



Unit: Back-End Website Development

Assignment title: Green Futures

Marking Scheme

Markers are advised that, unless a task specifies that an answer be provided in a particular form, then an answer that is correct (factually or in practical terms) **must** be given the available marks. If there is doubt as to the correctness of an answer, the relevant NCC Education materials should be the first authority.

This marking scheme has been prepared as a **guide only** to markers and there will frequently be many alternative responses which will provide a valid answer.

Each candidate's script must be fully annotated with the marker's comments (where applicable) and the marks allocated for each part of the tasks.

Throughout the marking, please credit any valid alternative point.

Where markers award half marks in any part of a task, they should ensure that the total mark recorded for the task is rounded up to a whole mark.

Marker's comments:

Moderator's comments:

Mark:

Moderated mark:

Final mark:

Penalties applied for academic malpractice:

Task	Guide	Maximum Marks
1	<p>Task 1 Setup Page for Database.</p> <p><i>The set-up page should create a table of visitors with auto-incrementing primary keys set on the appropriate fields. (5 marks)</i></p> <p><i>It should make use of appropriate data types for each of the required fields. (5 marks)</i></p>	<hr/> <p style="text-align: right;">10</p>
2	<p>Task 2 Login and Registration.</p> <p><i>The login and registration should include the following:</i></p> <p><i>A prompt to register if a login fails THREE (3) times. (up to 3 marks)</i></p> <p><i>Code to handle attempting to register an existing username. (up to 2 marks)</i></p> <p><i>Code to check the provided password against the stored password. (up to 2 marks)</i></p> <p><i>Code to create a new user when a registration is attempted. (up to 2 marks)</i></p> <p><i>Additional marks are available for making the login system. (up to 3 marks):</i></p> <ul style="list-style-type: none"> • <i>Limit the number of attempts to 3.</i> • <i>Reset of attempts after three minutes.</i> • <i>Appropriately displayed warning message</i> <p><i>Encryption/use of hashing of the password (up to 3 marks)</i></p>	<hr/> <p style="text-align: right;">15</p>
3	<p>Task 3 Create the Sign Up Now form</p> <p><i>A typical structure for doing this might be:</i></p> <ul style="list-style-type: none"> • <i>Create MySQL data. (5 marks)</i> • <i>Install the script to show donations they have made. (5 marks)</i> • <i>Add a pop-up “sign up now” form. (5 marks)</i> 	<hr/> <p style="text-align: right;">15</p>
4	<p>Additionality</p> <ul style="list-style-type: none"> • <i>Mobile accessible website which works on TWO (2) different devices. (2 marks)</i> • <i>Sign-up pop-up that appears on the home page. (3 marks)</i> • <i>Cookie accepts and agrees to the message. (2 marks)</i> • <i>Links to Privacy, Copyright and Cookies information. (2 marks)</i> 	

Task	Guide	Maximum Marks
	<ul style="list-style-type: none"> • Social media buttons and inclusion of relevant media to enhance the website design page. (4 marks) • Twitter feed on the home page. (2 marks) • Home Page with a striking landing page including an image slider and responsible dropdown buttons for the different pages. (2 marks) • Accessible news feed. (3 marks) 	20
5	<p>Deletion/modification of records</p> <ul style="list-style-type: none"> • Create a web-enabled application that allows users to <ul style="list-style-type: none"> ○ create, ○ query, ○ browse and manipulate the membership database (such as PHP linked to SQL) <p>If the php script/database is correctly created and works to allow the user to enter and delete a record successfully then (award the full 10 marks).</p> <p>If the php script/database allows the user to create and manipulate the database (award 5 marks).</p> <p>If the php script/database allows the user to only create records (award 3 marks).</p> <ul style="list-style-type: none"> • Allow front-end users to create update and delete records currently they are browsing. Create php scripts which allow the user to insert records through MySQL into the database table and also update data including appropriate error messages. <p>If php script shows both updating and deleting records correctly (award the full 5 marks).</p> <p>If php script shows both updating and deleting records but includes any errors (award 4 marks).</p> <p>If php script shows only updating records (award 3 marks).</p> <p>If php script shows only deleting records (award 2 marks).</p> <p>If php script has been attempted and shows some correct coding (award 1 mark.)</p>	15

Task	Guide	Maximum Marks
6	<p>Serial number generator in the database</p> <ul style="list-style-type: none"> • Create a script that includes a visitor registration number – this should auto-generate SIX (6) - digit numbers with a prefix PP (plus the SIX (6) digits). <p>If the serial number generator is correct (award the full 10 marks). If the script contains no more than TWO (2) errors (award 5 marks). If the script query is attempted but is unsuccessful (award 1 mark).</p>	<hr/> <p style="text-align: right;">10</p>
7	<p>Reflection</p> <ul style="list-style-type: none"> • Description of what you have learnt. (3 marks) • Description as to how the system can be improved to become a more accessible website for disabled users. (3 marks) • Description as to which parts of the development were most difficult and why this was. (4 marks) • Description as to how you overcame any development issues. (5 marks) 	<hr/> <p style="text-align: right;">15</p>
Total: 100 Marks		

Learning Outcomes matrix

Task	Learning Outcomes assessed	Marker can differentiate between varying levels of achievement
1	1, 2, 3	Yes
2	3, 5	Yes
3	1, 2, 3, 4	Yes
4	1, 2, 3, 4	Yes
5	1, 2, 3, 4, 5	Yes
6	1, 2, 3, 4, 5	Yes
7		Yes

Grade descriptors

Learning Outcomes	Pass	Merit	Distinction
1. Identify and demonstrate an understanding of key concepts and technologies required for back-end website development	Identify basic back-end development concepts and technologies.	Explain back-end development concepts and technologies with clarity and understanding of their practical applications.	Demonstrate a comprehensive and in-depth understanding of back-end development concepts, technologies, and their innovative applications in complex scenarios.
2. Demonstrate skills in back-end programming languages for developing the server-side of a website and integrate it with the front-end	Use basic features of back-end programming languages to create simple server-side applications that interact with the front-end.	Employ advanced features and best practices of back-end programming languages to develop efficient server-side applications that are effectively integrated with the front-end.	Exhibit mastery in utilizing back-end programming languages to develop highly optimized, scalable, and complex server-side applications with seamless front-end integration.
3. Develop a back-end web application alongside databases and servers with capabilities of rapid interaction with the databases	Develop a simple back-end application with basic database interactions.	Develop a more complex back-end application that demonstrates efficient database interactions and server configuration.	Develop sophisticated back-end applications with advanced database management, ensuring rapid and efficient data processing and interaction.
4. Design and implement a web development framework driven server-side application and demonstrate understanding of APIs along with the	Implement a basic server-side application using a web development framework and simple API interactions.	Design and implement a robust server-side application using a web development framework, demonstrating effective use of APIs and integration of	Innovatively design and implement advanced server-side applications leveraging cutting-edge web development frameworks, with complex API integrations and

Learning Outcomes	Pass	Merit	Distinction
appropriate frameworks and tools		multiple tools and frameworks.	optimal use of various tools and frameworks.
5. Apply web security concepts for designing a robust web application	Apply basic web security measures to protect a web application.	Implement advanced security protocols and measures to safeguard the web application against common security threats.	Design and implement comprehensive security strategies, demonstrating an advanced understanding of web security to protect the application against sophisticated attacks.
6. Demonstrating an understanding of building web applications in a collaborative environment with version control and continuous integration / continuous deployment (CI/CD) process to deploy to cloud-based servers	Demonstrate basic use of version control and familiarity with CI/CD concepts for web application deployment.	Effectively utilize version control, and implement CI/CD processes for efficient and reliable web application development and deployment.	Masterfully manage web application development in a collaborative environment, leveraging advanced version control techniques and CI/CD processes for seamless, automated deployment to cloud-based servers.