MICROCREDENTIALS FOR DIGITAL CONTENT CREATION
COMPETENCE 3.2:
INTEGRATING AND RE-ELABORATING DIGITAL CONTENT

DSW
DIGITAL SKILLS WALLET

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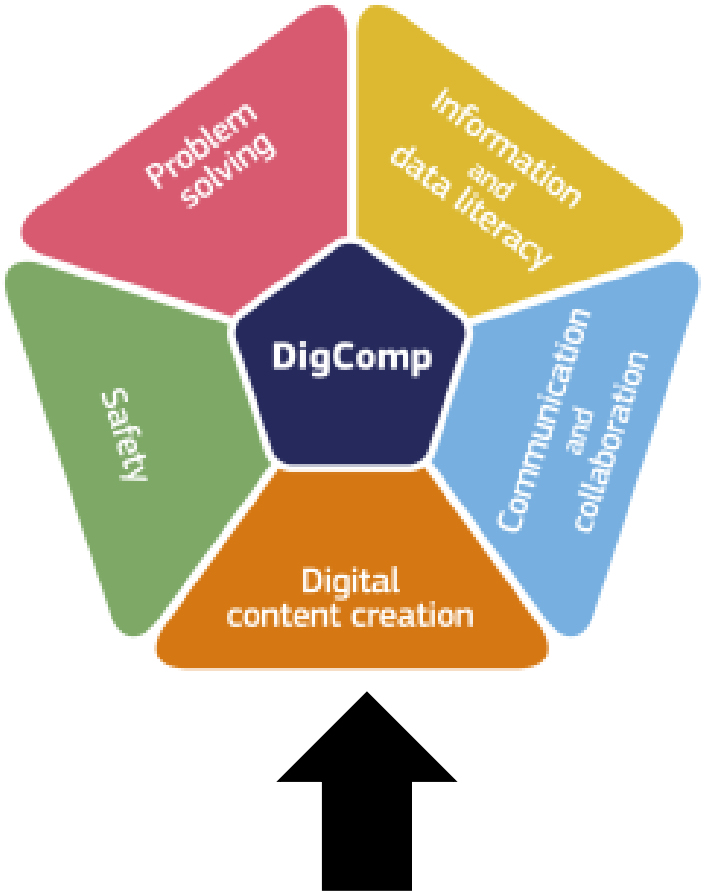
Problem solving
Information and data literacy
DigComp
Communication and collaboration
Safety
Digital content creation

Contents

FOUNDATION LEVEL
(LEVEL 1 and LEVEL 2)

Basics of Web Content Elaboration - 1 (MC 3.2.A.1)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Basics of Web Content Elaboration - 1 Code: MC 3.2.A.1
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
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Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 3 – Maximum 5 hours
Level of the learning experience leading to the micro-credential	FOUNDATION
Type of assessment	Automatically marked Questions Number of Questions: 8 – 10 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.A.1)

Learning Outcomes (ref. Level 1-2 LOs 3.2.1 - 3.2.4):

- Understanding of HTML fundamentals.
- Knowledge of JavaScript basics.
- Knowledge of Responsive Design principles.
- Capacity to style pages using CSS.

Description (MC 3.2.A.1)

At the foundation level of web development, having a firm grasp of HTML fundamentals is essential. It involves understanding the core structure, semantics, and diverse elements that construct HTML, essentially forming the backbone of web content. This knowledge delves into the purpose and usage of HTML elements, facilitating the creation of organized and well-structured web pages. It encompasses defining content hierarchies, employing semantic tags, and crafting the foundational structure for websites.

Complementing this, possessing Knowledge of JavaScript basics is crucial. This proficiency revolves around mastering fundamental JavaScript concepts vital for creating interactive web experiences. It encompasses handling user interactions, manipulating the DOM to dynamically update webpage content, and managing various events occurring within the browser. This skill set empowers developers to infuse interactivity, responsiveness, and enhanced functionality into web applications.

Furthermore, a grasp of Responsive Design principles is essential. This involves understanding techniques to create web layouts that seamlessly adapt to diverse screen sizes and devices. This knowledge ensures that web content appears well-organized and legible regardless of the user's device, utilizing flexible grids, media queries, and responsive styling.

Lastly, the capacity to style pages using CSS is imperative. Proficiency in CSS allows for the effective styling of web pages by employing selectors, properties, and basic layout techniques. This skill ensures consistent and visually appealing design, enhancing user experience and readability across different browsers and devices.

Questions (MC 3.2.A.1)

1. Can you explain the purpose and usage of semantic HTML elements in web content structuring?
2. Describe the role of JavaScript in enhancing user interactivity on a website.
3. Could you explain the process of manipulating the DOM using JavaScript for dynamic content updates?
4. What techniques or methods would you use to ensure a website is responsive and adapts to various screen sizes?
5. Why is responsive design important, and how does it benefit the user experience?
6. How would you use CSS selectors to target specific elements on a webpage for styling?

Basics of Web Content Elaboration - 2 (MC 3.2.A.2)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Basics of Web Content Elaboration - 2 Code: MC 3.2.A.2
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
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Notional workload needed to achieve the learning outcomes	Minimum 3 – Maximum 5 hours
Level of the learning experience leading to the micro-credential	FOUNDATION
Type of assessment	Automatically marked Questions Number of Questions: 8 – 10 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.A.2)

Learning Outcomes (ref. Level 1-2 LOs 3.2.5 - 3.2.8):

- Understanding URLs and HTTP/HTTPS.
- Basic deployment knowledge.
- Version control basics.
- Capacity to use web development tools.

Description (MC 3.2.A.2)

At the foundation level of web development, comprehending URLs and the HTTP/HTTPS protocols is crucial. Understanding URLs involves knowledge of their structure, functionality, and the significance of HTTP/HTTPS in web communication. HTTP/HTTPS protocols govern how information is transferred between a user's browser and web servers, ensuring secure and reliable data exchange. This knowledge forms the basis for navigating the internet and comprehending the mechanisms behind data transmission, crucial for creating and interacting with web content.

Moreover, having basic deployment knowledge is essential. This includes understanding domain names, the concept of web hosting, and the fundamental methods involved in deploying websites. Proficiency in deploying websites via methods like FTP (File Transfer Protocol) and various hosting services is pivotal for making web content accessible to users on the internet.

Additionally, grasping version control basics, particularly with tools like Git, is foundational. Familiarity with Git enables developers to track changes in code, collaborate effectively with team members, and manage different versions of their codebase. This skill is vital for maintaining code integrity, managing project history, and facilitating seamless collaboration among developers.

Utilizing Web development tools, such as text editors or Integrated Development Environments (IDEs) like Visual Studio Code, is another important skill. These tools provide an efficient environment for coding, debugging, and managing web applications. Proficiency in utilizing these tools enhances productivity and facilitates the creation of web content by providing essential features and functionalities to developers.

Questions (MC 3.2.A.2)

1. Can you describe the structure of a URL and its various components?
2. How would you differentiate between domain registration and web hosting?
3. What is the purpose of version control in software development, and why is Git commonly used among developers?
4. Describe the difference between 'commit', 'pull', and 'push' commands in Git.
5. What features in an Integrated Development Environment (IDE) like Visual Studio Code aid in debugging web applications?
6. How does utilizing an IDE improve the efficiency and productivity of a web developer compared to a basic text editor?

Basics of Web Content Elaboration - 3 (MC 3.2.A.3)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Basics of Web Content Elaboration - 3 Code: MC 3.2.A.3
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
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Notional workload needed to achieve the learning outcomes	Minimum 3 – Maximum 5 hours
Level of the learning experience leading to the micro-credential	FOUNDATION
Type of assessment	Automatically marked Questions Number of Questions: 8 – 10 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.A.3)

Learning Outcomes (ref. Level 1-2 LOs 3.2.9 - 3.2.12):

- Understanding the principles of Client-Side Scripting.
- Understanding of Box Model and Layouts in CSS.
- Basic understanding of SEO Principles.
- Ability to perform debugging and troubleshooting.

Description (MC 3.2.A.3)

At the foundational level of web development, understanding the principles of Client-Side scripting, particularly the role of JavaScript, is paramount. Client-Side Scripting involves leveraging JavaScript to enhance user interactions and elevate web page experiences. JavaScript enables dynamic content manipulation, event handling, and interactivity, allowing developers to create responsive and engaging web applications.

Furthermore, comprehension of the Box Model and Layouts in CSS is essential. This knowledge revolves around understanding the CSS box model—a fundamental concept dictating how elements are rendered on a webpage. Proficiency in employing different techniques for web layouts, such as using margins, padding, borders, and positioning, ensures effective and visually appealing design structures.

A basic understanding of SEO (Search Engine Optimization) Principles is also crucial. This involves grasping fundamental concepts like keyword research, meta tags, content optimization, and link building to improve a website's visibility and ranking on search engine results pages. Implementing these principles aids in attracting organic traffic and enhancing a website's reach.

Moreover, possessing the ability to perform debugging and troubleshooting is foundational. It encompasses identifying and resolving common issues in HTML, CSS, and JavaScript using browser developer tools. Proficiency in debugging ensures efficient problem-solving, leading to improved code quality and functionality in web development endeavors.

Questions (MC 3.2.A.3)

1. How does JavaScript contribute to enhancing user interactions and experiences on web pages?
2. Can you provide examples of how JavaScript can be used to create dynamic content or handle user events on a website?
3. How would you use CSS techniques (e.g., margins, padding, positioning) to create a responsive layout for a webpage?
4. Explain the importance of meta tags and how they can impact a website's visibility in search engine results.
5. What are some fundamental strategies for optimizing website content to improve its ranking on search engines?
6. How would you use browser developer tools to identify and fix a CSS layout issue on a webpage?

Basics of Web Content Elaboration - 4 (MC 3.2.A.4)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Basics of Web Content Elaboration - 4 Code: MC 3.2.A.4
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
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Notional workload needed to achieve the learning outcomes	Minimum 3 – Maximum 5 hours
Level of the learning experience leading to the micro-credential	FOUNDATION
Type of assessment	Automatically marked Questions Number of Questions: 8 – 10 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.A.4)

Learning Outcomes (ref. Level 1-2 LOs 3.2.13 - 3.2.16):

- Knowledge of responsive images and media.
- Understanding of APIs and fetching data.
- Capacity to ensure browser compatibility.
- Awareness of basic Web Accessibility.

Description (MC 3.2.A.4)

At the foundation level of web development, having knowledge of Responsive Images and Media is crucial. This knowledge involves employing techniques that ensure images and media content adapt and display appropriately across various devices and screen sizes. Utilizing responsive image attributes, such as srcset and sizes, and implementing media queries allow for seamless adaptation, improving user experience and page load times.

Understanding APIs and fetching data is fundamental in leveraging external data within web applications. Comprehending APIs and utilizing JavaScript Fetch API enables developers to retrieve data from servers asynchronously. This skill facilitates the integration of dynamic content, such as fetching data from databases or third-party services, enhancing the interactivity and functionality of web applications.

Furthermore, the capacity to ensure browser compatibility is essential. This skill involves testing and validating websites across different browsers and devices to ensure consistent functionality and appearance. Employing standardized coding practices, utilizing browser-specific prefixes, and testing web content on various browsers aids in achieving cross-browser compatibility.

Additionally, having an awareness of basic Web Accessibility is crucial for creating inclusive web experiences. This involves understanding and implementing accessibility standards like WCAG to ensure web content is perceivable, operable, and understandable for users with disabilities. It involves using semantic HTML, providing alternative text for images, and enabling keyboard navigation, fostering an accessible online environment for diverse user needs.

Questions (MC 3.2.A.4)

1. How would you implement responsive images on a website to ensure proper display on various devices? Describe the techniques or attributes you might use.
2. What is an API, and how does it enable data retrieval in web development? Explain the role of the JavaScript Fetch API in this context.
3. How would you ensure a website's functionality across different browsers and devices? Describe methods or techniques you might use to test and achieve cross-browser compatibility.
4. Why is it important for a website to function consistently across various browsers, and what challenges might arise in achieving this?
5. What are some key considerations for making web content accessible to users with disabilities?

Basics of Social Media Content Elaboration - 1 (MC 3.2.A.5)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	**Basics of Social Media Content Elaboration - 1** **Code: MC 3.2.A.5**
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
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Notional workload needed to achieve the learning outcomes	Minimum 3 – Maximum 5 hours
Level of the learning experience leading to the micro-credential	**FOUNDATION**
Type of assessment	Automatically marked Questions Number of Questions: 8 – 10 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.A.5)

Learning Outcomes (ref. Level 1-2 LOs 3.2.17 - 3.2.20):

- Understanding Social Media platforms.
- Knowledge of Social Media algorithms.
- Basic ability to create Social Media content.
- Basic ability to craft captions for Social Media content development.

Description (MC 3.2.A.5)

At the foundational level of expertise in social media content development and integration, a fundamental grasp of various aspects forms the bedrock for effective engagement and interaction across diverse platforms. Understanding social media platforms is paramount; it involves familiarizing oneself with major platforms like Facebook, Twitter, Instagram, LinkedIn, and TikTok. This entails comprehending their unique features, user demographics, and preferred content formats, enabling tailored content creation for specific audiences.

Furthermore, a basic understanding of social media algorithms is crucial. Recognizing the factors influencing content reach, engagement, and visibility helps content creators optimize their posts effectively. It involves comprehending how algorithms prioritize content, thereby aiding in strategic content planning.

Moreover, foundational expertise involves possessing basic skills to craft engaging social media content. This includes proficiency in creating visually appealing graphics, images, videos, and well-crafted written posts suitable for different platforms. Additionally, the ability to compose compelling and concise captions, headlines, and descriptions is vital. Crafting captivating text that resonates with the target audience aids in capturing attention and driving engagement.

At this foundational level, individuals acquire a working knowledge of platforms, algorithms, content creation, and captioning, laying a solid groundwork for effective social media engagement and integration.

Questions (MC 3.2.A.5)

1. Can you highlight specific features unique to each platform and how content formats differ to cater to diverse audiences?
2. How do you perceive factors influencing content reach, and what strategies might you employ to enhance visibility based on your understanding?
3. Can you showcase examples of your work, including images, videos, graphics, or written posts, illustrating your fundamental skills in creating visually appealing and engaging content?
4. How do you ensure your captions resonate with the target audience, convey the intended message, and complement the content effectively? Provide examples of well-crafted captions you've developed.

Basics of Social Media Content Elaboration - 2 (MC 3.2.A.6)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Basics of Social Media Content Elaboration - 2 Code: MC 3.2.A.6
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Notional workload needed to achieve the learning outcomes	Minimum 3 – Maximum 5 hours
Level of the learning experience leading to the micro-credential	FOUNDATION
Type of assessment	Automatically marked Questions Number of Questions: 8 – 10 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.A.6)

Learning Outcomes (ref. Level 1-2 LOs 3.2.21 - 3.2.24):

- Knowledge of visual design.
- Understanding audience engagement.
- Knowledge of content calendar management.
- Awareness of community management.

Description (MC 3.2.A.6)

At the foundational level of expertise in social media content development and integration, a spectrum of essential skills contributes significantly to effective online engagement and content creation. Knowledge of visual design stands as a cornerstone skill, involving a basic understanding of graphic design tools like Canva or Adobe Spark. These tools empower individuals to craft visually captivating and branded content suitable for various social media platforms, enhancing the overall appeal and engagement potential.

Moreover, understanding audience engagement tactics is crucial. This encompasses familiarity with techniques such as employing questions, polls, hashtags, and encouraging interactions with followers. These methods serve to stimulate audience participation, fuel discussions, and increase visibility across platforms.

Another critical skill at this foundational level is knowledge of content calendar management. This involves the ability to organize and plan content schedules systematically. Maintaining consistency and frequency in posting on social media platforms is pivotal for audience retention and engagement. Awareness of community management practices is also important. It includes promptly and professionally responding to comments, messages, and user interactions.

At the foundational level, possessing basic visual design skills, understanding audience engagement tactics, managing content calendars effectively, and practicing community management principles are pivotal in establishing a strong groundwork for successful social media content development and integration.

Questions (MC 3.2.A.6)

1. How do you utilize visual design principles when creating content for social media?
2. Could you describe your experience using graphic design tools like Canva or Adobe Spark to produce visually appealing and branded content?
3. How would you employ strategies such as asking questions, conducting polls, using hashtags, or encouraging interactions to boost engagement with followers? Share an example where you successfully utilized these techniques.
4. How do you organize and plan content schedules to ensure consistent and timely posting? Can you discuss the importance of maintaining a content calendar for effective social media presence?
5. How do you handle user comments, messages, and interactions to foster engagement and build a sense of community?

Basics of Social Media Content Elaboration - 3 (MC 3.2.A.7)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	**Basics of Social Media Content Elaboration - 3** **Code: MC 3.2.A.7**
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
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Notional workload needed to achieve the learning outcomes	Minimum 3 – Maximum 5 hours
Level of the learning experience leading to the micro-credential	**FOUNDATION**
Type of assessment	Automatically marked Questions Number of Questions: 8 – 10 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.A.7)

Learning Outcomes (ref. Level 1-2 LOs 3.2.25 - 3.2.27):

- Basic knowledge of analytics and insights.
- Understanding Social Media policy and guidelines.
- Capacity to carry out basic video editing operations.

Description (MC 3.2.A.7)

At the foundational level of expertise in social media content development and integration, several key competencies lay the groundwork for effective engagement and strategic content creation. Firstly, a fundamental understanding of analytics and insights is essential. This involves grasping basic social media metrics such as likes, shares, comments, and reach. Utilizing these metrics aids in tracking content performance and engagement, providing valuable insights for refining future strategies.

Secondly, knowledge of social media policies and guidelines is crucial. Understanding basic best practices, platform etiquette, and compliance with guidelines ensures responsible and effective content dissemination.

Moreover, possessing a capacity for basic video editing operations is vital. This includes familiarity with entry-level video editing tools or applications to create simple yet engaging video content suitable for sharing on social media platforms. Proficiency in basic editing operations enables the creation of visually appealing and captivating videos, enhancing audience engagement and interaction.

At the foundation level, individuals develop proficiency in basic analytics, insights utilization, adherence to social media policies, and basic video editing skills. These competencies form the cornerstone for effective social media content development and integration strategies.

Questions (MC 3.2.A.7)

1. How would you use basic analytics (likes, shares, comments, reach) to measure the success of a social media post or campaign? Provide an example where understanding these metrics influenced content strategy.
2. How do platform guidelines impact content creation and dissemination? Describe how you ensure compliance with social media policies and guidelines in your content creation process.
3. What entry-level video editing tools or apps are you familiar with, and how would you use them to create simple yet engaging video content? Provide an example of a video edited using these tools.
4. How would you utilize basic social media analytics and insights to refine content strategy? Explain how the analysis of social media metrics influences decisions regarding content creation, posting schedules, or audience engagement strategies

Basics of Social Media Content Elaboration - 4 (MC 3.2.A.8)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	**Basics of Social Media Content Elaboration - 4** **Code: MC 3.2.A.8**
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
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Level of the learning experience leading to the micro-credential	**FOUNDATION**
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Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.A.8)

Learning Outcomes (ref. Level 1-2 LOs 3.2.28 - 3.2.30):

- Basic knowledge of cross-platform posting.
- Understanding trends and hashtags.
- Capacity of learning and adaptation.

Description (MC 3.2.A.8)

At the foundational level of expertise in social media content development and integration, several pivotal skills and insights pave the way for effective engagement and visibility across diverse platforms. First and foremost, possessing basic knowledge of cross-platform posting is essential. This involves understanding how to repurpose content across various social media platforms while tailoring it to fit each platform's unique audience preferences and features. It enables content creators to adapt their posts effectively, optimizing for maximum engagement and resonance on each platform.

Moreover, foundational expertise encompasses a grasp of trends and hashtags. Individuals at this level understand the importance of staying attuned to current trends, popular hashtags, and viral content strategies. This awareness aids in crafting content that aligns with ongoing conversations and controls viral strategies, enhancing the visibility and relevance of their posts.

A foundational understanding includes the commitment to continuous learning and adaptation. This willingness to explore and adapt facilitates the refinement of content creation strategies and ensures relevance in an ever-evolving digital landscape. In essence, at this foundational level, individuals acquire essential skills in cross-platform posting, trend awareness, and the willingness to adapt, laying a solid groundwork for effective social media content development and integration.

Questions (MC 3.2.A.8)

1. How do you ensure content is adapted and optimized for different platforms? Provide an example of how you repurpose content across multiple platforms while tailoring it to suit each platform's unique audience and features.
2. How do you stay updated on current trends, popular hashtags, and viral content strategies in social media? Provide an example where you effectively used a trending topic or hashtag in your content.
3. How do you adapt your content creation strategies based on these changes? Share an instance where your continuous learning and adaptation to new trends or features positively impacted your social media content.
4. How do you tailor content to meet the preferences and behaviors of users on specific platforms? Provide an example of how you've adapted content to suit a particular platform's audience and features.

Relational Database Concepts and RDBMS Platforms (MC 3.2.A.9)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	**Relational Database Concepts and RDBMS Platforms** **Code: MC 3.2.A.9**
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Notional workload needed to achieve the learning outcomes	Minimum 5 – Maximum 8 hours
Level of the learning experience leading to the micro-credential	**FOUNDATION**
Type of assessment	Automatically marked Questions Number of Questions: 10 – 12 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.A.9)

Learning Outcomes (ref. Level 1 LOs 3.2.31 - 3.2.37):

- Database Fundamentals.
- Relational Database Concepts.
- Data Types.
- Relational Database Management Systems (RDBMS).
- Database Creation and Management.
- Inquisitiveness.
- Readiness in exploring learning resources.

Description (MC 3.2.A.9)

At the foundation level of expertise in Relational Databases, individuals develop a solid understanding of general principles of databases, and the basic principles of data organization and storage. Relational Database Concepts includes fundamental structures like tables, the significance of tables, rows, and columns, and relationships principles. At this level of expertise, individuals understand the fundamental concepts of numeric, character, and date/time data types. They learn to discern appropriate data types for diverse scenarios, ensure accurate representation and efficient storage, fostering essential skills for database design and management. They are introduced to Relational Database Management Systems (RDBMS), getting to know popular platforms such as MySQL or Microsoft SQL Server. Some database creation and management skills are acquired, enabling individuals to create and maintain databases, tables, and relationships in an RDBMS environment.

Encouraging an inquisitive mindset to explore and understand database concepts is essential. This leads individuals to delve into the functionality and complexity of RDBMS platforms. Readiness to use learning resources and educational materials to understand basic concepts of database systems. These competencies form a robust foundation, laying the groundwork for proficiency in database management and development.

Questions (MC 3.2.A.9)

1. Database concept: Explain what the main aim for data organization and storage is.
2. Table Structure Understanding: Define the components of a database table, highlighting the roles of columns and rows. How does this structure facilitate data organization?
1. Define what a "column" represents in a relational database and provide an example of a real-world scenario where using columns is beneficial.
2. Relationship Identification: Explain the concept of a "relationship" between tables.
3. Data Type Recognition: Identify and describe three common data types used in a relational database. Provide examples of scenarios where each data type is appropriate.
4. Handling Null Values: Discuss the role of NULL values in relational databases. How are they used, and what challenges might arise when working with columns that allow NULL values?
5. Platform Characteristics: Explain what the key functionalities of RDBMS are.

Basics on Data Modeling (MC 3.2.A.10)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Basics on Data Modeling Code: MC 3.2.A.10
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
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Notional workload needed to achieve the learning outcomes	Minimum 3 – Maximum 5 hours
Level of the learning experience leading to the micro-credential	FOUNDATION
Type of assessment	Automatically marked Questions Number of Questions: 8 – 10 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.A.10)

Learning Outcomes (ref. Level 1-2 LOs 3.2.38 - 3.2.43):

- Basic database design.
- Basic Data Modeling.
- Entity-Relationship Diagrams (ERD).
- Primary and Foreign Keys.
- Entity-Relationship Diagram Creation.
- Normalization Basics and Practice.

Description (MC 3.2.A.10)

At the foundation level of expertise in Relational Databases, individuals acquire knowledge in basic database design, understanding the principles of organizing data efficiently. They understand the fundamental Data Modeling concepts, applying basic techniques to design logical structures.

Proficiency in Entity-Relationship Diagrams (ERD) is cultivated, enabling visualization of database relationships. Understanding Primary and Foreign Keys becomes integral for ensuring data integrity and connectivity. Individuals learn to create ERDs, translating conceptual models into visual representations.

Normalization basics are fundamental, teaching the importance of minimizing data redundancy. Through normalization practice, individuals hone skills in structuring databases to conform to higher normal forms, optimizing data storage and retrieval.

This foundation establishes essential competencies for designing, modeling, and normalizing databases, providing a solid footing for more advanced concepts and practices in relational database management

Questions (MC 3.2.A.10)

1. Basic Design Principles: Explain the fundamental principles of relational database design. How does adhering to these principles contribute to effective data organization?
2. Primary and Foreign Keys: Differentiate between primary keys and foreign keys. Why are they essential in maintaining data integrity, and how are they implemented in a database schema?
3. Normalization Concepts: Define normalization in the context of database design. How does normalization mitigate data redundancy, and what are the primary normal forms?
4. Database Design Best Practices: Discuss three best practices in relational database design. How do these practices contribute to the efficiency and maintainability of a database?

SQL Fundamentals - 1 (MC 3.2.A.11)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	SQL Fundamentals - 1 Code: MC 3.2.A.11
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
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Notional workload needed to achieve the learning outcomes	Minimum 10 – Maximum 12 hours
Level of the learning experience leading to the micro-credential	FOUNDATION
Type of assessment	Automatically marked Questions Number of Questions: 15 – 20 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.A.11)

Learning Outcomes (ref. Level 1-2 LOs 3.2.44 - 3.2.50):

- SQL Basics.
- Basic SQL Query Writing.
- Query Filtering.
- Principles of Data Grouping.
- Principles of Queries Nesting.
- Basic Query Optimization.
- Attentiveness to Detail.

Description (MC 3.2.A.11)

At the foundation level of expertise in Relational Databases, individuals gain proficiency in SQL basics, encompassing the understanding of Structured Query Language and its application. They acquire skills in basic SQL query writing, enabling them to retrieve data from databases. Query filtering becomes second nature, as individuals learn to extract specific information by employing WHERE clauses. Principles of Data Grouping are used for organized analysis, involving the utilization of the GROUP BY clause. Furthermore, individuals learn to embed queries within each other for more complex data retrieval where database navigation is required.

Basic Query Optimization skills are cultivated, emphasizing efficiency in retrieving data through proper indexing and query structuring. Attention to Detail is a crucial attitude, ensuring accuracy in database querying, from query construction to result interpretation.

This foundation establishes essential competencies and serves as a facilitator for more advanced database practices.

Questions (MC 3.2.A.11)

1. SQL Basics: What is the purpose of the SELECT statement in SQL?
2. Basic SQL Query Writing: Explain the significance of the FROM clause in a SQL query.
3. Query Filtering: Explain the difference between the LIKE and = operators in query filtering. How can the IN clause be employed for filtering results?
4. Principles of Data Grouping: Explain the role of aggregate functions in conjunction with GROUP BY.
5. Principles of Queries Nesting: Describe a scenario where using a nested query is more advantageous than a single query.

SQL Fundamentals - 2 (MC 3.2.A.12)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	SQL Fundamentals - 2 Code: MC 3.2.A.12
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: 101087628
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 8 – Maximum 10 hours
Level of the learning experience leading to the micro-credential	FOUNDATION
Type of assessment	Automatically marked Questions Number of Questions: 8 – 10 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.A.12)

Learning Outcomes (ref. Level 1-2 LOs 3.2.51 - 3.2.55):

- Keeping Database Content Up to Date.
- Data Entry and Up to Date.
- Concurrency Control.
- Data Security Awareness.
- Adaptability.

Description (MC 3.2.A.12)

At the foundation level of expertise in Relational Databases, individuals develop skills in keeping database content up to date by employing SQL commands like INSERT, UPDATE and DELETE, ensuring real-time data accuracy. Data entry proficiency is cultivated, emphasizing accurate and efficient insertion of information into the database. Knowing data types is very important.

Understanding Concurrency Control becomes essential, enabling individuals to manage simultaneous transactions and prevent data inconsistencies. Data Security Awareness is introduced, promoting a proactive mindset toward securing information through access controls. Adaptability is emphasized as a crucial attitude, encouraging individuals to navigate evolving database structures and technologies.

This foundation equips individuals with the essential skills and attitudes needed to maintain accurate, secure, and up-to-date relational databases.

Questions (MC 3.2.A.12)

1. Data Entry and Up to Date: How do you ensure data consistency during the data entry process? Explain the role of the VALUES clause in an INSERT statement.
2. DELETE Operation: Describe the purpose of the WHERE clause in a DELETE statement. Explain the potential consequences of using DELETE without a WHERE clause.
3. UPDATE Operation: Describe how to create headers or footers with different content on odd and even pages. How does the WHERE clause influence the outcome of an UPDATE statement?
4. Transactional Considerations: How can access controls be implemented to enhance data security? Explain the concept of a rollback and when it might be necessary.

INTERMEDIATE LEVEL
(LEVEL 3 and LEVEL 4)

Web Content Design and Layout - 1 (MC 3.2.B.1)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	**Web Content Design and Layout - 1** **Code: MC 3.2.B.1**
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: **101087628**
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 5 – Maximum 7 hours
Level of the learning experience leading to the micro-credential	**INTERMEDIATE**
Type of assessment	Automatically marked Questions Number of Questions: 10 – 12 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.B.1)

Learning Outcomes (ref. Level 3-4 LOs 3.2.56 - 3.2.59):

- Understanding of advanced JavaScript concepts.
- Capacity to use the advanced HTML & HTML5 features.
- Capacity to use advanced CSS & CSS preprocessors.
- Capability of using front-end frameworks.

Description (MC 3.2.B.1)

At the intermediate level of expertise in web development and integration, a professional demonstrates a solid grasp of advanced JavaScript concepts, including closures, prototypes, and asynchronous programming utilizing Promises, async/await, along with familiarity with ES6+ features and modern JavaScript frameworks/libraries. This understanding enables them to create dynamic functionalities and efficiently manage data within web applications.

Professionals' competence should extend to utilizing advanced HTML and HTML5 features proficiently. They leverage semantic elements to enhance website structure, implement local storage for client-side data retention, utilize canvas for graphic rendering, integrate audio/video elements seamlessly, and employ responsive image techniques for optimal adaptability across various devices.

Furthermore, professionals should exhibit proficiency in employing advanced CSS and CSS preprocessors. They utilize CSS methodologies effectively, implement advanced selectors, incorporate animations for enhanced user interaction, utilize grid and flexbox layouts for responsive design, and possess knowledge of CSS preprocessors like Sass or LESS to organize and streamline stylesheet development.

Additionally, at this level the skill set includes the adept use of frontend frameworks such as React, Vue, or Angular. These skills should be demonstrated in at least one major framework, in utilizing its components and features to develop interactive web applications or ensuring a smooth and engaging user experience.

Questions (MC 3.2.B.1)

1. Describe how you've utilized closures and prototypes in your previous projects. Can you explain a scenario where closures were particularly useful?
2. How have you ensured the responsiveness of images and integrated audio/video elements effectively?
3. In what ways have you employed advanced CSS techniques like animations, grid, and flexbox layouts to enhance the user interface and experience in your projects?
4. Could you describe a project where you applied a major framework like React, Vue, or Angular to build a complex, interactive web application? What challenges did you face, and how did you overcome them while using this framework?

Web Content Design and Layout - 2 (MC 3.2.B.2)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	**Web Content Design and Layout - 2** **Code: MC 3.2.B.2**
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: **101087628**
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 5 – Maximum 7 hours
Level of the learning experience leading to the micro-credential	**INTERMEDIATE**
Type of assessment	Automatically marked Questions Number of Questions: 10 – 12 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.B.2)

Learning Outcomes (ref. Level 3-4 LOs 3.2.60 - 3.2.63):

- Understanding of accessibility standards & best practices.
- Knowledge of performance optimization techniques.
- Capacity to develop responsive Web design.
- Ability to ensure cross-browser compatibility & testing.

Description (MC 3.2.B.2)

At the intermediate level of expertise in web development and integration, a professional should demonstrate a comprehensive understanding of accessibility standards and best practices, particularly the Web Content Accessibility Guidelines (WCAG). They implement these guidelines meticulously to create inclusive web experiences, ensuring that websites are usable and accessible to all users, including those with disabilities. Their knowledge extends beyond compliance, focusing on integrating features that enhance accessibility for a diverse user base.

Additionally, they should possess knowledge of performance optimization techniques geared toward enhancing website speed and efficiency. They are adept at employing strategies such as code minification, lazy loading of resources, optimizing images without compromising quality, and implementing caching mechanisms to improve website performance and load times.

Moreover, their expertise includes developing responsive web designs using CSS media queries. They excel in crafting layouts that seamlessly adapt and respond to various devices and screen sizes, providing an optimal user experience across platforms.

Furthermore, their capability extends to ensuring cross-browser compatibility and testing. They possess the skills to conduct thorough testing across different browsers and devices, ensuring consistent functionality and appearance of websites. They leverage tools and techniques to identify and resolve compatibility issues, ensuring a seamless experience for users regardless of the platform or browser they use.

Questions (MC 3.2.B.2)

1. How do you ensure adherence to WCAG standards when developing websites?
2. Can you discuss a specific project where you implemented accessibility best practices and describe the measures taken to create an inclusive web experience for users with disabilities?
3. Could you detail the techniques you used, such as code minification, lazy loading, image optimization, or caching?
4. Can you provide examples of how you've ensured that websites you've developed are fully responsive and adaptable across various devices and screen sizes?
5. How do you ensure cross-browser compatibility and consistent functionality across different devices?
6. Can you share your methodology for testing websites across multiple browsers and devices?

Web Content Design and Layout - 3 (MC 3.2.B.3)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	**Web Content Design and Layout - 3** **Code: MC 3.2.B.3**
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: **101087628**
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 5 – Maximum 7 hours
Level of the learning experience leading to the micro-credential	**INTERMEDIATE**
Type of assessment	Automatically marked Questions Number of Questions: 10 – 12 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.B.3)

Learning Outcomes (ref. Level 3-4 LOs 3.2.64 - 3.2.67):

- Understanding of backend basics.
- Knowledge of authentication & authorization methods.
- Capability to work with databases.
- Capacity to work with version control systems.

Description (MC 3.2.B.3)

At the intermediate level of expertise in web development and integration, a professional exhibits comprehensive understanding of backend basics, encompassing server-side development using frameworks like Node.js, Django, or Express. Professionals should adeptly handle databases, implement routing mechanisms, employ middleware for request processing, and create RESTful APIs, enabling seamless communication between the server and client-side applications.

Moreover, professionals should possess knowledge of authentication and authorization methods essential for secure web application development. They must understand various user authentication techniques, proficiently manage sessions, and implement robust access control measures to safeguard sensitive data and functionalities.

Professionals should extend their experience working with databases, demonstrating competence in data modeling, SQL querying, and utilizing database management systems like MySQL or PostgreSQL. They efficiently manage data, design database schemas, and execute optimized queries for effective data retrieval and manipulation.

Additionally, professionals should showcase mastery in version control systems such as Git, employing workflows, branching strategies, and utilizing collaboration platforms like GitHub or GitLab proficiently. They should understand the importance of version control, ensuring efficient code management, collaboration, and integration of changes within a team environment, contributing to the overall development process.

Questions (MC 3.2.B.3)

1. Can you describe your experience in server-side development using frameworks like Node.js, Django, or Express?
2. Provide an example of a project where you implemented routing, middleware, and created RESTful APIs, highlighting your approach to handling data transactions between the server and client-side applications.
3. How have you implemented user authentication and session management in your previous projects? Discuss the methods or techniques you've used to ensure secure access controls.
4. Can you elaborate on a specific instance where you implemented robust security measures for user authentication?
5. Can you explain your approach to data modeling, and provide examples of SQL queries you've written for data retrieval or manipulation?
6. How do you manage collaboration using platforms like GitHub effectively within a development team?

Web Content Design and Layout - 4 (MC 3.2.B.4)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	**Web Content Design and Layout - 4** **Code: MC 3.2.B.4**
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: **101087628**
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 5 – Maximum 7 hours
Level of the learning experience leading to the micro-credential	**INTERMEDIATE**
Type of assessment	Automatically marked Questions Number of Questions: 10 – 12 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.B.4)

Learning Outcomes (ref. Level 3-4 LOs 3.2.68 - 3.2.71):

- Understanding of deployment & DevOps fundamentals.
- Understanding of Web security principles.
- Capability to integrate data from external API's.
- Capacity to use debugging & performance profiling tools.

Description (MC 3.2.B.4)

At the intermediate level of expertise in web development and integration, a professional must demonstrate a robust understanding of deployment and DevOps fundamentals. It includes comprehension of deploying pipelines, embracing concepts of continuous integration/continuous deployment (CI/CD), and a grasp of basic DevOps principles. This knowledge enables management of code deployment and automated processes and ensures smooth transitions from development to production environments.

Moreover, this level needs a solid understanding of web security principles, and the capacity of recognizing common vulnerabilities like XSS (Cross-Site Scripting) and CSRF (Cross-Site Request Forgery). This encompasses implementation of security best practices throughout the development cycle, of strategies to mitigate vulnerabilities and protect web applications from potential threats.

This proficiency extends to integrating external data sources via APIs seamlessly. Users at this level should demonstrate the capability to consume and integrate data from diverse external APIs into web applications, facilitating the exchange of information and enhancing the functionality of the developed applications.

Additionally, they showcase mastery in using debugging techniques and performance profiling tools for web applications. Their expertise lies in efficiently identifying and resolving issues by employing various debugging tools and leveraging performance profiling tools to optimize the application's performance, ensuring a smooth and responsive user experience.

Questions (MC 3.2.B.4)

1. Could you describe your experience with deployment pipelines and CI/CD in previous projects? How have you utilized these concepts to automate deployment processes and ensure smooth transitions from development to production environments?
2. How do you implement security best practices to mitigate these vulnerabilities during web development? Could you share a specific instance where you addressed these issues effectively?
3. Describe your proficiency in integrating data from external APIs into web applications. How did you ensure data security and reliability while integrating these APIs?
4. How do you identify and resolve issues efficiently? Provide an example of a situation where you used these tools to optimize a web application's performance and improve its responsiveness.

Optimizing Content for Social Media Engagement - 1 (MC 3.2.B.5)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	**Optimizing Content for Social Media Engagement - 1** **Code: MC 3.2.B.5**
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: **101087628**
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 5 – Maximum 7 hours
Level of the learning experience leading to the micro-credential	**INTERMEDIATE**
Type of assessment	Automatically marked Questions Number of Questions: 10 – 12 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.B.5)

Learning Outcomes (ref. Level 3-4 LOs 3.2.72 - 3.2.75):

- Knowledge of Audience Analysis and Segmentation.
- Ability to create advanced Social Media content.
- Ability to develop a content strategy.
- Ability of copywriting and storytelling.

Description (MC 3.2.B.5)

At the intermediate level of expertise in social media content development and integration, a deeper understanding and heightened proficiency in various facets significantly elevate content creation and engagement strategies.

Firstly, a deeper comprehension of Audience Analysis and Segmentation is pivotal. Going beyond surface-level demographics, this involves a thorough examination of audience behaviors and interests through data analysis. This knowledge allows content creators to tailor their content to resonate with specific audience segments, thus enhancing engagement and connection. Moreover, the ability to create advanced social media content becomes more complex. Proficiency extends to diverse content formats, including video editing, graphic design, infographics, and interactive content. Mastery in these areas enables the delivery of captivating and high-quality content that stands out amidst the digital noise.

Additionally, the intermediate level expertise necessitates the development of a comprehensive content strategy. This involves aligning content with specific goals, targeting precise audience segments, and integrating brand objectives across various social media platforms. Crafting such a strategy ensures consistency and coherence in messaging while maximizing reach and impact.

Enhanced proficiency in crafting compelling narratives and persuasive copy tailored to different social media platforms captivates audiences and fosters deeper engagement. At this intermediate level, individuals should possess refined storytelling skills, allowing for more effective social media content development and integration.

Questions (MC 3.2.B.5)

1. How do you utilize data analysis to understand audience behavior, demographics, and interests? Provide an example of how you've tailored content for specific audience segments based on this analysis.
2. How do you incorporate video editing, graphic design, infographics, and interactive elements to engage audiences?
3. How do you align this strategy with specific goals, audience targeting, and brand objectives across various social media platforms? Provide an example of a content strategy you've developed and its impact on achieving campaign goals.
4. How do you craft compelling and persuasive content suited for different platforms? Provide an example of a social media post or campaign where your copywriting and storytelling significantly contributed to engagement or conversions.

Optimizing Content for Social Media Engagement - 2 (MC 3.2.B.6)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	**Optimizing Content for Social Media Engagement - 2** **Code: MC 3.2.B.6**
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: **101087628**
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 5 – Maximum 7 hours
Level of the learning experience leading to the micro-credential	**INTERMEDIATE**
Type of assessment	Automatically marked Questions Number of Questions: 10 – 12 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.B.6)

Learning Outcomes (ref. Level 3-4 LOs 3.2.76 - 3.2.79):

- Understanding of paid advertising and boosting strategies.
- Capacity to use advanced analytics tools.
- Capacity to create advanced visual design.
- Capabilities of video content production.

Description (MC 3.2.B.6)

At the intermediate level of expertise in social media content development and integration, a deeper understanding and execution of multifaceted strategies become crucial for users' engagement. One crucial facet involves comprehending paid advertising and boosting strategies. This entails not only understanding but also implementing paid advertising techniques effectively. Individuals at this level craft and manage targeted social media ad campaigns tailored to reach specific audiences, maximizing visibility and engagement.

Proficiency in utilizing advanced analytics tools is very important. It involves harnessing complex analytics tools adeptly to scrutinize social media metrics and track Key Performance Indicators (KPIs). The goal is to extract actionable insights that inform content optimization strategies, ensuring content performs optimally within the ever-evolving social media landscape.

An intermediate expertise level necessitates mastery in creating visually captivating content using professional design tools like Adobe Creative Suite. This proficiency enables the creation of visually stunning and brand-consistent content across various social media platforms, thereby enhancing brand recognition and engagement. Additionally, possessing capabilities in video content production is essential at this stage. Individuals showcase proficiency in the end-to-end process of video creation—scripting, filming, editing, and optimizing videos tailored for different social media platforms. This expertise elevates content quality and engagement, leveraging the power of visual storytelling in the digital realm.

Questions (MC 3.2.B.6)

1. How do you identify target audiences and create/manage ad campaigns to reach specific demographics or user segments? Provide an example where you successfully utilized paid advertising to achieve specific campaign objectives.
2. How do you control analytics insights to optimize content performance and engagement? Share an instance where analytics data guided content strategy improvements.
3. How do you ensure consistency in visual branding across various social media platforms?
4. How do you approach scripting, filming, editing, and optimizing videos to resonate with target audiences on different platforms? Share an example of a video content campaign you've orchestrated.

Optimizing Content for Social Media Engagement - 3 (MC 3.2.B.7)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Optimizing Content for Social Media Engagement - 3 Code: MC 3.2.B.7
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: 101087628
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 5 – Maximum 7 hours
Level of the learning experience leading to the micro-credential	INTERMEDIATE
Type of assessment	Automatically marked Questions Number of Questions: 10 – 12 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.B.7)

Learning Outcomes (ref. Level 3-4 LOs 3.2.80 - 3.2.82):

- Understanding influencer collaboration and partnerships.
- Capacity of community building.
- Ability of advanced Social Media listening.

Description (MC 3.2.B.7)

At the intermediate level of expertise in social media content development and integration, a deeper understanding of pivotal elements augments an individual's proficiency in engaging audiences and optimizing brand presence. Firstly, there's a focus on comprehending influencer collaboration and partnerships. This involves knowledge of cultivating associations with influencers, utilizing their reach, credibility, and resonance with specific audiences to enhance brand visibility and engagement. Intermediate practitioners understand how to craft effective influencer marketing strategies that resonate with their brand's objectives, leveraging these collaborations to broaden their reach.

An enhanced capacity for community building is crucial. Intermediate-level professionals possess advanced community management skills, adept at fostering engagement, nurturing relationships, and effectively overseeing online communities. They create environments conducive to interaction, responding promptly to queries, and steering discussions that align with brand values, fostering a sense of belonging among community members.

Additionally, an intermediate expertise level encompasses advanced social media listening abilities. Proficient practitioners utilize complex tools to conduct brand monitoring, perform sentiment analysis, and track industry trends. This data-driven approach informs content strategy, allowing for a more targeted and relevant approach to content creation that resonates with audience preferences and industry developments.

Questions (MC 3.2.B.7)

1. How do you identify suitable influencers, develop partnerships, and utilize influencer marketing to enhance reach and engagement for brands? Provide an example of a successful influencer partnership and its impact on brand visibility.
2. How do you foster engagement, build relationships, and handle online communities effectively?
3. Discuss how you control advanced social media listening tools to gather insights for content strategy. How do you utilize these tools to monitor brand mentions, conduct sentiment analysis, and identify industry trends?
4. Explain how you integrate insights obtained from influencer collaborations, community engagement, and social media listening into a cohesive content strategy. How do you align these insights to optimize content creation, distribution, and engagement strategies across social media channels?

Optimizing Content for Social Media Engagement - 4 (MC 3.2.B.8)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Optimizing Content for Social Media Engagement - 4 Code: MC 3.2.B.8
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: 101087628
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 5 – Maximum 7 hours
Level of the learning experience leading to the micro-credential	INTERMEDIATE
Type of assessment	Automatically marked Questions Number of Questions: 10 – 12 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.B.8)

Learning Outcomes (ref. Level 3-4 LOs 3.2.83 - 3.2.85):

- Knowledge of crisis management and response.
- Capacity to conduct A/B testing and optimization.
- Capacity of strategic collaboration and campaign planning.

Description (MC 3.2.B.8)

At the intermediate level of expertise in social media content development and integration, individuals delve deeper into specialized knowledge and skill sets that empower them to navigate complex scenarios and optimize content strategies for enhanced engagement and impact.

A crucial facet at this stage is the understanding of crisis management and response within the realm of social media. Proficiency in crisis communication strategies is essential for effectively handling negative feedback or managing social media crises. Individuals at this level are equipped to develop and implement strategies that mitigate potential damage, maintain brand reputation, and handle sensitive situations adeptly.

An intermediate expertise level involves the capacity to conduct A/B testing and optimization. Proficiency in conducting such tests on social media content, meticulously analyzing results, and drawing data-driven insights is paramount. This allows for the refinement and optimization of content strategies, ensuring they align more effectively with audience preferences and maximize engagement.

Individuals at this stage possess the capacity for strategic collaboration and campaign planning. They can plan and execute strategic social media campaigns, often collaborating cross-functionally within a team or with external partners. This skill involves aligning campaign goals with overall business objectives, coordinating resources, and leveraging various channels to achieve maximum impact.

Questions (MC 3.2.B.8)

1. How would you effectively manage a social media crisis or negative feedback? Provide an example where you successfully navigated a challenging situation using crisis management techniques.
2. Describe your process for conducting A/B testing on social media content. How do you analyze the results and derive insights to optimize content strategies?
3. How do you collaborate cross-functionally or with external partners to create and implement successful campaigns? Provide an example of a well-executed campaign that demonstrates your strategic planning and collaborative skills.
4. How do you control data to make informed decisions and drive campaign optimizations? Share an instance where data analysis influenced a successful social media strategy change.

Query Optimization and Tuning (MC 3.2.B.9)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Query Optimization and Tuning Code: MC 3.2.B.9
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: 101087628
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 6 – Maximum 8 hours
Level of the learning experience leading to the micro-credential	INTERMEDIATE
Type of assessment	Automatically marked Questions Number of Questions: 8 – 10 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.B.9)

Learning Outcomes (ref. Level 3-4 LOs 3.2.86 - 3.2.91):

- Advanced SQL.
- Query Optimization.
- Indexing Strategies.
- Advanced Indexing Implementation.
- Performance Monitoring Tools.
- Critical Thinking.

Description (MC 3.2.B.9)

At the intermediate level of expertise in Relational Databases, individuals expand their knowledge with Advanced SQL, investigating complex queries, subqueries, and advanced join techniques. Query Optimization becomes a key skill, involving the refinement of SQL queries for enhanced performance. Mastery of Indexing Strategies is achieved, understanding how to create and utilize indexes effectively.

Advanced Indexing Implementation involves optimizing indexes for specific use cases, such as covering indexes and clustered indexes. Proficiency in Performance Monitoring Tools is cultivated, enabling individuals to analyze and enhance database performance using appropriate tools.

Critical Thinking becomes a crucial attitude, guiding individuals in analyzing database structures, identifying bottlenecks, and devising strategic solutions for optimal performance. This intermediate expertise empowers individuals to navigate intricate database scenarios, ensuring efficient data retrieval, and preparing them for more advanced challenges in relational database management and optimization.

Questions (MC 3.2.B.9)

1. Advanced SQL: Provide an example of a SQL query that uses advanced join techniques, such as OUTER JOINs.
2. Query Optimization: Describe the steps involved in optimizing a SQL query for better performance. How does understanding the query execution plan contribute to query optimization?
3. Indexing Strategies: Define the purpose of indexing in a relational database. Differentiate between clustered and non-clustered B-tree and Bitmap indexes. When would you use each?

Optimizing Database Design (MC 3.2.B.10)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Optimizing Database Design Code: MC 3.2.B.10
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: 101087628
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 6 – Maximum 8 hours
Level of the learning experience leading to the micro-credential	INTERMEDIATE
Type of assessment	Automatically marked Questions Number of Questions: 8 – 10 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.B.10)

Learning Outcomes (ref. Level 3-4 LOs 3.2.92 - 3.2.95):

- Advanced Database Design Principles.
- Data Modeling at Scale.
- Advanced Data Normalization.
- Problem-Solving Orientation.

Description (MC 3.2.B.10)

At the intermediate level of expertise in Relational Databases, individuals explore Advanced Database Design Principles, improving their ability to create complex and scalable database structures. They master Data Modeling at Scale, ensuring the effectiveness of database designs as data volumes increase and relationships become more and more complex. Advanced Data Normalization becomes a key skill, allowing individuals to design databases that minimize redundancy and adhere to higher normalization forms. A Problem-Solving Orientation is cultivated, enabling individuals to identify and address complex challenges in database design and management.

This intermediate proficiency empowers individuals to conceptualize and implement sophisticated database architectures that meet the demands of large-scale data scenarios. They develop a nuanced understanding of data modeling considerations, normalization practices, and possess a problem-solving mindset crucial for navigating the details of relational databases at an advanced level. This foundation prepares them for higher-level responsibilities in database design and management.

Questions (MC 3.2.B.10)

1. Advanced Database Design Principles: How does denormalization play a role in certain advanced database design scenarios? Explain the concept of partitioning in the context of advanced database design?
2. Data Modeling at Scale: Provide an example of data modeling techniques that support large-scale databases. Discuss the considerations for accommodating diverse data types in a large-scale data model.
3. Advanced Data Normalization: How does denormalization balance the pursuit of higher normalization forms in certain situations?

Data Protection (MC 3.2.B.11)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Data Protection Code: MC 3.2.B.11
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: 101087628
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 8 – Maximum 10 hours
Level of the learning experience leading to the micro-credential	INTERMEDIATE
Type of assessment	Automatically marked Questions Number of Questions: 12 – 15 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.B.11)

Learning Outcomes (ref. Levels 3-4 LOs 3.1.96 - 3.1.100):

- Data Access Control.
- Transaction Management.
- Stored Procedures and Triggers.
- Backup and Recovery
- Ethical Decision-Making

Description (MC 3.2.B.11)

At the intermediate level of expertise in Relational Databases, individuals delve into advanced aspects of database management. Data Access Control becomes a focal point, emphasizing the implementation of precise access permissions to safeguard sensitive information.

Transaction Management mastery is essential, ensuring the integrity of database transactions through effective handling of commits and rollbacks. Stored Procedures and Triggers proficiency is cultivated, enabling the creation of encapsulated logic within the database for enhanced functionality and automation.

A comprehensive understanding of Backup and Recovery practices is crucial, involving regular backups to prevent data loss and the establishment of recovery mechanisms for unforeseen circumstances.

This intermediate-level proficiency equips individuals with the skills to secure data access, manage complex transactions, implement procedural logic, and establish robust backup and recovery strategies, contributing to the reliable and secure functioning of relational databases in diverse operational contexts.

Questions (MC 3.2.B.11)

Questions to evaluate a person's intermediate level of knowledge in Data Protection:

1. Data Access Control: How do you grant specific privileges to a user in a relational database? Explain the role of roles in managing access control in a database.
2. Transaction Management: How does the COMMIT statement contribute to transaction management? Discuss a situation where a rollback might be necessary in a transaction.
3. Stored Procedures and Triggers: Provide an example of a stored procedure and explain its advantages. Describe the purpose of a database trigger and provide an example scenario.
4. Backup and Recovery: Describe a strategy for implementing incremental backups in a large-scale database.

ADVANCED LEVEL
(LEVEL 5 and LEVEL 6)

Advanced Web Design and Integration - 1 (MC 3.2.C.1)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	**Advanced Web Design and Integration - 1** **Code: MC 3.2.C.1**
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: **101087628**
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 5 – Maximum 7 hours
Level of the learning experience leading to the micro-credential	**ADVANCED**
Type of assessment	Automatically marked Questions Number of Questions: 10 – 12 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.C.1)

Learning Outcomes (ref. Level 5-6 LOs 3.2.101 - 3.2.104):

- Ability to work with advanced front-end frameworks.
- Ability to carry out full-stack development.
- Capacity to use advanced JavaScript libraries & tools.
- Ability to carry out Web performance optimization.

Description (MC 3.2.C.1)

Advanced expertise in web development and integration at the front-end level involves a deep understanding and command of powerful frameworks like React, Angular, or Vue. This mastery extends to architecting, scaling, and optimizing large-scale applications using these frameworks. Professionals at this level possess the capability to design robust architectures, leverage framework-specific features, and employ optimization strategies for enhanced performance, resulting in seamless and efficient user experiences.

Additionally, full-stack development proficiency characterizes the ability to seamlessly maneuver between frontend and backend aspects of web development. This entails integrating diverse technologies across the stack, ensuring harmonious interactions between frontend and backend components to create cohesive and functional web applications.

Furthermore, advanced knowledge in JavaScript libraries such as Redux, RxJS, and developer tools like Webpack signifies the adeptness to manage state efficiently, ensure code maintainability, and scale complex applications with optimized workflows, showcasing a comprehensive command over these advanced tools.

Moreover, expertise in web performance optimization involves the implementation of advanced techniques such as code splitting, lazy loading, and server-side rendering. These strategies are meticulously applied to enhance website speed, minimize load times, and augment the overall user experience across various devices and network conditions.

Questions (MC 3.2.C.1)

1. How would you determine the appropriate use of React, Angular, or Vue for developing large-scale applications? Describe scenarios where each framework excels.
2. Can you explain how you would optimize and scale a complex application architecture using a specific front-end framework?
3. How do you ensure seamless communication and data exchange between the front-end and back-end components of a full-stack application?
4. Explain the significance of using tools like Webpack or Babel in a sophisticated web development environment. How do these tools enhance the development process?
5. How would you implement code splitting, lazy loading, or server-side rendering to optimize web performance? Provide examples of scenarios where each technique would be beneficial.

Advanced Web Design and Integration - 2 (MC 3.2.C.2)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Advanced Web Design and Integration - 2 Code: MC 3.2.C.2
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: 101087628
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 8 – Maximum 10 hours
Level of the learning experience leading to the micro-credential	ADVANCED
Type of assessment	Automatically marked Questions Number of Questions: 10 – 12 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.C.2)

Learning Outcomes (ref. Level 5-6 LOs 3.2.105 - 3.2.108):

- Understanding of WebAssembly (Wasm) & Next-Generation technologies.
- Capacity to perform progressive Web Apps (PWAs) development.
- Capacity to design microservices & serverless architecture.
- Capacity to perform advanced database management & NoSQL databases.

Description (MC 3.2.C.2)

Advanced expertise in web development and integration encompasses a multifaceted skill set crucial for crafting cutting-edge solutions.

Progressive Web Apps (PWAs) Development at an advanced level involves creating dynamic applications with offline capabilities, push notifications, and elevated user experiences. Professional PWAs ensure seamless functionality, engaging users through app-like experiences within web browsers.

WebAssembly (Wasm) & Next-Generation technologies signify an understanding and utilization of emerging tools for optimizing web application performance. Advanced practitioners harness the potential of WebAssembly and other evolving technologies to enhance speed, efficiency, and user experiences across diverse devices and platforms.

Proficiency in microservices & serverless architecture means the ability to design scalable web applications by structuring them into smaller, independent services. Advanced developers proficiently deploy microservices and serverless architectures, enabling scalability and adaptability while optimizing resources and costs.

Furthermore, expertise in Advanced Database management & NoSQL Databases involves adept usage of databases like MongoDB or Cassandra, coupled with optimization techniques. Advanced practitioners efficiently manage vast data sets, ensuring high performance, scalability, and effective data management in complex web applications. This comprehensive skill set enables professionals to build sophisticated, high-performing web solutions meeting the demands of modern web development.

Questions (MC 3.2.C.2)

1. How would you describe the role of WebAssembly (Wasm) in enhancing web application performance compared to traditional JavaScript?
2. Can you explain how emerging technologies, other than Wasm, contribute to building high-performance web applications? Describe a recent advancement and its potential impact.
3. Describe the key features and benefits of Progressive Web Apps (PWAs) compared to traditional web applications. How do PWAs enhance user experiences?
4. Explain the concept of microservices and their advantages in building scalable web applications. How does this architecture differ from monolithic applications?
5. How would you determine the suitability of using NoSQL databases such as MongoDB or Cassandra over traditional relational databases for a specific web application? Provide examples.

Advanced Web Design and Integration - 3 (MC 3.2.C.3)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	**Advanced Web Design and Integration - 3** **Code: MC 3.2.C.3**
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: **101087628**
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 8 – Maximum 10 hours
Level of the learning experience leading to the micro-credential	**ADVANCED**
Type of assessment	Automatically marked Questions Number of Questions: 10 – 12 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.C.3)

Learning Outcomes (ref. Level 5-6 LOs 3.2.109 - 3.2.112):

- Knowledge in Web application security.
- Understanding containerization & orchestration.
- Capacity to carry out advanced API development & GraphQL.
- Capacity in developing real-time Web applications & WebSockets

Description (MC 3.2.C.3)

Advanced proficiency in web development and integration involves a comprehensive grasp of crucial skills and knowledge sets:

Web Application Security expertise entails a deep understanding of security protocols, encryption methods, and secure coding practices. Professionals at this level possess a meticulous comprehension of potential security threats, implementing robust measures to safeguard web applications against vulnerabilities and cyber-attacks.

Containerization & Orchestration, including tools like Docker and Kubernetes, signifies the ability to utilize containerized deployment and orchestration tools. Advanced practitioners leverage these technologies to create scalable, manageable, and portable web applications, optimizing resource utilization and streamlining deployment processes.

Advanced API development & GraphQL proficiency involves adeptness in constructing intricate APIs. This skill encompasses implementing GraphQL, enabling efficient querying and manipulation of data for enhanced performance and flexibility in managing complex data structures.

Furthermore, expertise in Real-Time Web applications & WebSockets showcases the ability to develop real-time web applications using WebSockets and related technologies. Skilled developers excel in enabling instant data exchange, fostering interactive and dynamic user experiences through real-time updates and communication channels. These advanced skills collectively empower professionals to create secure, scalable, and innovative web solutions meeting the demands of modern web development.

Questions (MC 3.2.C.3)

1. How do you ensure data integrity and confidentiality in your code?
2. How does containerization enhance scalability and manageability?
3. Explain the role of orchestration tools like Kubernetes in managing containerized applications. How does Kubernetes help in deploying and scaling web applications?
4. Discuss the advantages of using GraphQL over traditional REST APIs for data querying and manipulation in web applications.
5. How would you design a complex API structure to ensure efficient data retrieval and manipulation, considering scalability and performance?
6. How does using WebSockets enable instant data exchange between clients and servers?

Advanced Web Design and Integration - 4 (MC 3.2.C.4)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	**Advanced Web Design and Integration - 4** **Code: MC 3.2.C.4**
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: **101087628**
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 8 – Maximum 10 hours
Level of the learning experience leading to the micro-credential	**ADVANCED**
Type of assessment	Automatically marked Questions Number of Questions: 10 – 12 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.C.4)

Learning Outcomes (ref. Level 5-6 LOs 3.2.113 - 3.2.116):

- Ability to carry out cross-platform development.
- Ability to carry out Continuous Integration (CI).
- Ability to carry out Continuous deployment (CD).
- Capabilities in team leadership & collaboration.

Description (MC 3.2.C.4)

Advanced proficiency in web development and integration encompasses a diverse range of skills crucial for modern development landscapes:

Cross-Platform development proficiency, exemplified by frameworks like React Native or Ionic, denotes the capability to craft cross-platform mobile applications utilizing web technologies. Professionals possessing this skill harness the power of web-based technologies to develop robust and scalable applications across multiple platforms, ensuring efficient code reuse and quicker time-to-market.

Continuous Integration/Continuous Deployment (CI/CD) expertise involves advanced implementation and automation of CI/CD pipelines. Skilled practitioners streamline development workflows, automating build, test, and deployment processes, facilitating rapid and reliable software delivery cycles. They employ advanced tools and methodologies to ensure consistency, quality, and efficiency of the development lifecycle.

Furthermore, team leadership & collaboration prowess represents the ability to lead, manage, and inspire teams while overseeing projects. Advanced developers excel in mentoring junior developers, fostering their growth, and effectively collaborating within development teams. They possess strong communication skills, promote teamwork, and navigate diverse perspectives to ensure successful project execution and achieve collective goals. This combination of technical expertise and leadership capabilities drives innovation and excellence within web development teams.

Questions (MC 3.2.C.4)

1. How does cross-platform development using frameworks like React Native or Ionic leverage web technologies to build mobile applications? Highlight the advantages of using these frameworks.
2. Discuss a project where you've utilized React Native or Ionic to develop a cross-platform mobile application. What challenges did you face, and how did you address them?
3. Explain the importance of implementing CI/CD pipelines in web development. How does automation improve efficiency and quality in the development process?
4. Describe the steps involved in setting up and maintaining an advanced CI/CD pipeline for a complex web application. How do you ensure robustness and reliability in the pipeline?
5. Discuss your approach to leading a development team and managing projects. How do you ensure effective communication, coordination, and motivation within the team?

Advanced Social Media Content Elaboration - 1 (MC 3.2.C.5)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	**Advanced Social Media Content Elaboration - 1** **Code: MC 3.2.C.5**
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: **101087628**
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 5 – Maximum 7 hours
Level of the learning experience leading to the micro-credential	**ADVANCED**
Type of assessment	Automatically marked Questions Number of Questions: 10 – 12 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.C.5)

Learning Outcomes (ref. Level 5-6 LOs 3.2.117 - 3.2.120):

- Capability to create expert-level content.
- Ability to develop complex content strategies.
- Capacity to perform advanced data-driven audience analysis.
- Capacity of advanced copywriting and brand storytelling.

Description (MC 3.2.C.5)

At the advanced level of expertise in social media content development and integration, professionals exhibit an extended proficiency in content creation and strategy. Mastery in crafting expert-level content encompasses a diverse array of formats. This includes interactive elements, AR filters, 360-degree videos, live streaming, and immersive experiences meticulously tailored for each platform. The ability to adapt these formats should showcase an understanding of user engagement dynamics.

Expertise at this level extends to the development of intricate content strategies. Professionals possess the capability to architect highly targeted and personalized strategies aligned with specific objectives. These strategies incorporate segmentation, personalization techniques, and meticulous customer journey mapping, ensuring content resonates profoundly with intended audiences.

Advanced proficiency in data analytics is very important at this expertise level. Individuals should possess data-driven insights to comprehend audience behavior, preferences, and micro-segmentation. This mastery enables the delivery of highly targeted content, precisely tailored to meet the needs and interests of the audiences.

Additionally, a key aspect of advanced expertise lies in the adeptness at advanced copywriting and brand storytelling. Professionals exhibit skills in crafting persuasive narratives and maintaining consistent brand messaging across multiple social media platforms. Their adeptness in creating compelling stories strengthens brand identity and fosters deeper connections with the audience.

Questions (MC 3.2.C.5)

1. Explain your capability in creating expert-level content across diverse formats like interactive content, AR filters, live streaming, and immersive experiences for various social media platforms. Can you provide examples of how you've utilized these formats to engage audiences effectively?
2. How do you ensure content resonates with diverse audience segments while meeting strategic goals? Provide an example of a successful targeted content strategy you've implemented.
3. How do you control data analytics to understand audience behavior, preferences, and micro-segmentation? Provide an example where audience analysis influenced content strategy and resulted in improved engagement or conversions.
4. How do you maintain consistent brand messaging while tailoring content for different platforms and audience segments? Share an example of a successful brand storytelling campaign you've developed.

Advanced Social Media Content Elaboration - 2 (MC 3.2.C.6)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Advanced Social Media Content Elaboration - 2 Code: MC 3.2.C.6
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: 101087628
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 8 – Maximum 10 hours
Level of the learning experience leading to the micro-credential	ADVANCED
Type of assessment	Automatically marked Questions Number of Questions: 10 – 12 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.C.6)

Learning Outcomes (ref. Level 5-6 LOs 3.2.121 - 3.2.124):

- Utilization at expert-level of Social Media analytics.
- Capacity of strategic visual design and branding.
- Capability of producing innovative video content and storytelling.
- Mastery of paid Social Media advertising.

Description (MC 3.2.C.6)

At the advanced level of expertise in Social Media content development and integration, a multifaceted skill set becomes necessary to mitigate the complexities of the digital landscape.

One crucial aspect is the utilization of expert-level Social Media analytics. Professionals at this tier showcase a mastery of advanced analytics tools, allowing them to analyze, and to extract actionable insights crucial for continuous content optimization. This data-driven approach facilitates informed decision-making, leading to enhanced content performance.

Mastery in advanced graphic design, video editing, and branding techniques enables the creation of a consistent, visually striking brand presence across diverse content formats. This ensures a compelling and cohesive brand image that resonates across various platforms. Advanced practitioners showcase a capability for producing innovative video content and storytelling. Proficiency in crafting videos using advanced editing techniques, coupled with storytelling prowess, helps in creating engaging narratives that captivate audiences, thereby maximizing engagement.

Mastery of paid Social Media advertising is crucial for this expertise level. Experts possess the knowledge and skills to plan and execute complex paid advertising campaigns. This includes employing intricate targeting strategies, retargeting methods, and optimizing return on investment (ROI), ensuring that each campaign achieves its desired objectives effectively.

Questions (MC 3.2.C.6)

1. How do you interpret complex metrics to derive actionable insights for content optimization?
2. Can you provide an example where analytics insights led to a significant improvement in content performance?
3. How do you ensure a consistent brand presence through advanced graphic design and video editing techniques? Provide an example of how you've successfully maintained brand consistency across diverse content.
4. How do you employ advanced editing techniques and storytelling to engage audiences effectively?.
5. How do you employ complex targeting and retargeting strategies to optimize ROI? Provide an example of a successful paid advertising campaign and the key strategies that contributed to its success.

Advanced Social Media Content Elaboration - 3 (MC 3.2.C.7)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Advanced Social Media Content Elaboration - 3 Code: MC 3.2.C.7
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: 101087628
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 8 – Maximum 10 hours
Level of the learning experience leading to the micro-credential	ADVANCED
Type of assessment	Automatically marked Questions Number of Questions: 10 – 12 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.C.7)

Learning Outcomes (ref. Level 5-6 LOs 3.2.125 - 3.2.127):

- Extended capacity to achieve influencer marketing and collaborations.
- Extended capacity to achieve community management and engagement strategies.
- Extended capacity to achieve crisis communication and reputation management.

Description (MC 3.2.C.7)

At the advanced level of expertise in social media content development and integration, an expansion of capabilities marks a shift towards more complex strategies and execution. An extended capacity for influencer marketing and collaborations becomes crucial. Advanced skills involve not just identification but also looking after strategic partnerships with influencers. This includes the ability to execute intricate influencer campaigns, meticulously measuring their impact on brand visibility, audience engagement, and conversion rates. Mastery in this area involves leveraging influencer relationships to drive authenticity, trust, and credibility for the brand.

Expanded skills in community management extend beyond mere interaction to building brand communities. This involves implementing engagement tactics that foster connections, drive meaningful conversations, and create loyal brand advocates. Advanced proficiency in this area amplifies brand loyalty and advocacy through strategic engagement initiatives.

An extended capacity for crisis communication and reputation management becomes crucial at this level. Experts demonstrate adeptness in swiftly navigating and mitigating complex social media crises. They possess the skills to implement effective crisis communication strategies, ensuring brand reputation remains intact even during challenging times.

Questions (MC 3.2.C.7)

1. How do you measure the impact of influencer collaborations on brand visibility and engagement?
2. How do you drive engagement and create brand advocates through strategic engagement tactics? Provide an example of a community engagement strategy that significantly enhanced brand loyalty.
3. How do you navigate complex situations while safeguarding brand reputation? Share an instance where your crisis communication strategy successfully mitigated a social media crisis.
4. How do you use analytics and metrics to assess the impact on brand visibility, engagement, and reputation? Provide examples of key performance indicators (KPIs) used to measure social media success.

Advanced Social Media Content Elaboration - 4 (MC 3.2.C.8)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Advanced Social Media Content Elaboration - 4 Code: MC 3.2.C.8
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: 101087628
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 8 – Maximum 10 hours
Level of the learning experience leading to the micro-credential	ADVANCED
Type of assessment	Automatically marked Questions Number of Questions: 10 – 12 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.C.8)

Learning Outcomes (ref. Level 5-6 LOs 3.2.128 - 3.2.130):

- Ability to conduct data-driven testing and optimization.
- Extended capacity in strategic collaboration and partnerships.
- Ability of leadership and thought leadership in social media.

Description (MC 3.2.C.8)

At the advanced level of expertise in social media content development and integration, professionals possess the necessary skills to optimize strategies and drive users' engagement. One significant proficiency lies in the ability to conduct data-driven testing and optimization. This includes a proven track record in conducting advanced A/B testing, multivariate testing, and iterative optimization of content strategies. Detailed data analysis can enable refining content strategies for maximum impact and audience resonance.

Professionals proficient in fostering strategic collaborations with diverse entities—brands, organizations, or influencers can orchestrate joint campaigns, cross-promotions, and innovative collaborations. Their adeptness in navigating partnerships can contribute to expanding mutually beneficial engagements.

At the advanced level individuals showcase leadership capacity in the area of social media. Beyond managerial roles, these leaders establish thought leadership within the industry by implementing new approaches, setting trends, and proposing content that influences industry discourse.

In essence, advanced experts in social media content development and integration exhibit a blend of analytical prowess, collaborative finesse, and visionary leadership, driving strategies that resonate with audiences while steering industry innovation.

Questions (MC 3.2.C.8)

1. Describe your experience in conducting advanced A/B testing, multivariate testing, and iterative optimization of content strategies based on detailed data analysis. How do you control data-driven insights to refine and enhance content performance?
2. How do you identify and cultivate strategic partnerships to amplify brand reach and engagement? Provide an example of a successful collaboration that significantly boosted social media impact.
3. How do you inspire and motivate teams to innovate and excel in social media campaigns? Describe an instance where your leadership contributed to establishing thought leadership or pioneering trend-setting content in the industry.
4. How do you stay ahead of trends and implement innovative strategies to capture audience attention? Share an example of a social media campaign or content that showcased your ability to set trends and innovate in the industry.

Database Internals and Optimization (MC 3.2.C.9)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Database Internals and Optimization Code: MC 3.2.C.9
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: 101087628
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 10 – Maximum 12 hours
Level of the learning experience leading to the micro-credential	ADVANCED
Type of assessment	Automatically marked Questions Number of Questions: 12 – 15 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.C.9)

Learning Outcomes (ref. Levels 5-6 LOs 3.2.131 - 3.2.135):

- Database Internals.
- Advanced Indexing Techniques.
- Database Performance Tuning.
- Optimizing Complex Queries.
- Cost Optimization.

Description (MC 3.2.C.9)

At the advanced level of expertise in Relational Databases, individuals explore into details Database Internals, acquiring a deep understanding of how database engines store, retrieve, and manage data. Advanced Indexing Techniques have become second nature, involving the strategic creation and management of indexes tailored to specific database workloads. Database Performance Tuning is a refined skill, surrounding the identification and resolution of difficulties for optimal system efficiency. Optimizing Complex Queries becomes intuitive, requiring a nuanced approach to complex database queries to enhance execution speed and resource utilization.

Moreover, individuals must take into consideration Cost Optimization, which involves making informed decisions to balance performance gains with resource costs. This advanced proficiency equips individuals to navigate the complexities of relational databases with precision, ensuring not only robust database design but also fine-tuned performance for demanding applications and scenarios.

Questions (MC 3.2.C.9)

Questions to evaluate a person's advanced level of knowledge in Database Internals and Optimization:

1. Database Internals: Explain the role of a query execution plan in understanding database internals. How does the storage engine handle data retrieval and indexing in a relational database?
2. Database Performance Tuning: How can statistics be useful to enhance the performance of a relational database? Explain the role of buffer pool tuning in optimizing database performance.
3. Optimization: Provide an example of rewriting a complex query to improve performance. Describe strategies for optimizing resource utilization to achieve cost efficiency.

Distributed Database Systems (MC 3.2.C.10)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Distributed Database Systems Code: MC 3.2.C.10
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: 101087628
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 8 – Maximum 10 hours
Level of the learning experience leading to the micro-credential	ADVANCED
Type of assessment	Automatically marked Questions Number of Questions: 8 – 10 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.C.10)

Learning Outcomes (ref. Levels 5-6 LOs 3.2.136 - 3.2.139):

- Distributed Database Systems.
- Database Partitioning Strategies.
- Advanced Data Modeling.
- Innovation.

Description (MC 3.2.C.10)

At the advanced level of expertise in Relational Databases, individuals deepen the complexity of Distributed Database Systems, mastering the principles of data distribution, replication, and coordination across multiple interconnected databases. Database Partitioning Strategies become a basic skill, involving the strategic division of large datasets for improved performance and scalability. Advanced Data Modeling is improved to model complex relationships, hierarchies, and various data types, ensuring comprehensive representation of business requirements.

Innovation becomes a defining attitude, inspiring individuals to envision and implement cutting-edge solutions in database architecture and design. This includes exploring emerging technologies, adapting novel modeling techniques, and devising inventive strategies for data distribution and management.

This advanced proficiency equips individuals to navigate the challenges of distributed environments, implement sophisticated partitioning strategies, model complex data structures, and foster an innovative mindset to address evolving demands in relational database systems.

Questions (MC 3.2.C.10)

Questions to evaluate a person's advanced level of knowledge in Distributed Database Systems:

1. Distributed Database Systems: How do you ensure consistency and fault tolerance in a distributed database environment? Provide an example of a scenario where data sharding is advantageous in a distributed system.
2. Database Partitioning Strategies: Describe a situation where vertical partitioning is preferable over horizontal partitioning. How does partitioning contribute to improved performance and scalability?
3. Advanced Data Modeling: How would you model a hierarchical data structure in a relational database? Describe a scenario where advanced data modeling techniques were crucial in a distributed database environment.
4. Integration of Skills: Provide an example of a creative solution you developed to address a special data modeling challenge.

Advanced Security Measures and Compliance (MC 3.2.C.11)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Advanced Security Measures and Compliance Code: MC 3.2.C.11
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: 101087628
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 10 – Maximum 12 hours
Level of the learning experience leading to the micro-credential	ADVANCED
Type of assessment	Automatically marked Questions Number of Questions: 12 – 15 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.C.11)

Learning Outcomes (ref. Levels 5-6 LOs 3.2.140 - 3.2.145):

- Data Encryption and Security.
- Advanced Transaction Management.
- Replication Strategies.
- Advanced Security Implementation.
- Data Archiving and Purging.
- Problem-Solving Mindset.

Description (MC 3.2.C.11)

At the advanced level of expertise in Relational Databases, individuals elevate their capabilities in Data Encryption and Security, implementing robust measures to safeguard sensitive information through encryption protocols and access controls. Advanced Transaction Management mastery involves orchestrating complex transactions with precision, ensuring data integrity and consistency. Replication Strategies become a focal point, allowing for the duplication of data across multiple servers for enhanced availability and fault tolerance. Furthermore, individuals implement Advanced Security measures, going beyond basic access controls to fortify the database against sophisticated threats. Data Archiving and Purging proficiency is cultivated, involving the strategic management of historical data to optimize database performance.

A Problem-Solving Mindset is inherent, empowering individuals to tackle intricate security challenges, optimize data storage, and devise innovative solutions for data archiving and purging. This advanced proficiency equips individuals to navigate the evolving landscape of security threats and data management complexities in relational database systems.

Questions (MC 3.2.C.11)

Questions to evaluate a person's advanced level of knowledge in Advanced Security Measures and Compliance:

1. Advanced Transaction Management: How does two-phase commit protocol contribute to advanced transaction management? Discuss the considerations for implementing long-running transactions in a database.
2. Replication Strategies: How do you ensure data consistency in a replicated database environment?
3. Advanced Security Implementation: Explain how you would secure a database against SQL injection attacks. Provide an example of a situation where dynamic data masking is essential for security.
4. Data Archiving and Purging: How do you decide on a data retention policy for archiving and purging purposes?

EXPERT LEVEL
(LEVEL 7 and LEVEL 8)

Mastering Web Development and Integration - 1 (MC 3.2.D.1)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	**Mastering Web Development and Integration - 1** **Code: MC 3.2.D.1**
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: **101087628**
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 10 – Maximum 12 hours
Level of the learning experience leading to the micro-credential	**Highly specialized**
Type of assessment	Automatically marked Questions Number of Questions: 16 – 20 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.D.1)

Learning Outcomes (ref. Levels 7-8-6 LOs 3.2.146 - 3.2.149):

- Knowledge of cutting-edge Web technologies.
- Ability to carry out advanced frontend architecture design.
- Capability of advanced performance engineering.
- Web Security specialization.

Description (MC 3.2.D.1)

Highly specialized expertise in web development and integration encompasses a deep understanding and hands-on experience with cutting-edge web technologies. Professionals at this level continuously update their knowledge base, staying abreast of the latest trends and advancements in the rapidly evolving web landscape.

Advanced frontend architecture design signifies the ability to craft intricate and scalable frontend architectures. These experts employ advanced design patterns and principles to architect complex systems, ensuring robustness, scalability, and maintainability in large-scale applications.

Moreover, mastery in Advanced performance engineering involves optimizing web application performance to its utmost potential. These specialists utilize advanced techniques, conduct performance profiling, and fine-tune applications meticulously to deliver optimal user experiences, focusing on speed, responsiveness, and efficiency.

Web Security specialization denotes a niche focus on web security, encompassing penetration testing, ethical hacking, and advanced security implementations. These professionals specialize in identifying and mitigating complex threats, employing rigorous security measures to safeguard web applications against vulnerabilities and cyber-attacks. Their expertise ensures the resilience and integrity of web systems in an increasingly interconnected and digital environment.

Questions (MC 3.2.D.1)

1. How do you stay updated with the latest trends and advancements in web technologies?
2. Can you discuss a specific emerging web technology or trend that excites you, and how it could potentially impact the future of web development?
3. Describe the process of designing a complex and scalable frontend architecture for a large-scale web application. What design patterns and principles would you apply, and why?
4. Explain the steps you take to optimize web application performance. How do you approach performance profiling and identify bottlenecks in a web application?
5. Describe your approach to web security, including penetration testing and ethical hacking methodologies. How do you assess and mitigate complex security threats in web applications?

Mastering Web Development and Integration - 2 (MC 3.2.D.2)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Mastering Web Development and Integration - 2 Code: MC 3.2.D.2
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: 101087628
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 10 – Maximum 12 hours
Level of the learning experience leading to the micro-credential	Highly specialized
Type of assessment	Automatically marked Questions Number of Questions: 16 – 20 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.D.2)

Learning Outcomes (ref. Levels 5-6 LOs 3.2.150 - 3.2.153):

- Web accessibility & inclusive design expertise.
- Highly scalable & fault-tolerant systems expertise.
- Capacity to perform cross-platform & universal applications development.
- Capacity to carry out cloud-native Web development & serverless computing.

Description (MC 3.2.D.2)

Highly specialized expertise in web development and integration encompasses a niche focus on several key skills, as the following:

Web accessibility & inclusive design expertise signifies specialization in creating inclusive web experiences catering to diverse user needs. Professionals at this level excel in implementing accessibility features and adhering to standards like WCAG. Their knowledge extends to accommodating assistive technologies, ensuring that web content is accessible to all users regardless of disabilities.

Highly scalable & fault-tolerant systems expertise involves designing and building web systems resilient to failures and capable of handling massive traffic. This expertise ensures continuous uptime by implementing fault-tolerant architectures and scalable infrastructure, guaranteeing reliability and performance under heavy loads. Cross-platform & universal applications development denotes mastery in creating applications compatible across various platforms and devices. This skill involves leverage of advanced frameworks and methodologies to develop universal applications, ensuring seamless user experiences across diverse environments.

Furthermore, expertise in cloud-native Web development & serverless computing involves designing, developing, and deploying web applications in cloud-native environments. These specialists tackle serverless computing and cloud services to create scalable, cost-effective, and easily maintainable web applications, optimizing resource utilization and scalability while minimizing operational overhead.

Questions (MC 3.2.D.2)

1. How do you ensure compliance with accessibility standards like WCAG?
2. What challenges did you face, and how did you ensure a highly accessible user experience?
3. Discuss your approach to designing highly scalable and fault-tolerant web systems capable of handling massive traffic. What architectural patterns or technologies do you use for fault tolerance and scalability?
4. How do you approach developing universal applications that seamlessly function across various platforms and devices? Describe the frameworks or methodologies you utilize for cross-platform development.
5. How did you ensure consistent functionality across different platforms?
6. How do you leverage cloud services for efficient development and deployment?

Mastering Web Development and Integration - 3 (MC 3.2.D.3)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Mastering Web Development and Integration - 3 Code: MC 3.2.D.3
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: 101087628
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 10 – Maximum 12 hours
Level of the learning experience leading to the micro-credential	Highly specialized
Type of assessment	Automatically marked Questions Number of Questions: 16 – 20 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.D.3)

Learning Outcomes (ref. Levels 5-6 LOs 3.2.154 - 3.2.156):

- Web analytics & data science integration specialization.
- IoT & Web integration specialization.
- Capability in advanced DevOps & Automation.

Description (MC 3.2.D.3)

Highly specialized expertise in web development and integration entails mastery in niche areas crucial for advancing technology and user experiences:

Web Analytics & Data Science integration specialization signifies a deep understanding of utilizing web analytics tools and data science techniques. Professionals at this level harness these tools to extract valuable insights from user behavior and application performance. They leverage data-driven approaches to optimize web applications, making informed decisions to enhance user experiences and achieve business objectives.

Specialized IoT & Web integration expertise involves seamlessly integrating web technologies with IoT ecosystems. These specialists create interconnected and intelligent web-enabled devices and systems, bridging the gap between web applications and the physical world. Their proficiency enables the development of innovative, IoT-driven web applications that enhance automation, efficiency, and connectivity in various domains.

Additionally, Advanced DevOps & Automation Specialists possess expertise in advanced DevOps practices, automation tools, and continuous improvement methodologies. They optimize web development workflows through automation, implementing robust DevOps strategies that enhance deployment frequency, reliability, and efficiency. Their proficiency in automation streamlines processes, accelerates development cycles, and fosters continuous improvement in web development practices.

Questions (MC 3.2.D.3)

1. How do you leverage web analytics tools to gather and interpret data for improving web applications? Describe a scenario where data insights influenced decision-making in a web development project.
2. Discuss the data science techniques you've used to derive actionable insights for optimizing user experiences or enhancing web application performance.
3. Explain how you integrate web technologies with IoT ecosystems to create interconnected and smart web-enabled devices.
4. Describe the advanced DevOps practices you've implemented in web development workflows. How do you utilize automation tools to streamline processes and improve efficiency?
5. Provide an example of a project where you applied continuous improvement methodologies in DevOps practices to enhance the web development lifecycle.

Mastering Web Development and Integration - 4 (MC 3.2.D.4)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	**Mastering Web Development and Integration - 4** **Code: MC 3.2.D.4**
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: **101087628**
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 10 – Maximum 12 hours
Level of the learning experience leading to the micro-credential	**Highly specialized**
Type of assessment	Automatically marked Questions Number of Questions: 16 – 20 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.D.4)

Learning Outcomes (ref. Levels 5-6 LOs 3.2.157 - 3.2.161):

- Understanding AI & Machine Learning Integration.
- Capacity to integrate AI & Machine Learning in Web applications.
- Expertise in UX/UI Design & interaction.
- Expertise in Regulatory Compliance.
- Expertise in Cybersecurity.

Description (MC 3.2.D.4)

Highly specialized expertise in web development and integration involves several key competencies vital for pushing the boundaries of innovation:

AI & Machine Learning Integration expertise signifies a profound understanding and adeptness in integrating AI and machine learning functionalities into web applications. Professionals at this level harness the power of AI and machine learning algorithms to enhance user experiences by personalizing content, enabling predictive analytics, and automating tasks, thereby revolutionizing web application capabilities.

Highly Specialized UX/UI Design & interaction expertise denotes mastery in crafting user-centric and innovative user experiences. These experts possess a deep understanding of user behavior analysis, employing intricate interaction design principles to create engaging interfaces. Their designs prioritize usability, aesthetics, and intuitive interactions, ensuring exceptional user satisfaction and engagement.

Regulatory Compliance & Cybersecurity expertise showcases specialization in ensuring web applications adhere to industry regulations while implementing robust cybersecurity measures. These specialists safeguard web applications by addressing compliance requirements and deploying stringent security protocols. Their proficiency in regulatory compliance and cybersecurity ensures data privacy, confidentiality, and the resilience of web applications against potential threats, bolstering trust and reliability among users.

Questions (MC 3.2.D.4)

1. Explain the role of AI and machine learning in enhancing user experiences within web applications. Provide examples of how these technologies can be leveraged for improved user interactions.
2. Describe a scenario where you integrated AI or machine learning functionalities into a web application to enhance user experiences. How did this integration impact user interactions or application performance?
3. Discuss your approach to crafting user-centric and engaging user experiences. How do you incorporate user behavior analysis and intricate interactions into UX/UI design?
4. Explain the importance of regulatory compliance in web applications and how you ensure adherence to industry regulations. How do you stay updated with evolving compliance standards?
5. Discuss the cybersecurity measures you've implemented in web applications to protect against potential threats. How do you approach ensuring robust security measures in a constantly evolving threat landscape?

Mastering Social Media Content Integration - 1 (MC 3.2.D.5)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	**Mastering Social Media Content Integration - 1** **Code: MC 3.2.D.5**
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: **101087628**
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 10 – Maximum 12 hours
Level of the learning experience leading to the micro-credential	**Highly specialized**
Type of assessment	Automatically marked Questions Number of Questions: 16 – 20 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.D.5)

Learning Outcomes (ref. Levels 7-8-6 LOs 3.2.162 - 3.2.165):

- Capacity to integrate emerging technologies into social media.
- Capacity to achieve content personalization.
- Capacity to integrate social commerce and E-commerce into social media.
- Capacity to perform advanced data analysis and predictive modeling.

Description (MC 3.2.D.5)

At the top of expertise in social media content development and integration lies a mastery that transcends conventional practices. The adeptness to integrate emerging technologies like AI, AR/VR, and IoT into social media content strategies defines this level. By implementing these innovations, experts create immersive experiences to captivate audiences, fostering deeper connections and engagements.

The ability to achieve content personalization is crucial at this high-level expertise. Professionals in the field should craft dynamic, tailored content that adapts to individual user preferences and behaviors. This proficiency enables the delivery of highly personalized experiences, elevating user interaction.

Expertise in integrating social commerce and e-commerce within social media platforms characterizes this level. Experts advanced proficiency empowers integration, looking after a direct path from social engagement to purchasing decisions.

Proficiency in advanced data analysis and predictive modeling is specific to this level of expertise. By using analytics and machine learning, experts can forecast trends and optimize content strategies proactively. The ability to extract trends from data can empower their strategic decision-making.

Expertise at this highly specialized level embodies innovation, personalization and commerce integration, transforming social media into a dynamic and engaging ecosystem.

Questions (MC 3.2.D.5)

1. Can you describe your experience in integrating emerging technologies like AI, AR/VR, or IoT into social media content strategies?
2. How do you ensure content personalization effectively engages and resonates with users? Share an example highlighting your expertise in achieving content personalization.
3. How do you drive sales and conversions directly from social channels? Provide an example of a successful e-commerce or social commerce campaign you orchestrated on social media.
4. Can you elaborate on your proficiency in leveraging advanced data analytics, predictive modeling, and machine learning algorithms to forecast trends and optimize content strategies on social media?
5. How do you use data-driven insights proactively to refine and enhance content strategies? Share an instance where data analysis significantly impacted a social media campaign's success.

Mastering Social Media Content Integration - 2 (MC 3.2.D.6)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Mastering Social Media Content Integration - 2 Code: MC 3.2.D.6
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: 101087628
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 10 – Maximum 12 hours
Level of the learning experience leading to the micro-credential	Highly specialized
Type of assessment	Automatically marked Questions Number of Questions: 16 – 20 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.D.6)

Learning Outcomes (ref. Levels 5-6 LOs 3.2.166 - 3.2.169):

- Understanding of cultural sensitivity and global marketing.
- Capacity to implement hyperlocal and geo-targeted strategies.
- Niche community building and engagement specialization.
- Mastery of cross-channel content distribution.

Description (MC 3.2.D.6)

At the highly specialized level of expertise in social media content development and integration, professionals possess skills that are crucial for global engagement and content dissemination.

A deep comprehension of cultural sensitivity and global marketing forms the core of this level. This expertise involves an awareness of cultural aspects, prevailing trends in diverse markets, and the adeptness to design effective international social media campaigns. Mastery in crafting strategies that resonate with diverse cultures ensures content relevance and resonance across borders.

Possessing the capacity to execute hyperlocal and geo-targeted strategies signifies an advanced skill set. Experts adeptly utilize geo-targeting tools to tailor content, engaging specific local audiences with pinpoint accuracy. Leveraging location-based strategies ensures highly targeted and localized content delivery, enhancing relevance and engagement.

Specialization in niche community building and engagement denotes particular skills. Professionals at this level possess specialized abilities to cultivate and sustain engaged communities centered around highly specific interests or topics on social media platforms.

Mastery of cross-channel content distribution represents an advanced capability. Proficient individuals excel in disseminating and repurposing content across diverse platforms and channels, optimizing reach and impact. This capacity ensures that content is strategically placed, maximizing visibility and resonance across varied digital landscapes.

Questions (MC 3.2.D.6)

1. Explain how your understanding of cultural nuances and global market trends informs your strategies for international social media marketing campaigns. Provide an example where you successfully navigated cultural sensitivities to create an effective global campaign.
2. How do you control the location-based strategies to create highly targeted and localized content? Share an example of a successful hyperlocal campaign you've executed.
3. How do you identify, engage, and maintain active participation within niche communities? Provide an example where you successfully fostered engagement within a specialized social media community.
4. How do you ensure consistent messaging and adapt content to maximize reach and impact across different channels? Share an example where your cross-channel content strategy effectively amplified content reach.

Mastering Social Media Content Integration - 3 (MC 3.2.D.7)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	**Mastering Social Media Content Integration - 3** **Code: MC 3.2.D.7**
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: **101087628**
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 10 – Maximum 12 hours
Level of the learning experience leading to the micro-credential	**Highly specialized**
Type of assessment	Automatically marked Questions Number of Questions: 16 – 20 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.D.7)

Learning Outcomes (ref. Levels 5-6 LOs 3.2.170 - 3.2.172):

- Capacity to perform advanced influencer relationship management.
- Capacity to manage branded content partnerships and sponsorships.
- Capacity of crisis prediction and prevention.

Description (MC 3.2.D.7)

At the highly specialized level of expertise in social media content development and integration, professionals exhibit proficiency in areas that significantly impact brand engagement and reputation.

One crucial skill is the advanced capacity for influencer relationship management. Experts at this level possess abilities to cultivate and sustain long-term partnerships with influencers. They strategize and execute comprehensive influencer programs, leveraging influencers' reach and resonance to amplify brand equity. Moreover, these adept professionals possess the acumen to meticulously measure and analyze the impact and effectiveness of influencer collaborations, ensuring alignment with brand objectives.

Another skill set consists of managing branded content partnerships and sponsorships. These specialists demonstrate proficiency in establishing and nurturing strategic alliances, sponsorships, and co-marketing initiatives across diverse social media platforms. Their expertise lies not only in initiating partnerships but also in optimizing and managing these collaborations to yield maximum brand exposure and audience engagement.

Individuals at this level showcase a remarkable capacity for crisis prediction and prevention. Possessing advanced data analysis skills, they can forecast potential social media crises. Their proactive approach involves the implementation of preemptive strategies to avert or mitigate the impact of these crises, safeguarding the brand's reputation and maintaining consumer trust.

Questions (MC 3.2.D.7)

1. How do you strategize influencer partnerships to align with brand objectives? Provide an example of a successful influencer campaign and its impact on brand equity.
2. How do you ensure alignment between brand values and content produced through partnerships? Share a successful branded content partnership experience.
3. How do you use data analytics or monitoring tools to anticipate crises? Provide an example where your proactive approach averted a potential social media crisis.
4. How do you analyze metrics to assess the effectiveness of these initiatives and their contribution to overall brand success?

Mastering Social Media Content Integration - 4 (MC 3.2.D.8)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Mastering Social Media Content Integration - 4 Code: MC 3.2.D.8
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: 101087628
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 10 – Maximum 12 hours
Level of the learning experience leading to the micro-credential	Highly specialized
Type of assessment	Automatically marked Questions Number of Questions: 16 – 20 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.D.8)

Learning Outcomes (ref. Levels 5-6 LOs 3.2.173 - 3.2.175):

- Knowledge of AI-driven customer service and Chatbots
- Ability to develop executive-level Social Media strategy.
- Capacity of cutting-edge innovation.

Description (MC 3.2.D.8)

At the top of expertise in social media content development and integration lies a highly specialized skill set related to elevating engagement strategies. Proficiency in AI-driven customer service and Chatbots is a keystone here. Mastery in implementing these solutions signifies a deep understanding of using AI-powered automation to optimize customer engagement and support mechanisms. Such specialized knowledge allows for the creation of responsive interactions, while streamlining organizational processes.

At this elevated level, professionals possess the ability to craft executive-level social media strategies. They can develop complex plans and offer strategic counsel to executives, introducing them to the dynamic social media landscapes. Professionals' insights into emerging trends and transformative potentials can influence a brand perception and drive a business growth.

Individuals at this level of expertise exhibit a high capacity for cutting-edge innovation. They lead the change in social media strategies, contributing to the creation of new approaches that can challenge industry norms. The techniques of thought leadership they propose can sometimes reshape businesses by setting new standards and benchmarks in an entire area of interest.

Questions (MC 3.2.D.8)

1. Explain your specialized knowledge in implementing AI-driven customer service solutions using chatbots and AI-powered automation. How do you control these technologies to enhance customer engagement and support?
2. How do you align social media initiatives with organizational goals and drive transformation through strategic social media planning?
3. How have you contributed to thought leadership in the industry through pioneering approaches and disruptive content creation? Share an example where your innovative social media strategies significantly impacted brand visibility or engagement.
4. Reflect on the outcomes and impact of your specialized expertise in AI-driven customer service, executive-level social media strategy development, and innovative content creation. How have these specialized skills led to measurable improvements in customer engagement, organizational growth, or industry recognition?

Mastering Social Media Content Integration - 5 (MC 3.2.D.9)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Mastering Social Media Content Integration - 4 Code: MC 3.2.D.9
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: 101087628
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 10 – Maximum 12 hours
Level of the learning experience leading to the micro-credential	Highly specialized
Type of assessment	Automatically marked Questions Number of Questions: 16 – 20 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.D.9)

Learning Outcomes (ref. Levels 7-8 LOs 3.2.176 - 3.2.179):

- Event-Driven Architecture.
- Database as a Service (DBaaS) Architecture.
- Strategic Thinking.
- Adaptability.

Description (MC 3.2.D.9)

At the highest level of expertise in Relational Databases, individuals exemplary integrate Event-Driven Architecture, understanding how to design databases that respond dynamically to events and real-time data changes. Mastery extends to Database as a Service (DBaaS) Architecture, where individuals navigate the intricacies of cloud-based database solutions, optimizing for scalability, accessibility, and resource efficiency.

Strategic Thinking becomes inherent, guiding individuals in aligning database architectures with organizational goals, foreseeing industry trends, and devising long-term plans for database evolution. Adaptability remains a core attitude, allowing individuals to pivot smoothly in response to emerging technologies, changing business requirements, and evolving security landscapes.

This highest-level proficiency empowers individuals to lead strategic initiatives, envision innovative database solutions, and orchestrate architectures that transcend traditional paradigms, contributing to relational database advancements.

Questions (MC 3.2.D.9)

Questions to evaluate a highly specialized person' s knowledge in Cutting-Edge Database Technologies:

1. Event-Driven Architecture: Provide an example of implementing event sourcing in a relational database system. How would you design a database to handle real-time data streaming and processing?
2. Database as a Service (DBaaS) Architecture: Describe the key considerations when migrating from a traditional database to a DBaaS model.
3. Adaptability: How do you approach adapting database security measures to address emerging threats?
4. Integration of Skills: Provide an example of a strategic initiative you led to enhance database capabilities. How does event-driven architecture align with your strategic thinking in database design?

Advanced Database Schema Evolution (MC 3.2.D.10)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	**Advanced Database Schema Evolution** **Code: MC 3.2.D.10**
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: **101087628**
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 8 – Maximum 12 hours
Level of the learning experience leading to the micro-credential	**Highly specialized**
Type of assessment	Automatically marked Questions Number of Questions: 10 – 15 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.D.10)

Learning Outcomes (ref. Levels 7-8 LOs 3.2.180 - 3.2.184):

- Advanced Database Design.
- Database Schema Evolution.
- High Availability Architectures.
- Database Refactoring.
- Capacity Planning.

Description (MC 3.2.D.10)

At the highest level of expertise in Relational Databases, individuals demonstrate proficiency in Advanced Database Design, orchestrating complex and scalable database architectures that harmonize with evolving business needs. Database Schema Evolution is second nature, involving perfect adaptation of database structures over time without compromising data integrity. High Availability Architectures are a focal point, with individuals designing and implementing robust solutions to ensure continuous database operation, minimizing downtime, and enhancing reliability. Database Refactoring becomes a strategic skill, allowing for the restructuring of databases to improve efficiency, maintainability, and adaptability.

Capacity Planning expertise directs individuals in forecasting resource needs and optimizing database performance.

This highest-level proficiency empowers individuals to navigate the complexities of evolving database requirements, ensuring optimal performance, resilience, and adaptability in the face of dynamic business landscapes and technological advancements.

Questions (MC 3.2.D.10)

Questions to evaluate a highly specialized person' s knowledge in Advanced Database Schema Evolution:

1. Advanced Database Design: Provide an example of a complex database design you orchestrated, considering scalability and performance. How do you balance normalization principles with denormalization strategies in advanced database design?
2. Database Schema Evolution: Provide a scenario where you successfully managed a unified schema evolution without data loss. How do you ensure backward compatibility when evolving a database schema?
3. High Availability Architectures: Describe the components of a high availability architecture in a relational database system.
4. Database Refactoring: How do you ensure data consistency during the refactoring of a large-scale database?

Global Database Systems (MC 3.2.D.11)

Basic Information

Identification of the learner	Any Citizen
Title and code of the micro-credential	Global Database Systems Code: MC 3.2.D.11
Country(ies)/Region(s) of the issuer	IRELAND, ITALY, CYPRUS, GREECE, ROMANIA http://dsw.projectsgallery.eu
Awarding body(ies)	DSW Consortium Project Number: 101087628
Date of issuing	Nov 2023
Notional workload needed to achieve the learning outcomes	Minimum 10 – Maximum 12 hours
Level of the learning experience leading to the micro-credential	Highly specialized
Type of assessment	Automatically marked Questions Number of Questions: 10 – 15 Passing Score: 75%
Form of participation in the learning activity	Online Asynchronous
Type of quality assurance used to underpin the micro-credential	Peer Review

Learning outcomes (MC 3.2.D.11)

Learning Outcomes (ref. Levels 7-8 LOs 3.2.185 - 3.2.189):

- Global Database Architectures.
- Temporal and Spatial Databases.
- Multi-Database Integration.
- Expertise in Database Sharding.
- Global Perspective.

Description (MC 3.2.D.11)

At the highest level of expertise in Relational Databases, individuals get mastery in Global Database Architectures, crafting sophisticated solutions that transcend geographical boundaries. They navigate the specificity of Temporal and Spatial Databases, ensuring precise representation of time-sensitive and spatial information, crucial in diverse applications from finance to geographic information systems.

Multi-Database Integration becomes important at orchestrating the harmonious interaction of disparate databases and fostering comprehensive data accessibility.

Expertise in Database Sharding is a core skill, involving the strategic partitioning of data across distributed servers to enhance scalability and performance. The highest-level professionals embrace a Global Perspective, considering cultural, regulatory, and infrastructural nuances in database design, ensuring adaptability to a diverse array of environments.

This profound expertise empowers individuals to design, implement, and manage relational databases on a global scale, seamlessly incorporating temporal and spatial dimensions while navigating the challenges of multi-database integration and sharding.

Questions (MC 3.2.D.11)

Questions to evaluate a highly specialized person' s knowledge in Global Database Systems:

1. Global Database Architectures: Discuss the considerations and challenges in designing a global database architecture.
2. Temporal and Spatial Databases: Explain the principles of temporal databases and their application in specific industries. How do you model and query spatial data in a relational database for geographic information systems?
3. Multi-Database Integration: Describe strategies for integrating multiple databases with different schemas and technologies. How do you ensure data consistency and integrity in a multi-database integration environment?
4. Expertise in Database Sharding: How do you determine the optimal sharding key for a particular database workload?
5. Integration of Skills: Describe how your expertise in temporal and spatial databases aligns with global database architecture decisions. Explain how multi-database integration strategies are influenced by a global perspective.

APPENDIX 1: LEARNING OUTCOMES

COMPETENCE AREA: DIGITAL CONTENT CREATION

COMPETENCE: INTEGRATING AND RE-ELABORATING DIGITAL CONTENT

COMPETENCE 3.2: INTEGRATING AND RE-ELABORATING DIGITAL CONTENT TO MODIFY, REFINE AND INTEGRATE NEW INFORMATION AND CONTENT INTO AN EXISTING BODY OF KNOWLEDGE AND RESOURCES TO CREATE NEW, ORIGINAL AND RELEVANT CONTENT AND KNOWLEDGE.		
FOUNDATION		
1	At basic level and with guidance, I can:	• select ways to modify, refine, improve and integrate simple items of new content and information to create new and original ones.
2	At basic level and with autonomy and appropriate guidance where needed, I can:	• select ways to modify, refine, improve and integrate simple items of new content and information to create new and original ones.
INTERMEDIATE		
3	On my own and solving straightforward problems, I can:	• explain ways to modify, refine, improve and integrate well-defined items of new content and information to create new and original ones.
4	Independently, according to my own needs and solving well-defined and non-routine problems, I can:	• discuss ways to modify, refine, improve and integrate new content and information to create new and original ones.
ADVANCED		
5	As well as guiding others, I can:	• operate with new different items of content and information, modifying, refining, improving and integrating them in order to create new and original ones.
6	At advanced level, according to my own needs and those of others and in complex contexts, I can:	• assess the most appropriate ways to modify, refine, improve and integrate specific new items of content and information to create new and original ones.
HIGHLY SPECIALISED		
7	At highly specialised level, I can:	• create solutions to complex problems with limited definition, related to modifying, refining, improving and integrating new content into existing knowledge to create new ones. • integrate my knowledge to contribute to professional practice and knowledge and guide others in integrating and re-elaborating content.
8	At the most advanced and specialised level, I can:	• create solutions to solve complex problems with many interacting factors that are related to modifying, refining, improving and integrating new content

		and information into existing knowledge to create new • propose new ideas and processes to the field

INTRODUCTION

At present time, the Information Technology domain is constantly evolving, presenting both challenges and opportunities for any individual, regardless of age or education. Using or navigating this dynamic environment requires the capacity of integrating and re-elaborating digital content, particularly within the area of web and social media platforms.

Integrating digital content involves the incorporation of various forms of media, such as text, images, videos, and interactive elements, to create a cohesive and engaging experience for the audience. This process requires consideration of the target audience, platform dynamics, and desired outcomes. By integrating content effectively, creators can enhance user engagement, increase brand visibility, and ultimately drive desired actions, whether it's generating leads, or fostering community engagement.

Re-elaborating digital content involves repurposing existing materials in innovative ways to maximize their impact and reach. This could entail transforming a blog post into a series of social media graphics, repackaging webinar footage into bite-sized video clips, or turning user-generated content into interactive experiences. By re-elaborating content, creators can extend their lifespan, reach new audiences, and reinforce key messages across multiple channels.

In essence, integrating and re-elaborating digital content is a multifaceted process that requires creativity, strategic thinking, and a deep understanding of the digital landscape. By mastering these techniques, creators can unlock the full potential of their content, driving meaningful results and staying ahead in an ever-changing digital world.

PREREQUISITES

Basic Computer Skills: The student should be familiar with how to use a computer, navigate the file system, create and manage files and folders, and perform basic tasks like copying, pasting, and installing software.

Operating systems: The user should possess the basic skills in using operating systems like Windows, MacOS, or Linux. An operating system (OS) is a fundamental software component that manages computer hardware and provides services and interfaces for user programs. It acts as an intermediary between applications and the hardware, allowing users to interact with the computer's resources in a more user-friendly and efficient manner.

Problem-Solving Skills: The user should be able to approach problems methodically and think critically. This will be essential in developing digital content. Having a basic understanding of arithmetic, algebra, and logic can be beneficial for solving problems and understanding methods and technologies of developing digital content.

English Proficiency: Most programming resources, tutorials, and documentation are available in English. A good grasp of the English language will make it easier to access learning materials and communicate with the programming community.

FOUNDATION LEVEL (LEVEL 1 and LEVEL 2)

COMPETENCE AREA 3: DIGITAL CONTENT CREATION

COMPETENCE 3.2: INTEGRATING AND RE-ELABORATING DIGITAL CONTENT

TO MODIFY, REFINE AND INTEGRATE NEW INFORMATION AND CONTENT INTO AN EXISTING BODY OF KNOWLEDGE AND RESOURCES TO CREATE NEW, ORIGINAL AND RELEVANT CONTENT AND KNOWLEDGE.

LEVEL 1 - FOUNDATION

At basic level and with guidance, I can:

- select ways to modify, refine, improve and integrate simple items of new content and information to create new and original ones.

LEVEL 2 - FOUNDATION

At basic level and with autonomy and appropriate guidance where needed, I can:

- select ways to modify, refine, improve and integrate simple items of new content and information to create new and original ones

TOPIC 1: INTEGRATING AND RE-ELABORATING WEB CONTENT

Learning Outcome	Level	K-S-A	Description
1. Understanding of HTML fundamentals.	L1-L2	K	Understanding the structure, semantics, and elements of HTML, the backbone of web content.
2. Knowledge of JavaScript basics.	L1-L2	K	Grasping fundamental JavaScript concepts for interactivity, DOM manipulation, and event handling.
3. Knowledge of responsive design principles.	L1-L2	K	Knowledge of creating web layouts that adapt to various screen sizes and devices.
4. Capacity to style pages using CSS.	L1-L2	S	Capacity to style web pages using CSS, selectors, properties, and layout techniques.

5. Understanding URLs and HTTP/HTTPS.	L1-L2	K	Knowledge of how URLs work and the significance of HTTP/HTTPS protocols in web communication.
6. Basic deployment knowledge (e.g., FTP, Hosting).	L1-L2	K	Understanding domain names, web hosting, and deploying websites using various methods.
7. Version control basics.	L1-L2	K	Familiarity with Git for tracking changes, collaborating, and managing code versions.
8. Capacity to use web development tools.	L1-L2	S	Capacity to use text editors or IDEs for coding and debugging web applications.
9. Understanding the principles of Client-Side scripting.	L1-L2	K	Awareness of role of JavaScript in enhancing user interactions and experiences on web pages.
10. Understanding of Box Model and Layouts in CSS.	L1-L2	K	Understanding the CSS box model and using different techniques for web layouts.
11. Basic understanding of SEO principles.	L1-L2	K	Understanding how to improve a website's visibility and ranking in search engines.
12. Ability to use debugging and troubleshooting.	L1-L2	S	Ability to identify and resolve common issues in HTML, CSS, and JavaScript, using browser developer tools.
13. Knowledge of responsive images and media.	L1-L2	K	Knowledge of techniques for displaying images and media responsively on different devices.
14. Understanding of APIs and fetching data.	L1-L2	K	Understanding APIs and using JavaScript Fetch API to retrieve data from servers.
15. Capacity to ensure browser compatibility.	L1-L2	S	Capacity of ensuring websites function across different browsers and devices.
16. Awareness of basic Web accessibility	L1-L2	A	Awareness of making web content perceivable, operable, and understandable for diverse user needs.
TOPIC 2: INTEGRATING AND RE-ELABORATING SOCIAL MEDIA CONTENT			
17. Understanding Social Media platforms.	L1-L2	K	Familiarity with major social media platforms (e.g., Facebook, Twitter, Instagram, LinkedIn, TikTok), their features, audiences, and content formats.
18. Knowledge of Social Media algorithms.	L1-L2	K	Basic understanding of how social media algorithms work, including factors affecting reach, engagement, and visibility of content.
19. Basic ability to create Social Media content.	L1-L2	S	Basic skills in creating engaging and visually appealing content, including images, videos, graphics, and written posts suitable for social media platforms.
20. Basic ability to craft captions.	L1-L2	S	Ability to craft compelling and concise captions, headlines, and descriptions that resonate with the target audience on social media.

21. Basic knowledge of visual design tools.	L1-L2	K	Knowledge of graphic design tools to create visually appealing and branded content.
22. Understanding audience engagement.	L1-L2	K	Familiarity with engaging techniques such as asking questions, conducting polls, using hashtags, and encouraging interaction with followers.
23. Knowledge of content calendar management.	L1-L2	K	Knowledge of organizing and planning content schedules to maintain consistency and frequency in posting on social media platforms.
24. Awareness of community management.	L1-L2	A	Awareness of responding to comments, messages, and user interactions promptly and professionally to foster community engagement.
25. Basic knowledge of analytics and insights.	L1-L2	S	Understanding basic social media analytics to track performance metrics, including likes, shares, comments, and reach.
26. Understanding Social Media policy.	L1-L2	S	Understanding and adherence to social media etiquette, rules, and policies.
27. Capacity to carry out basic video editing operations.	L1-L2	S	Familiarity with entry-level video editing tools or apps to create simple, engaging video content suitable for social media sharing.
28. Basic knowledge of cross-platform posting.	L1-L2	S	Basic knowledge of repurposing content across different social media platforms while optimizing for each platform's unique audience and features.
29. Understanding trends and hashtags.	L1-L2	S	Awareness of trends, popular hashtags to control social media content creation.
30. Continuous learning and adaptation.	L1-L2	A	Willingness to stay updated with changes in social media algorithms, new features, and emerging trends through ongoing learning and exploration.
TOPIC 3: INTEGRATING AND RE-ELABORATING DATABASE CONTENT			
31. Database Fundamentals.	L1	K	Understanding the basic principles and purpose of databases in computing
32. Relational Database Concepts	L1	K	Understanding the basic concepts of databases, such as tables, rows, columns, and relationships.
33. Data Types	L1	K	Recognition of different data types (e.g., integer, varchar) and their use in database design
34. Relational Database Management Systems (RDBMS)	L1	K	Familiarity with popular RDBMS platforms like MySQL, PostgreSQL, Oracle, or Microsoft SQL Server.
35. Database Creation and Management	L1	S	Skill in creating databases, tables, and relationships using an RDBMS.
36. Inquisitiveness	L1	A	A curiosity to explore and understand database concepts and functionalities.
37. Readiness in exploring Learning Resources	L1	A	Ready to utilize beginner-level learning resources and documentation.
38. Basic database design	L1	K	Design simple database schemas, including entity-relationship diagrams.
39. Basic Data Modeling	L1	S	Ability to translate simple business requirements into a basic data model.

40. Entity-Relationship Diagrams (ERD)	L1	K	Basic understanding of ERDs to visualize and design database structures.
41. Primary and Foreign Keys	L1	K	Understanding the role of primary and foreign keys in establishing relationships between tables.
42. Entity-Relationship Diagram Creation	L1	S	Skills in creating simple ERDs to represent database relationships.
43. Normalization Basics and Practice	L2	S	Capacity to understand and apply of normalization principles and techniques to organize data and reduce redundancy
44. SQL Basics	L1	K	Familiarity with the basic structure of SQL (Structured Query Language) for interacting with databases.
45. Basic SQL Query Writing	L1	S	Ability to write simple SELECT queries for data retrieval.
46. Query Filtering	L1	S	Skills in filtering and sorting data using WHERE and ORDER BY clauses in SQL.
47. Principles of Data Grouping	L2	K	Understanding of principles of aggregate functions for data analysis.
48. Principles of Queries Nesting	L2	K	Understanding of principles and techniques of embedding queries for complex data retrieval by using nested SQL statements.
49. Basic Query Optimization	L2	S	Basic skills in optimizing simple queries for better performance.
50. Attentiveness to Detail	L1	A	Aware of the importance of accuracy and precision in database work.
51. Keeping Database Content Up to Date	L1	K	Using SQL commands to ensure the real-time data and consistency
52. Data Entry and Up to Date	L1	S	Ability to insert, update, and delete data using SQL commands.
53. Concurrency Control	L2	K	Manage simultaneous transactions to prevent data inconsistency and conflicts.
54. Data Security Awareness	L2	A	Acknowledging the importance of data security practices and compliance.
55. Adaptability	L2	A	Openness to learning new tools and adapting to changes in the database environment.

INTERMEDIATE LEVEL (LEVEL 3 and LEVEL 4)

COMPETENCE AREA 3: DIGITAL CONTENT CREATION

COMPETENCE 3.2: INTEGRATING AND RE-ELABORATING DIGITAL CONTENT

TO MODIFY, REFINE AND INTEGRATE NEW INFORMATION AND CONTENT INTO AN EXISTING BODY OF KNOWLEDGE AND RESOURCES TO CREATE NEW, ORIGINAL AND RELEVANT CONTENT AND KNOWLEDGE.

LEVEL 3 - INTERMEDIATE

On my own and solving straightforward problems, I can:

- explain ways to modify, refine, improve and integrate well-defined items of new content and information to create new and original ones.

LEVEL 4 - INTERMEDIATE

Independently, according to my own needs and solving well-defined and non-routine problems, I can:

- discuss ways to modify, refine, improve and integrate new content and information to create new and original ones.

TOPIC 1: INTEGRATING AND RE-ELABORATING WEB CONTENT

Learning Outcome	Level	K-S-A	Description
56. Understanding of advanced JavaScript Concepts.	L3-L4	K	Understanding closures, prototypes, asynchronous programming (Promises, async/await), ES6+ features, and modern JavaScript frameworks/libraries.
57. Capacity to use the advanced HTML & HTML5 features.	L3-L4	S	Mastery of HTML5 features like semantic elements, local storage, canvas, audio/video, and responsive image techniques.
58. Capacity to use advanced CSS & CSS Preprocessors.	L3-L4	S	Proficiency in CSS methodologies, advanced selectors, animations, grid, flexbox, and knowledge of CSS preprocessors like Sass or LESS.
59. Capability of using Frontend Frameworks.	L3-L4	S	Proficiency in at least one major front-end framework (e.g., React, Vue, Angular) for building complex, interactive web applications.

60. Understanding of accessibility standards & best practices.	L3-L4	K	Deep understanding and implementation of web accessibility standards (WCAG) for creating inclusive web experiences.
61. Knowledge of performance optimization techniques.	L3-L4	K	Knowledge of strategies to improve website speed, including code minification, lazy loading, image optimization, and caching.
62. Capacity to develop responsive Web design.	L3-L4	S	Expertise in creating fully responsive designs that adapt to various devices using CSS media queries.
63. Ability to ensure cross-browser compatibility & testing.	L3-L4	S	Ability to ensure consistent functionality and appearance of websites across different browsers and devices.
64. Understanding of backend basics.	L3-L4	K	Understanding server-side development, handling databases, routing, middleware, and RESTful APIs.
65. Knowledge of authentication & authorization methods.	L3-L4	K	Knowledge of user authentication methods, session management, and implementing secure access controls.
66. Capability to work with databases.	L3-L4	S	Proficiency in working with databases, understanding data modeling, querying with SQL, and database management systems (e.g., MySQL, PostgreSQL).
67. Capacity to work with version control systems & collaboration tools.	L3-L4	S	Mastery of Git workflows, branching strategies, and utilizing collaboration platforms like GitHub or GitLab effectively.
68. Understanding of deployment & DevOps fundamentals.	L3-L4	K	Understanding deployment pipelines, continuous integration/continuous deployment (CI/CD), and basic DevOps concepts.
69. Understanding of Web Security principles.	**L3-L4**	**K**	Understanding common web vulnerabilities (such as XSS, CSRF) and implementing security best practices in web development.
70. Capability to integrate data from external API's.	**L3-L4**	**S**	Proficiency in consuming and integrating data from external APIs into web applications.
71. Capacity to use debugging & performance profiling tools.	**L3-L4**	**S**	Mastery of debugging techniques and using performance profiling tools for web applications to optimize performance.
TOPIC 2: INTEGRATING AND RE-ELABORATING SOCIAL MEDIA CONTENT			
72. Knowledge of Audience Analysis and Segmentation.	L3-L4	K	Understanding of audience behavior, demographics, and interests through data analysis and segmentation to tailor content for audience segments.
73. Ability to create advanced Social Media content.	L3-L4	S	Proficiency in creating diverse and high-quality content, including video editing, graphic design, creating infographics, and interactive content.

74. Ability to develop a content strategy.	L3-L4	S	Ability to develop a comprehensive content strategy aligned with specific goals, audience targeting, and brand objectives across multiple social media platforms.
75. Ability of copywriting and storytelling.	L3-L4	S	Enhanced skills in crafting compelling and persuasive copywriting, storytelling, and narrative development suited for different social media platforms.
76. Understanding of paid advertising and boosting strategies.	L3-L4	K	Understanding and implementation of paid advertising techniques, including creating and managing ad campaigns to reach specific target audiences.
77. Capacity to use advanced analytics tools.	L3-L4	S	Proficiency in utilizing advanced analytics tools to analyze social media metrics, track KPIs, and derive actionable insights to optimize content performance.
78. Capacity to create advanced visual design.	L3-L4	S	Mastery in using professional design tools to create brand-consistent content.
79. Capabilities of video content production.	L3-L4	S	Proficiency in producing high-quality video content, including scripting, filming, editing, and optimizing videos for various social media platforms.
80. Understanding influencer collaboration and partnerships.	L3-L4	K	Knowledge of developing partnerships with influencers and leveraging influencer marketing strategies to expand reach and engagement.
81. Capacity of community building.	L3-L4	S	Skills in building, handling and management of online communities.
82. Ability of advanced Social Media listening.	L3-L4	S	Utilizing advanced social media listening tools to monitor brand mentions, sentiment analysis, and industry trends to inform content strategy.
83. Knowledge of crisis management and response.	L3-L4	K	Understanding crisis communication strategies and managing social media crises or negative feedback.
84. Capacity of testing and optimization.	L3-L4	S	Proficiency in conducting testing and optimizing content based on data insights.
85. Capacity of strategic collaboration and campaign planning.	L3-L4	S	Ability to plan and execute strategic social media campaigns, collaborating cross-functionally within a team or with external partners.
TOPIC 3: INTEGRATING AND RE-ELABORATING DATABASE CONTENT			
86. Advanced SQL.	L3	K	Proficiency in writing complex SQL queries, including joins, subqueries, and aggregates.
87. Query Optimization.	L4	S	Skill in analyzing and optimizing query execution plans for better performance.
88. Indexing Strategies.	L3	K	Understanding and implementing advanced indexing strategies for query optimization.
89. Advanced Indexing Implementation.	L4	S	Implementing and managing advanced indexing strategies
90. Performance Monitoring Tools.	L4	K	Familiarity with tools for monitoring and analyzing database performance.
91. Critical Thinking.	L3	A	Analyzing complex database issues critically and proposing effective solutions.

92. Advanced Database Design Principles.	L3	K	Understanding advanced concepts in designing normalized and efficient database structures.
93. Data Modeling at Scale.	L4	K	Designing and implementing complex data models that scale with organizational needs.
94. Advanced Data Normalization.	L4	S	Application of higher normal forms for complex database designs.
95. Problem-Solving Orientation.	L4	A	Proactive approach to identifying and solving complex database-related challenges.
96. Data Access Control.	L3	K	Knowledge of database security, including user permissions, roles, and access control.
97. Transaction Management.	L4	K	Knowledge of transaction isolation levels and handling concurrency in database transactions.
98. Stored Procedures and Triggers.	L3	K	Ability to design, implement, and optimize stored procedures and triggers.
99. Backup and Recovery	L3	K	Understanding and implementing comprehensive backup and recovery strategies.
100. Ethical Decision-Making	L4	A	Consistent application of ethical considerations in data management and usage.

ADVANCED LEVEL (LEVEL 5 and LEVEL 6)

COMPETENCE AREA 3 : DIGITAL CONTENT CREATION

COMPETENCE 3.2: INTEGRATING AND RE-ELABORATING DIGITAL CONTENT

TO MODIFY, REFINE AND INTEGRATE NEW INFORMATION AND CONTENT INTO AN EXISTING BODY OF KNOWLEDGE AND RESOURCES TO CREATE NEW, ORIGINAL AND RELEVANT CONTENT AND KNOWLEDGE.

LEVEL 5 - ADVANCED

As well as guiding others, I can:

- operate with new different items of content and information, modifying, refining, improving and integrating them in order to create new and original ones.

LEVEL 6 - ADVANCED

At advanced level, according to my own needs and those of others and in complex contexts, I can:

- assess the most appropriate ways to modify, refine, improve and integrate specific new items of content and information to create new and original ones.

TOPIC 1: INTEGRATING AND RE-ELABORATING WEB CONTENT

Learning Outcome	Level	K-S-A	Description
101. Ability to work with advanced frontend frameworks (React, Angular, Vue).	L5-L6	S	Expertise in architecting, scaling, and optimizing large-scale applications using front-end frameworks.
102. Ability to carry out full-stack development.	L5-L6	S	Ability to work on both frontend and backend aspects of web development, integrating various technologies.
103. Capacity to use advanced JavaScript libraries & tools.	L5-L6	S	Mastery of advanced JavaScript libraries (e.g., Redux, RxJS) and developer tools (e.g., Webpack, Babel) for efficient development workflows.

104. Ability to perform Web performance optimization.	L5-L6	S	Advanced techniques in performance optimization, including code splitting, lazy loading, and server-side rendering for improved speed and user experience.
105. Understanding of WebAssembly (Wasm) & Next-Generation technologies.	L5-L6	K	Understanding and leveraging Wasm and other emerging technologies for high-performance web applications.
106. Capacity to perform progressive Web Apps (PWAs) development.	L5-L6	S	Ability to create high-performing PWAs with offline capabilities, push notifications, and enhanced user experiences.
107. Capacity to design microservices & serverless architecture.	L5-L6	S	Proficiency in designing, developing, and deploying microservices and serverless architectures for scalable web applications.
108. Capacity to perform advanced database management & NoSQL databases.	L5-L6	S	Expertise in using NoSQL databases (e.g., MongoDB, Cassandra) and advanced database optimization techniques.
109. Knowledge in Web application security.	L5-L6	K	In-depth knowledge of security protocols, encryption techniques, secure coding practices, and thorough understanding of potential security threats.
110. Understanding containerization & orchestration (Docker, Kubernetes).	L5-L6	K	Understanding containerized deployment and orchestration tools for scalable and manageable web applications.
111. Expertise in advanced API & GraphQL.	L5-L6	S	Capacity to build complex APIs, including GraphQL for data querying.
112. Capacity in developing real-time Web applications & WebSockets.	L5-L6	S	Expertise in developing real-time web applications using WebSockets and related technologies for instant data exchange.
113. Ability to carry out cross-platform development (React Native, Ionic).	L5-L6	S	Ability to develop cross-platform mobile applications using web technologies.
114. Ability to carry out Continuous Integration (CI).	L5-L6	S	Advanced implementation and automation of CI pipelines for efficient development workflows.
115. Ability to carry out Continuous deployment	L5-L6	S	Advanced implementation and automation of CD pipelines for efficient development workflows.
116. Capabilities in team leadership & collaboration.	L5-L6	S	Ability to lead teams, manage projects, mentor junior developers, and effectively collaborate within development teams.
TOPIC 2 : INTEGRATING AND RE-ELABORATING SOCIAL MEDIA CONTENT			

117. Capability to create expert-level content.	L5-L6	S	Mastery in creating captivating content formats, interactive content, AR filters, 360-degree videos, live streaming, and immersive experiences.
118. Ability to develop complex content strategies.	L5-L6	S	Ability to develop highly targeted and personalized content strategies aligned with specific objectives, incorporating segmentation and personalization.
119. Capacity to perform advanced data-driven audience analysis.	L5-L6	S	Advanced proficiency in leveraging data analytics to understand audience behavior, preferences, highly targeted content delivery.
120. Capacity of advanced copywriting and brand storytelling.	L5-L6	S	Skills in crafting compelling narratives, persuasive copywriting, and maintaining consistent brand messaging across multiple social media platforms.
121. Utilization at expert-level of Social Media analytics.	L5-L6	S	Proficiency in using advanced analytics tools to measure and analyze complex metrics, deriving actionable insights for continuous content optimization and performance improvement.
122. Capacity of strategic visual design and branding.	L5-L6	S	Mastery in advanced graphic design, video editing, and branding techniques, ensuring a consistent and visually appealing brand presence across all content.
123. Capability of producing innovative video content and storytelling.	L5-L6	S	Proficiency in producing innovative video content, storytelling through video, and optimizing videos for maximum engagement.
124. Mastery of paid Social Media advertising.	L5-L6	S	Expertise in planning and executing advanced paid advertising campaigns, including sophisticated targeting, retargeting strategies, and optimizing ROI.
125. Extended capacity to achieve influencer marketing and collaborations.	L5-L6	S	Advanced skills in building strategic partnerships with influencers, executing influencer campaigns, and measuring their impact on brand visibility.
126. Extended capacity to achieve community management and engagement strategies.	L5-L6	S	Community management skills, fostering brand communities, driving engagement, and creating brand advocates through strategic engagement.
127. Extended capacity to achieve crisis communication and reputation management.	L5-L6	S	Extended expertise in handling complex social media crises, implementing effective crisis communication strategies, and maintaining brand reputation.
128. Ability to conduct data-driven testing and optimization.	L5-L6	S	Proven ability in conducting advanced A/B testing, multivariate testing, and iterative optimization of content strategies based on detailed data analysis.
129. Extended capacity in strategic collaboration and partnerships.	L5-L6	S	Proficiency in strategic collaboration with other brands, organizations, or influencers for joint campaigns, cross-promotions, and collaborations.
130. Ability of leadership and thought leadership in social media.	L5-L6	S	Ability to lead social media teams and establish thought leadership in the industry through innovative approaches and trend-setting content.
TOPIC 3 : INTEGRATING AND RE-ELABORATING DATABASE CONTENT			

131.	Database Internals.	L5-L6	K	In-depth understanding of the internal workings of a database engine, including storage structures and query execution plans.
132.	Advanced Indexing Techniques.	L5-L6	K	Mastery of advanced indexing strategies, including covering indexes, bitmap indexes, and their impact on query performance.
133.	Database Performance Tuning.	L5-L6	S	Advanced skills in performance monitoring, analysis, and tuning for optimal database performance.
134.	Optimizing Complex Queries.	L5-L6	S	Implementing and managing advanced indexing strategies
135.	Cost Optimization.	L5-L6	A	Identifying opportunities for cost optimization in database infrastructure and operations.
136.	Distributed Database Systems.	L5-L6	K	Proficiency in managing databases across distributed environments, understanding consistency models, and handling distributed transactions.
137.	Database Partitioning Strategies.	L5-L6	S	Implementation and management of advanced data partitioning strategies for large datasets.
138.	Advanced Data Modeling.	L5-L6	S	Ability to design complex data models that align with organizational needs and scalability requirements.
139.	Innovation.	L5-L6	A	Willingness to innovate and explore new technologies to push the boundaries of database management.
140.	Data Encryption and Security.	L5-L6	K	Expertise in implementing advanced security measures, data encryption, fine-grained access control, and compliance with industry regulations.
141.	Advanced Transaction Management.	L5-L6	K	Knowledge of advanced transaction management concepts, including distributed transactions and two-phase commit.
142.	Replication Strategies.	L5-L6	K	Expertise in implementing advanced replication strategies, such as bi-directional replication and conflict resolution.
143.	Advanced Security Implementation.	L5-L6	S	Implementation of advanced security measures, including multi-factor authentication and secure key management.
144.	Data Archiving and Purging.	L5-L6	S	Understanding and implementing comprehensive backup and recovery strategies.
145.	Problem-Solving Mindset.	L5-L6	A	Proactive approach to identifying and solving complex database-related challenges.

HIGHLY SPECIALISED (LEVEL 7 and LEVEL 8)

COMPETENCE AREA 3: DIGITAL CONTENT CREATION

COMPETENCE 3.2: INTEGRATING AND RE-ELABORATING DIGITAL CONTENT

TO MODIFY, REFINE AND INTEGRATE NEW INFORMATION AND CONTENT INTO AN EXISTING BODY OF KNOWLEDGE AND RESOURCES TO CREATE NEW, ORIGINAL AND RELEVANT CONTENT AND KNOWLEDGE.

LEVEL 7 - EXPERT

At highly specialized level, I can:

- create solutions to complex problems with limited definition that are related to modifying, refining, improving and integrating new content and information into existing knowledge to create new and original ones.
- integrate my knowledge to contribute to professional practice and knowledge and guide others in integrating and re-elaborating content.

LEVEL 8 - EXPERT

At the most advanced and specialized level, I can:

- create solutions to solve complex problems with many interacting factors that are related to modifying, refining, improving and integrating new content and information into existing knowledge to create new and original ones.
- propose new ideas and processes to the field.

TOPIC 1 : DEVELOPMENT OF DIGITAL TEXT DOCUMENTS

Learning Outcome	Level	K-S-A	Description
146. Knowledge of cutting-edge Web technologies.	L7-L8	K	In-depth knowledge and hands-on experience with cutting-edge web technologies, staying updated with the latest trends and advancements.
147. Ability to carry out advanced frontend architecture design.	L7-L8	S	Expertise in designing complex and scalable front-end architectures, applying advanced design patterns and principles.
148. Capability of advanced performance engineering.	L7-L8	S	Mastery in optimizing web application performance, utilizing advanced techniques, performance profiling, and fine-tuning for optimal user experiences.
149. Web Security specialization.	L7-L8	S	Specialization in web security, including penetration testing, ethical hacking, and advanced security implementations to mitigate complex threats.
150. Capacity to implement Web accessibility and to carry out inclusive design.	L7-L8	S	Specialization in creating accessible and inclusive web experiences for diverse user needs, including assistive technologies and compliance with accessibility standards.
151. Highly scalable & fault-tolerant systems expertise.	L7-L8	S	Expertise in designing and building fault-tolerant, highly scalable web systems capable of handling massive traffic and ensuring continuous uptime.
152. Capacity to perform cross-platform & universal applications development.	L7-L8	S	Mastery in developing universal applications that work seamlessly across various platforms and devices, using advanced frameworks and methodologies.
153. Capacity to carry out cloud-native Web development & serverless computing.	L7-L8	S	Expertise in designing, developing, and deploying cloud-native web applications, leveraging serverless computing and cloud services.
154. Web analytics & data science integration specialization.	L7-L8	S	Specialization in utilizing web analytics tools and data science techniques to derive actionable insights for web applications.
155. IoT & Web integration specialization.	L7-L8	S	Expertise in integrating web technologies with IoT ecosystems, creating interconnected and smart web-enabled devices and systems.
156. Capability in advanced DevOps & Automation.	L7-L8	S	Proficiency in advanced DevOps practices, automation tools, and continuous improvement methodologies for web development workflows.
157. Understanding AI & Machine Learning Integration.	L7-L8	K	Understanding AI and machine learning functionalities into web applications for enhanced user experiences.
158. Capacity to integrate AI & Machine Learning in Web applications.	L7-L8	S	Integrating AI and machine learning functionalities into web applications for enhanced user experiences.

159. Expertise in UX/UI Design & interaction	L7-L8	S	Mastery in crafting user-centric, innovative, and engaging user experiences, considering intricate interactions and user behavior analysis.
160. Expertise in Regulatory Compliance.	L7-L8	S	Specialization in ensuring web applications comply with industry regulations. and implementing robust cybersecurity measures.
161. Expertise in Cybersecurity.	L7-L8	S	Specialization in implementing robust cybersecurity measures.
TOPIC 2 : INTEGRATING AND RE-ELABORATING SOCIAL MEDIA CONTENT			
162. Capacity to integrate emerging technologies into social media.	L7-L8	S	Expertise in integrating emerging technologies like AI, AR/VR, or IoT into social media content strategies, creating innovative and immersive experiences.
163. Capacity to achieve content personalization.	L7-L8	S	Mastery in creating highly personalized, dynamically generated content tailored to individual user preferences and behaviors.
164. Capacity to integrate social commerce and E-commerce into social media.	L7-L8	S	Advanced proficiency in leveraging social media platforms for e-commerce and social commerce strategies, driving sales and conversions directly from social channels.
165. Capacity to perform advanced data analysis and predictive modeling.	L7-L8	S	Proficiency in leveraging advanced data analytics, predictive modeling, and machine learning algorithms to forecast trends and optimize content strategies proactively.
166. Understanding of cultural sensitivity and global marketing. Deep	L7-L8	K	Understanding cultural nuances, global market trends, and effective strategies for international social media marketing campaigns.
167. Capacity to implement hyperlocal and geo-targeted strategies.	L7-L8	S	Expertise in implementing hyperlocal marketing, leveraging geo-targeting and location-based strategies for highly targeted and localized content delivery.
168. Niche community building and engagement specialization	L7-L8	S	Specialized skills in building and nurturing highly specialized and engaged communities around niche interests or topics on social media platforms.
169. Mastery of cross-channel content distribution.	L7-L8	S	Mastery in distribution and repurposing content across various channels and platforms, maximizing content reach and impact.
170. Capacity to perform advanced influencer relationship management.	L7-L8	S	Expertise in managing long-term relationships with influencers, strategizing comprehensive influencer programs, and measuring their impact on brand equity.
171. Capacity to manage branded content partnerships and sponsorships.	L7-L8	S	Proficiency in establishing and managing branded content partnerships, sponsorships, and co-marketing initiatives across social media platforms.

172. Capacity of crisis prediction and prevention.	L7-L8	S	Advanced skills in predicting potential social media crises through data analysis and implementing proactive strategies to prevent them.
173. Knowledge of AI-driven customer service and Chatbots.	L7-L8	K	Specialized knowledge in implementing AI-driven customer service solutions, leveraging chatbots and AI-powered automation for enhanced customer engagement and support.
174. Ability to develop executive-level Social Media strategy.	L7-L8	S	Ability to develop high-level social media strategies, advise executives on social media trends, and drive organizational transformation through social media initiatives.
175. Capacity of cutting-edge innovation.	L7-L8	S	Leading-edge innovation in social media strategies, contributing to thought leadership in the industry through
TOPIC 3 : INTEGRATING AND RE-ELABORATING DATABASE CONTENT			
176. Event-Driven Architecture.	L7-L8	K	Integration of databases into event-driven architecture for real-time data processing.
177. Database as a Service (DBaaS) Architecture.	L7-L8	K	Expertise in designing and implementing highly scalable and fault-tolerant database solutions in the cloud.
178. Strategic Thinking.	L7-L8	A	Ability to think strategically about database architecture and its alignment with organizational goals.
179. Adaptability.	L7-L8	A	Willingness to adapt to emerging trends and technologies in the database domain.
180. Advanced Database Design.	L7-L8	K	Ability to design complex database structures, considering scalability and performance.
181. Database Schema Evolution.	L7-L8	S	Skill in evolving database schemas to adapt to changing business requirements.
182. High Availability Architectures.	L7-L8	K	Design and implementation of high availability architectures for databases, ensuring maximum uptime and disaster recovery plans.
183. Database Refactoring.	L7-L8	S	Skill in refactoring database schemas and structures for evolving application needs.
184. Capacity Planning.	L7-L8	A	Expertise in capacity planning to ensure databases can handle future growth and demand.
185. Global Database Architectures.	L7-L8	K	Design and implementation of databases to support global architectures, considering data consistency and latency.

186.	Temporal and Spatial Databases.	L7-L8	K	Understanding and application of temporal and spatial databases for managing time-sensitive and spatial data efficiently.
187.	Multi-Database Integration.	L7-L8	S	Ability to integrate and manage data across multiple database systems.
188.	Expertise in Database Sharding.	L7-L8	S	Implementation of database sharding for horizontal scaling and optimal performance.
189.	Global Perspective	L7-L8	A	Understanding the impact of global considerations on database design and management.

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