Assessment Task 1: Knowledge Questions

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| Course code and title | **ICT50220 Diploma of Information Technology** |
| Unit code and  title | **ICTWEB517 Create web-based programs** |
| Due date | 9/06/2024 |
| Resources  required | • ICTWEB517 Moodle Site  • Access to computer and internet  • Learner resource |
| Decision making rules | To achieve an overall satisfactory result for this assessment task:   * All questions must be answered satisfactorily |
| Learner  instructions | This task is a set of 10 written questions.  This task involves answering 10 questions.  For this task you will:   * Complete it individually. * Write answers to all questions. * Have time to read and review the assessment task in class. * Complete it in your own time and submit your answers electronically via Moodle by the due date. * Save the document as Assessment Task 1 StudentID.docx.   You must agree with the assessment submission terms and conditions by clicking on the ‘I confirm’ radio button in Melbourne Polytechnic Moodle prior to the submission.  If you have any questions about the task or concerns about your ability to complete the task, please discuss this with your Assessor. |

# Knowledge Questions

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|  | **What is programming control? (30-60 words)** | | |
|  | Answer | Satisfactory | Unsatisfactory |
| In the course of program execution, the sequential order of code execution directly impacts the program's outcome. The fundamental three flow control structures are: sequential structure, conditional branching structure, and iterative structure. | |  |  |

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| 1. 2 | What is the authentication and web security.  (50-100 words) | | |
|  | Answer | Satisfactory | Unsatisfactory |
| Authentication determines the various elements by which a system verifies someone's identity before granting access to files and any requested content.  Users can achieve this by inputting their username and password, allowing the system to confirm their identity.  Web security prevents many web-based attacks by providing a proxy between the user and their browser.  As the security of increasingly digitized devices and virtual assets is threatened, identifying malware and network attacks becomes increasingly difficult. Therefore, authentication and web security are crucial for safeguarding network security. | |  |  |

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| 1. 3 | What does HTTP stand for? What is HTTP used for? (30-60 words) | | |
|  | Answer | Satisfactory | Unsatisfactory |
| HTTP stands for Hypertext Transfer Protocol.  HTTP is a protocol specification documented to facilitate communication via HTTP implementations.  HTTP initiates requests to servers over TCP, which are then processed and responded to by the server.  HTTP operates at the application layer, serving as a protocol designed to facilitate specific applications, with its functionality implemented by an application running in user space. | |  |  |

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| 1. 4 | What is a stateless programming?  (30-60 words) | | |
|  | Answer | Satisfactory | Unsatisfactory |
| In statelessness, the transaction must end in a method.  Stateless means that no state is retained between different method calls.  Stateless does not save state specifically for a specific client.  Stateless statements usually occupy less resources and can be shared.  In stateless programming, data required for function execution is passed as input instead of maintaining separate state. | |  |  |

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| 1. 5 | Please briefly explain the principles of web analysis and design.  (50-100 words) | | |
|  | Answer | Satisfactory | Unsatisfactory |
| Collect goal-related data including website traffic, user behaviour, conversion rates, and other metrics that help understand user engagement.  Take action based on insights gleaned from web analytics to enhance your website.  When considering the arrangement of elements on the page, it's important to pay attention to visual balance. The balanced design injects cohesion and harmony.  Utilize responsive design to ensure your website adjusts seamlessly to any device size screen.  Comply with Hick's Law by minimizing user choice. Too many choices can lead to user paralysis. | |  |  |

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| 1. 6 | Please list the difference of features and functionalities between JavaScript and PHP  (30-60 words) | | |
|  | Answer | Satisfactory | Unsatisfactory |
| PHP is a server-side scripting language, while JavaScript is a client-side scripting language.  PHP, also known as "Hypertext Preprocessor", is widely used, primarily in the field of web development and can be embedded within HTML. JavaScript is a versatile language for front-end tasks, primarily employed to imbue web pages with interactivity and dynamism.  JavaScript delegates data submission to the browser for processing, whereas PHP submits data to the server for processing. | |  |  |

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| 7 | What is JavaScript and how can it assist you as a web developer?  (50-100 words) | | |
|  | Answer | Satisfactory | Unsatisfactory |
| JavaScript was originally conceived and implemented in the Netscape Navigator web browser in 1995 by Brendan Eich of Netscape Communications Corporation.  JavaScript is a lightweight, interpreted or just-in-time compiled programming language with function precedence.  Like other languages, JavaScript has its own basic data types, expressions, arithmetic operators, and basic program structures.  JavaScript can respond to browser events.  JavaScript can manage cookies, including their creation and modification.  JavaScript can embed dynamic text in HTML pages. | |  |  |

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| 8 | What is hypertext mark-up language? How can it help you as a web developer?  (30-60 words) | | |
|  | Answer | Satisfactory | Unsatisfactory |
| HTML is the universal language of the web, a simple and versatile markup language.  HTML employs a superset approach, thereby becoming more flexible and convenient.  The extensive application of Hypertext Markup Language has led to enhanced functionality, increased requirements for identifiers, etc. Hypertext Markup Language adopts the method of subclass elements to ensure system expansion.  By utilizing HTML, information to be conveyed is written into HTML files according to certain rules and identified through specialized browsers, which results in the web pages we see. | |  |  |

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| 9 | What are cascading style sheets? How can they help you as a web developer?  (30-60 words) | | |
|  | Answer | Satisfactory | Unsatisfactory |
| Cascading Style Sheets is a computer language used to express document styles such as HTML or XML.  CSS supports almost all font size styles and has the ability to edit web page object and model styles.  CSS controls the display of different layout styles for tags within HTML. You can control the corresponding html tag color, font size, font, width, height, floating and other styles.  CSS provides pixel-level precise control over the layout of element positions on web pages. | |  |  |

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| 10 | Provide an overview of the typical steps an organisation would require you to follow when developing a website.  (50-100 words) | | |
|  | Answer | Satisfactory | Unsatisfactory |
| Understanding requirements and clarifying the purpose of website development.  Planning the framework, organizing requirements, and sketching out the framework or prototype.  Designing and arranging page layouts to ensure visitors feel efficient, convenient, and comfortable.  Developing the website, adjusting based on feedback, then presenting it to the client for review until the design is confirmed.  Testing and evaluating the website for refinement. Then deploying the website to a server for publication.  Conducting website record-filing, backups, and post-maintenance tasks. | |  |  |

## Assessment Task Summary: Task 1 - Knowledge Questions

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| Trainer/Assessor to complete the following:  **THE LEARNER:** | | | | | | Yes | No |
| 1. | Satisfactorily answered all questions. | | | | |  |  |
| feedback **-** Assessor must include feedback | | | | | | | |
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| OVERALL TASK result | | | | | | | |
| Satisfactory  Not Satisfactory (resubmission required) – Due date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | | | |
| Date Assessment Returned | | |  | | | | |
| Trainer/assessor Name | | |  | | | | |
| Trainer/Assessor signature | | | X | | | | |
| **LEARNER DECLARATION**: Please read and sign below | | | | | | | |
| I, \_WangYiZhuo\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ have been advised of the outcome of this assessment task.  PRINT NAME | | | | | | | |
| LEARNER Signature | | WangYiZhuo | | Date |  | | |