

**ICT50220 Diploma of Information Technology**

**ICTWEB514 Create dynamic web pages**

**Student Guide and Assessment**

1. Overview

Competency-based assessment: Evidence will be gathered which is mapped to the requirements of the unit of competency.

The link between the unit and assessment tools can be found in the **Assessment Mapping** document.

1. Assessment Scenario

Assessment scenario is based on the simulated environment, unless otherwise specified. The candidates need to complete each assessment item according to the devised environment while following the instructions and guidelines

1. Summary of Assessment Tasks

To successfully complete this unit of competency students are required to complete the following assessment tasks:

1. Assessment Task 1: Candidates need to answer written questions to demonstrate their knowledge, candidate must answer all questions correctly to be deemed satisfactory in this task
2. Assessment Task 2:

Candidates need to complete the Unit Project (UP)

1. Instructions to Student

* Each assessment item will include instructions on how to complete and submit the assessment.
* Submit completed assessment items to your trainer via Moodle by the agreed date.
* All assessment items submitted must include student name and student ID number
* Clarify any questions regarding this assessment with your trainer.

1. Requirements

Common office equipment, technology, software and consumables, including:

Office supplies and equipment

Computers with internet access and word processing applications

Refer to student course materials to assist student in completion of all assessment items

1. Conditions

* Assessment may take place during or out of class time as required per each assessment task
* No marks or grades are allocated for the assessment. The task will be assessed as Satisfactory or Not Satisfactory
* Students will be assessed according to the criteria listed in the **Assessment Checklist**
* The Assessment Checklist will also be used to provide feedback and record unit outcome/completion

1. Submission
2. Assessment Task 1:

Competed written questions

1. Assessment Task 2:

* a completed Assessment Checklist

1. Recording requirements:

* Assessors are required to mark and upload student results on Moodle.

1. Requirements to be deemed competent

* Students must satisfactorily demonstrate **all assessment criteria for each assessment task** to be deemed Satisfactory for each assessment task.
* All assessment tasks must be completed satisfactorily to be able to determine competent in this unit of competency.

1. Reasonable adjustments

Trainer/assessor may make reasonable adjustments for students with LLN difficulties such as:

* Call for peer support from other students.
* Trainer will spend more time explaining/role playing the business scenario for students who do not have much work experience
* Trainer may conduct verbal assessment when a student is having difficulties in writing. (trainer must record details of reasonable adjustment arrangement on the assessment record sheet.
* Trainer are required to use the reasonable adjustment record sheet for each assessment task that required reasonable adjustments.

1. Student appeals

Students have the right to appeal an unfavourable decision or finding during assessment. All student appeals must be made in writing using the Appeals Form and specify the particulars of the decision or finding in dispute. Refer to GBCA Student Complaints and Appeals Policy & Procedure 7 – Internal appeal process – assessment for details.

1. Re-assessment

If a student receives a Not Yet Competent - NYC in a specific unit, he/she will have to make arrangements to be re-assessed. Reassessment is available only if the student has attempted assessment but fail to demonstrate competency. However, if student miss the particular assessment task, he/she may be allowed to re-sit for that particular assessment. This option is only available if the student has compelling ground for missing the assessment.

Students are only required to re-assess the assessment criteria/question in the task that he/she was deemed Not Satisfactory (NS). (E.g: written assessment task, verbal assessment task, practical assessment task etc.).

1. Cheating and plagiarism

It is GBCA 's policy to promote honesty and integrity of learning and assessment. It is expected that each GBCA 's student to accept her/his responsibility to maintain honesty and integrity in all endeavours inside and outside of GBCA 's classroom. Students are required to make a declaration of no cheating and plagiarism before submitting each assessment.

If a student is found to have involved in cheating or plagiarism in an assessment task, his/her will be deem Not Satisfactory. Students who are found cheating or guilty of plagiarism for a second time will need to re-enrol and repeat the entire Unit of Competence and pay applicable fees. Refer to Policy code 04 Plagiarism and Cheating Policy and Procedure for further information, including types of cheating, plagiarism, and disciplinary actions.

### Assessment Task 1

**Submission details**

* The assessment task is due on the date specified by the assessor. Any variation to this arrangement must be approved in writing by the assessor.
* Word limit: a maximum of 100 words per answer to each question.
* The assessor is to download the student submission, review them, and provide relevant feedback.

**Performance objective**

Students are to demonstrate their skills and knowledge required to produce both server and client-side content for web pages.

**Assessment description**

This task consists of written questions. Students are required to answer all the questions individually. Students are allowed to use computer to do online research where necessary and consult a range of learning resources: such as handouts and textbooks, learners’ resources and slides.

**Instructions for the Trainer**

* The following forms the basis of specific evidence that you need to collect from students for assessment in this assessment task.
* The task and specific assessment requirements that are given to students are also outlined.
* Refer to all the red, bold, and italic text for a guide to suggested answers for assessments and also for instructions on how to use the assessment tools.
* For each assessment task, Assessment Result, located at the end of the task is to be completed.
* This Assessment Result allows the trainer/assessor to record the following items correctly:
  + Outcome of the assessment task as either Satisfactory (S) or Not Satisfactory (NS).
  + Submission type: Initial, first or second attempt
  + Comments for the feedback to student
* The mapping document should be referred to identify what aspects of the Unit of Competency are being addressed by each assessment task.
* Once all assessment tasks allocated to this Unit of Competency have been undertaken, unit completion sheet, located at the end of all assessments, is to be completed to record the unit outcome. The outcome will be either Competent (C) or Not Yet Competent (NYC).
* The “Unit cover sheet” is available with the student guide and assessment.
* Each “Unit cover sheet” should be referred to Assessment Result outcome as Satisfactory (S) or Not Satisfactory (NS), and this information then transferred to the final result in the “Unit cover sheet” as Competent (C) or Not Yet Competent (NYC).
* If all assessment tasks are deemed Satisfactory (S), then the unit outcome is Competent (C).
* If at least one of the assessment tasks is deemed Not Satisfactory (NS), then the unit outcome is Not Yet Competent (NYC).
* The trainer/assessor must sign the Unit cover sheet and provide feedback to the student.
* The following Information is attached to all the assessment tasks:
  + Assessment type
  + Assessment task description
  + Applicable conditions
  + Resubmissions and reattempts
  + Location
  + Instructions for answering the assessment task
  + How trainers/assessors will assess the work
  + Task-specific instructions for students

**Assessment Task 1**

|  |  |  |  |
| --- | --- | --- | --- |
| Student Name: | **Ben (zhijian) Wen** | Student ID No: | **s20242427** |

|  |  |  |
| --- | --- | --- |
| **Questions** | **Satisfactory (S)**  **Not Yet Satisfactory**  **(NYS)** | |
| Question 1:  Explain each of the following web programming concepts.   1. authentication 2. web security 3. hypertext transfer protocol (HTTP) 4. session management 5. stateless programming   Answer:   1. Authentication   Authentication is telling whether someone are who they say they are. It provides access control for systems by checking to see if a user's credentials match the credentials in a database of authorized users or a data authentication server. In doing this, authentication ensures that systems, processes and enterprise information are secure.   1. Web security   Sensitive information needs to be protected, and that is the focus of web security.  Modern browsers already have several features to protect users' security on the web, but developers also need to use best practices and code carefully to ensure that their websites are secure.   1. Hypertext transfer protocol (HTTP)   HTTP is a client-server protocol and it is used for fetching resources such as HTML documents. It is the foundation of any data exchange on the Web, which means requests are initiated by the recipient, usually the Web browser. A complete document is typically constructed from resources such as text content, layout instructions, images, videos, scripts, and more.   1. Session management   HTTP itself is stateless, and session concept can allow the server to remember user data across multiple requests. Using session ID and browser cookies can make his happen.  Session management is the process of creating, maintaining, and securing user sessions in web applications — so that the server can recognize users, store temporary data, and control access during their interaction with a site.   1. Stateless programming   Stateless programming means that each request is independent — it doesn’t rely on or remember any data from previous interactions.  In other words, the system does not store any “state” (user info, variables, or context) between requests. | S | NYS |
| Question 2:  Explain the following 3 basic sections of a HTML markup language document.   1. header 2. main content 3. footer   Answer:   1. header   Header is a big strip across the top with a big heading, logo, and perhaps a tagline. This usually stays the same from one page of a website to another.   1. main content   Main content is a main area in the center that contains most of the unique content of a given web page, It can be the video you want to watch, or the main story you're reading, or the map you want to view, or the news headlines, etc. This is the one part of the website that definitely will vary from page to page!   1. footer   A footer is a strip across the bottom of the page that generally contains fine print, copyright notices, or contact info. It's a place to put information that is not critical or secondary to the website itself. The footer is also sometimes used for SEO purposes, by providing links for quick access to popular content. | S | NYS |
| Question 3:  Control Structures are the building blocks of client-side programming. Explain the following three common programming control structures.   1. If Statements 2. If-Else Statements 3. Loops   Answer:  A. If Statements  If statement is a conditional control structure used to make decisions.  It allows a program to execute certain code only when a condition is true. B. If-Else Statements If-Else Statements is also is a conditional control structure used to make decisions.  It allows a program to execute certain code only when a condition is true. if condition is false, then execute anther code.  C. Loops  A loop statement in programming repeatedly executes a block of code while a specific condition is true. It automates repetitive tasks, reducing code duplication. Common types include for, while, and do...while loops. Loops continue until the condition becomes false, allowing efficient data processing and iterative operations in programs. | S | NYS |
| Question 4:  Match the following CSS selectors to the corresponding CSS:   1. CSS element Selector 2. CSS class Selector 3. CSS Universal Selector  |  |  | | --- | --- | | CSS | CSS Selector used | | \* {   text-align: center;   color: blue; } | C | | p {   text-align: center;   color: red; } | A | | .center {   text-align: center;   color: red; } | B | | S | NYS |
| Question 5:  Which of the following JavaScript codes can be used to dynamically change the image and CSS styles of a HTML image element (id=product\_img). Choose two.   1. document.getElementById("product\_img").innerHTML = "new\_product.jpg"; 2. document.getElementById("product\_img").src = "new\_product.jpg"; 3. document.querySelector("product\_img").classList.add("special\_border"); 4. document.querySelector("#product\_img").classList.add("special\_border"); 5. document.querySelector(".product\_img").classList.add("special\_border");   Answer:  B, D | S | NYS |
| Question 6:  Briefly explain the following:   1. Client-side scripting 2. Server-side scripting   Answer:   1. Client-side scripting   Client-side scripting is executed in Web browsers. Source code is used to transfer from webserver to user's computer over the internet and run directly on browsers. It is also used for validations and functionality for user events.   1. Server-side scripting   Server-side scripting is executed in Web servers. They are basically used to create dynamic pages. It can also access the file system residing at the webserver. A server-side environment that runs on a scripting language is a web server. | S | NYS |
| Question 7:  Which one of the following PHP codes will display “Welcome to GBCA” in a H1 element on a web page?  A.  <?php $display = "<h1>Welcome to GBCA</h1>"; ?>  B.  <?php header("welcome.php"); ?>  C.  <?php  $display = "<h1>Welcome to GBCA</h1>"; echo "display"; ?>  D.  <?php  $display = "<h1>Welcome to GBCA</h1>"; echo $display; ?>  Answer:  D | S | NYS |
| Question 8:  Provide a brief description of following commonly used predefined variables in PHP.   |  |  | | --- | --- | | **Object** | **Description** | | [$GLOBALS](https://www.php.net/manual/en/reserved.variables.globals.php) |  | | $\_SERVER |  | | $\_GET |  | | $\_POST |  | | [$\_ENV](https://www.php.net/manual/en/reserved.variables.environment.php) |  |   Answer:  $GLOBALS  References all variables available in global scope. It is An associative array containing references to all variables which are currently defined in the global scope of the script. The variable names are the keys of the array.  $\_SERVER  Server and execution environment information. It is an array containing information such as headers, paths, and script locations.  $\_GET  Query string variables. It is An associative array of variables passed to the current script via the URL parameters (also known as the query string). Note that this array is populated whenever a query string is present, regardless of the HTTP request method.  $\_POST  Form data from HTTP POST requests. It is An associative array of variables passed to the current script via the HTTP POST method when using application/x-www-form-urlencoded or multipart/form-data as the HTTP Content-Type in the request.  $\_ENV  Environment variables. It is an associative array of variables passed to the current script via the environment method. | S | NYS |
| Question 9:  What is the difference between storing data in a local storage and session storage?  Answer:  Local storage and session storage both store data in the browser, but differ in duration and scope. Local storage keeps data permanently until manually deleted, even after closing the browser. Session storage, however, only lasts for the duration of a browser tab and is cleared when the tab or window is closed, providing temporary data storage. | S | NYS |
| Question 10:  What is a Database Management System (DBMS)?  Answer:  A Database Management System (DBMS) is software that allows users to create, manage, and organize data efficiently. It provides tools for storing, retrieving, updating, and securing data in databases. DBMS ensures data integrity, consistency, and accessibility while supporting multiple users and applications through structured query languages like SQL for managing relational or non-relational data. | S | NYS |
| Question 11:  List 3 debugging tools used for troubleshooting errors on website.  Answer:  - browser developer tools  - W3C markup validation service  - W3C CSS validation service | S | NYS |
| Question 12:  Briefly explain the following internet security protocols.   1. SSL 2. TLS 3. HTTPS   Answer:   1. SSL   SSL, Secure Sockets Layer certificates are used to establish an encrypted connection between a browser or user’s computer and a server or website. It prevents hackers from seeing or stealing any information transferred, including personal or financial data.   1. TLS   TLS, Transport Layer Security, is an updated version of SSL and it is more security. Provides the same thing as SSL (secure communication) but with stronger encryption, better performance, and updated security standards.   1. HTTPS   HTTPS makes web browsing safe by encrypting communication and verifying the site’s identity. That’s why all modern websites are expected to use it. HTTPS appears in the URL when a website is secured by an SSL/TLS certificate. Users can view the details of the certificate, including the issuing authority and the corporate name of the website owner, by clicking the lock symbol on the browser bar. | S | NYS |
| Question 13:  Briefly explain the following policies and standards which are applicable to developing websites.   1. Image copyright 2. Australian Privacy Principles 3. W3C WCAG accessibility guidelines   Answer:  A  When developing websites, adhere to image copyright policies by using only original, licensed, or royalty-free images. Always respect ownership rights, follow licensing agreements, and provide proper attribution where required. Avoid copying or misusing copyrighted content without permission. Ensuring compliance prevents legal issues, promotes ethical standards, and upholds professionalism, while protecting creators’ intellectual property and maintaining trust with users.  B  The Australian Privacy Principles (or APPs) are the cornerstone of the privacy protection framework in the Privacy Act 1988. They apply to any organisation or agency the Privacy Act covers. Including developing websites.  C  The Web Content Accessibility Guidelines (WCAG) is an internationally recognised standard created by the World Wide Web Consortium (W3C). It’s purpose is making Web content more accessible to people with disabilities. It also make Web content more usable by older individuals with changing abilities due to aging and often improve usability for users in general. | S | NYS |

**Comments:**

|  |
| --- |
| **Submission Type:  Initial submission |  1st Resubmission  2nd Resubmission** |
| **Result:  Satisfactory |  Not Yet Satisfactory** |

**Assessment Task 2**

1. **Submission details**

* The assessment task is due on the date specified by the assessor. Any variation to this arrangement must be approved in writing by the assessor.
* Answers must demonstrate an understanding and application of relevant concepts, critical thinking, and good writing skills.
* The student is required to complete four activities.
  + Activity 1: Website design specification
  + Activity 2: Develop dynamic web pages
  + Activity 3: Validate and test the web pages
  + Activity 4: Present the website in a meeting and obtain sign-off
* Student who wishes to change the given scenario must discuss and seek approval from the trainer.
* You must attempt all criteria to the required level, e.g. Assessment criteria mentioned in the performance checklist to be deemed satisfactory in this task.

1. **Performance objective**

Students need to demonstrate their ability to evaluate following skills, knowledge and professional practices

* Organisational requirement for the website design
* Technical requirement of the dynamic web page
* Different languages and technology which can be used to develop dynamic web pages
* Web site design and coding
* Website security and functionality
* Web page testing

1. **Assessment description**

* Your assessor will assess your work according to the given performance criteria/ performance checklist.

1. **Instructions for the Trainer**

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  + Location
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  + Task-specific instructions for students

Resources required to complete the assessment task:

* + Resources required to complete the assessment task:
  + an organisational style guide or policy
  + user requirements
  + industry standard markup languages
  + word processing software
  + a range of browsers and devices
  + the internet
  + required hardware, software and its components.

**Scenario**

Melbourne Watch Gallery is a retail company that sells smartwatches and sports trackers. Melbourne Watch Gallery has stores in major Melbourne and Sydney shopping centres. The head office is in Melbourne, Victoria. Melbourne Watch Gallery has been in operation for two years and has an extensive range of smartwatches and sports trackers to sell.

Melbourne Watch Gallery is implementing a new business strategy by focusing its sales on online business. Melbourne Watch Gallery is currently promoting watches via its website and social media channels, including Facebook, Twitter, and Instagram. They have also advertised in the newspapers and on selected radio stations.

You are hired as a web developer in the e-commerce development team. You have been tasked by your manager to develop an e-commerce website for Melbourne Watch Gallery.

You need to develop the home page, product page and login page together with a working shopping cart. You are also tasked to develop a product management system home page. The web designer has provided you with page design screenshots and basic requirements.

You should develop the web pages according to the web page design to maintain consistency with the entire website.

You are required to develop all dynamic functionalities using a combination of client-side and server-side programming languages. The company has requested that you use a Database Management System (DBMS) for this development project.

**Requirements**

**Part A - Home page requirements**

**Graphical user interface

Description automatically generated**

1. Navigation bar:
2. **Melbourne Watch Gallery** links to home page
3. **About us** page links to aboutus.html (this is an existing page)
4. **Product Management** links to a login page.
5. Header:
6. Font family: Courier New
7. Logo image file: logo.jpg
8. Logo width and height: 100px (approximate)
9. Product Listing
10. Use a 3-column layout
11. Each product tile should display the product name, product image, price and “Add to cart” button.
12. When “Add to cart” button is clicked, the product name, product image and price should be added to the shopping cart.
13. Create hyperlinks on the product name and product image. It should link to a product page. Include product ID as a URL parameter in the product hyperlink.
14. Display all products in the Products data store dynamically. Use server-side programming to retrieve products from a database and display them on the home page.
15. Refer to the database requirements for more information.
16. Shopping Cart
17. The last column must display a shopping cart with a border.
18. Width: 350px (approximate)
19. Include the title “Shopping Cart” on the top
20. For each cart item, use a 3-column and 2-row grid layout to display the product thumbnail image, product name, price and “Remove button”
21. Include at least 3 products in the shopping cart
22. Include a Total row for the total amount in the shopping cart
23. Include a “Check out” button at the bottom. The button should include a badge indicating the number of items in the shopping cart.
24. When the “Check out” button is clicked, redirect the page to the login page.
25. Use client-side JavaScript to program the dynamic functionalities for “Add to cart” and “Remove” buttons.
26. When a new item is added, the total amount and number of items in the shopping cart must be updated.
27. When “Remove” button is clicked, the product name, product image and price should be removed from the shopping cart. The total amount and number of items in the shopping cart must be updated.

**Part B - Product page requirements**

**Graphical user interface, text, application

Description automatically generated**

1. Refer to the home page for the navigation bar, header, and shopping cart requirements
2. Use the following layout:
   1. Product Images (left)
   2. Product information (centre)
   3. Shopping cart (right)
3. Product images
   1. Main product image width and height: 400px (approximate)
   2. Each product has 4 thumbnail images. They should be displayed as a row of images below the main product image.
   3. Thumbnail width and height: 100px (approximate)
   4. Include a border on each thumbnail image
   5. When mouse over a thumbnail image, the thumbnail image must be display as the main product image.
   6. Use client-side JavaScript to program the dynamic functionalities.
   7. All product image URLs should be retrieved from the Products data store.
4. Product information:
5. Product name should be display prominently on the top of this column.
6. Include a model number below the product name
7. Include a “Add to cart” button below the product price.
8. When “Add to cart” button is clicked, the product name, product image and price should be added to the shopping cart. Also refer to shopping cart requirements.
9. Include a heading “Product Overview” above the product description
10. When the “Add to cart” button is clicked, the product name, product image and price should be added to the shopping cart.
11. Shopping cart must be displayed on the last column.
12. Use Product ID in the URL parameter to retrieve the product information from a database. Display product information and images on the web page dynamically. Use server-side programming to complete this requirement.
13. Refer to the database requirements for more information.

**Part C - Login page requirements**

Graphical user interface, application

Description automatically generated

1. Refer to the home page for the navigation bar and header requirements.
2. Include label and text input for Username
3. Include label and text input for Password
4. Include a “Login” button.
5. When the “Login” button is clicked, submit the login form to a server-side script for password validation.
6. Retrieve the user login username and password from the database. The user password is encrypted with an MD5 algorithm.
7. On successful login, the user should be redirected to a Product Management page.
8. Store the username in a server-side session variable.

**Part D - Product Management page requirements**

Graphical user interface, application

Description automatically generated

1. Include the title “Product Management System” after the header.
2. Display a 5-column table with headings (Product ID, Image, Product Name, Price and Action). Display a product in each row. Refer to screenshot.
3. Display all products from the database. You need to use server-side programming to complete this requirement. Refer to the database requirements for more information.
4. Include the following action hyperlinks in the Action column. Add product ID on the hyperlinks as a URL parameter.
5. Edit: link to edit product page (this page will be developed in the next phase)
6. Delete: link to delete product page (this page will be developed in the next phase)
7. Preview: link to a product page (refer to product page requirements)
8. Add product ID on the hyperlinks as a URL parameter.
9. Include “Log out” in the navigation bar. The logout.php page is provided.

**Part E - Database requirements**

1. Products data store. The following product information is stored for each product:
2. product ID
3. product name
4. product description / overview
5. model no
6. price
7. image\_1 url
8. image\_2 url
9. image\_3 url
10. image\_4 url
11. Users data store. The following user information is stored for each user account:
12. User ID
13. username
14. password (encrypt with MD5 algorithm to align with cyber security protocols and procedures).

**Part F - Additional requirements**

1. Use external style sheet to define web page layout and style web elements.
2. The layout for navigation bar and header sections should be consistent across all pages.
3. All buttons and navigation items must be labelled according to the page design screenshot. This is an accessibility requirement.
4. Use a meaningful description for image alternative text. This is an accessibility requirement.

**Activity 1: Website design specification**

This assessment task requires the student to write a website design specification on the given scenario. The report should include the following section:

1. Main website functionalities
2. Relevant legislations and standards
3. Dynamic functionalities that require client-side programming
4. Dynamic functionalities that require server-side programming
5. Language for client-side programming
6. Language for server-side programming
7. Web page layout
8. Database design

**Organisation Template: Website design specification**

|  |
| --- |
| 1. **Main website functionalities**   - Home page with product list and shopping cart  - Product page with image, description and shopping cart  - Login page allow user login.  - Product management page. |
| **B. Relevant legislations and standards**  Copyright act  Privacy act |
| **C. Dynamic functionalities that require client-side programming**  add items to shopping cart  remove items from shopping cart  update total price  update items count |
| **D. Dynamic functionalities that require server-side programming**  Password validation  fetch product from server  product list management  dynamic update product information |
| **E. Language for client-side programming**  JavaScript |
| **F. Language for server-side programming**  PHP |
| **G. Web page layout**  **Home page layout**    **Product page layout**    **Login page layout**    **Product Management page layout** |
| **H. Database design**  **Products data store (table)**   |  |  |  | | --- | --- | --- | | **Column/field Name** | **Type** | **Length** | | product\_id | integer | 11 | | product\_name | text |  | | overview | text |  | | model\_no | text |  | | price | decimal | 10 | | image\_1 | text |  | | image\_2 | text |  | | image\_3 | text |  | | image\_4 | text |  |   **Users data store (table)**   |  |  |  | | --- | --- | --- | | **Column/field Name** | **Type** | **Length** | | user\_id | int | 11 | | username | varchat | 20 | | password | varchat | 32 | |

**Performance criteria checklist for unit assessment task:**

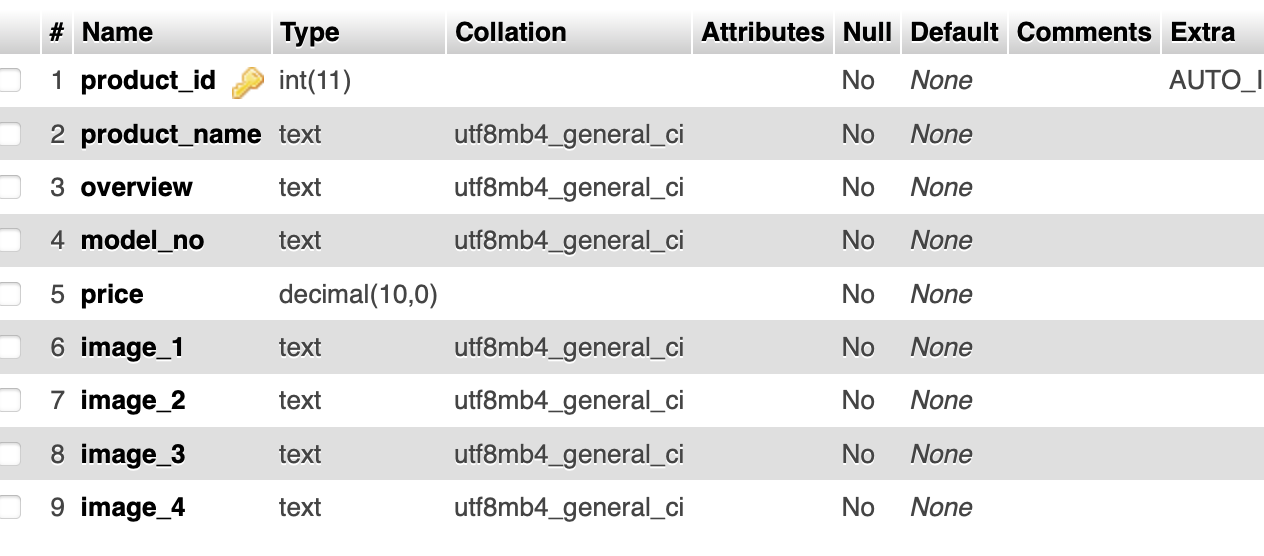
|  |  |  |  |
| --- | --- | --- | --- |
| **Trainer/ Assessor to complete** | | | |
| **Does the candidate meet the following criteria** | **Yes** | **No** | **Trainer/Assessor Comments** |
| **Website design specification**:   * Main website functionalities * Relevant legislations and standards * Dynamic functionalities that require client-side programming * Dynamic functionalities that require server-side programming * Language for client-side programming * Language for server-side programming |  |  |  |

**Activity 2: Develop dynamic web pages**

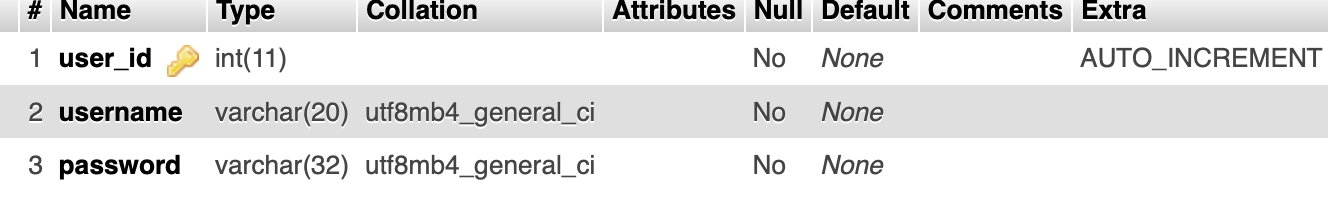
**Note: This activity is in continuation with the previous activity.**

1. Using a text editor of your choice, develop the following HTML/PHP documents according to the web page requirements given in the scenario:
   1. Home page
   2. Product page
   3. Login page
   4. Product Management page
2. You need to implement all client-side and server-side dynamic functionalities using the programming languages identified in Activity 1.
3. You need to setup a database according to the database design in Activity 1. Include screenshots of your database setup.

Products table structure:



Users table structure:



1. You need to submit all HTML, CSS, client-side scripts, server-side scripts and image files in a ZIP file with filename “XXX\_ICTWEB514\_Activity2.zip” where XXX is your student id.

**Performance criteria checklist for unit assessment task:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Trainer/ Assessor to complete** | | | |
| **Does the candidate meet the following criteria** | **Yes** | **No** | **Trainer/Assessor Comments** |
| Submitted all HTML web page, CSS, client-side scripts and server-side scripts. |  |  |  |
| Include screenshots of the database setup. |  |  |  |
| Meet Home page requirements, including page layout, styling and dynamic content. |  |  |  |
| Meet Product page requirements, including page layout, styling and dynamic functionalities. |  |  |  |
| Meet Login page requirements, including page layout, styling and dynamic functionalities. |  |  |  |
| Meet Product Management page requirements, including page layout, styling and dynamic content. |  |  |  |

**Activity 3: Validate and test the web pages**

**This activity is in continuation with the previous activity.**

1. Validate web pages for cross-browser issues. Use any 2 common browsers such as Chrome, Firefox, Microsoft Edge or Safari, for your testing. Document any issues in the table below. Provide a screenshot for each test result.
2. Validate web pages on 2 different devices such as iPad and iPhone, to ensure compatibility. Document any issues in the table below. Provide a screenshot for each test result.

|  |  |  |
| --- | --- | --- |
| **Cross-browser and Cross-Device validation issues** | | |
| **Issue No** | **Browser/ Device name** | **Details** |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |

1. Perform the following cyber security testing and record the test result. Debug and resolve any error during your testing until you pass all the cyber security test cases. Document the test results in the table below. Provide a screenshot for each test result.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case** | **Description** | **Test step** | **Expected result** | **Test result** (Pass or Fail) |
| 1 | Verify password stored in the database is encrypted with the MD5 algorithm. | Inspect the Admin user password in the Users data store. | Password value is encrypted. | Pass |
| 2 | Verify password validation is working in the login page. | Test with a valid username and password | Login is successful and the user is directed to the Product Management page. | Pass |
| 3 | Verify password validation is working in the login page. | Test with an invalid username and password | Login is unsuccessful and an error message is shown on the login page. | Pass |

1. Perform the following functional testing and record the test result. Debug and resolve any error during your testing until you pass all the functional test cases. Document the test results in the table below. Provide a screenshot for each test result.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case** | **Description** | **Test step** | **Expected result** | **Test result** (Pass or Fail) |
| 1 | Home page displays all products in the database accurately. | Verify the number of products displayed on the home page and the accuracy of information against the Products data store. | All products are displayed, and the information is correct. | Pass |
| 2 | Product page displays the correct product. Product information displayed is accurate. | Select a product on the Home page.  The product details should be displayed on a product page. | Product is displayed and the information is correct. | Pass |
| 3 | Shopping cart is working correctly. | Click “Add to cart” on a product in the home page. | Product is added to the shopping cart.  Total amount is updated. | Pass |
| 4 | Shopping cart is working correctly. | Click “Remove” on an item in the shopping cart | Product is removed from the shopping cart.  Total amount is updated. | Pass |
| 5 | Product Management page displays all products in the database accurately. | Verify the number of products displayed on the Product Management page and the accuracy of information against the Products data store. | All products are displayed, and the information is correct. | Pass |

Save all result screenshots to a word document with filename “XXX\_ICTWEB514\_Activity3.docx” where XXX is your student id. You are required to submit the following screenshots:

* Cross-browser testing
* Cross-device testing
* Cyber security testing
* Functional testing

**Performance criteria checklist for unit assessment task:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Trainer/ Assessor to complete** | | | |
| **Does the candidate meet the following criteria** | **Yes** | **No** | **Trainer/Assessor Comments** |
| Validate web pages for cross-browser issues. Use any 2 common browsers such as Chrome, Firefox, Microsoft Edge, Safari. |  |  |  |
| Validate web pages on 2 different devices such as iPad, iPhone, to ensure compatibility. |  |  |  |
| Perform the cyber security testing and record the test result. Debug and resolve any error during your testing until you pass all the cyber security test cases. |  |  |  |
| Perform the functional testing and record the test result. Debug and resolve any error during your testing until you pass all the functional test cases. |  |  |  |
| Document the test results. |  |  |  |
| Submit the following screenshots:   * Cross-browser testing * Cross-device testing * Cyber security testing * Functional testing |  |  |  |

**Activity 4: Present the website in a meeting and obtain sign-off**

**This activity is in continuation with the previous activity.**

In this activity, you need to conduct a meeting with your manager to present and gather feedback on your website. You need to obtain approval from the manager. He/she will provide the sign off for the website once all the requirements are being met.

In the meeting, you need to cover the following.

1. Present the website
2. Gather feedback
3. Confirm that website meets all functional and dynamic requirements.
4. Obtain sign off

You need to complete the meeting in 7-10 minutes and follow organisational procedures while conducting the meeting. Your trainer will complete the following performance checklist. You need to complete the organisational meeting minutes template and write the information related to the meeting discussion.

You need to submit the completed meeting minutes document to your assessor.

**Meeting minute template**

|  |  |  |  |
| --- | --- | --- | --- |
| **Minutes of Meeting**  Meeting Objective: Present and gather feedback on the website  Attendees: Ben Jerry, Elise , Tom, John  Venue: GBCA classroom  Date: 18 October 2025 | | | |
| **No** | **Points Discussed** | **Actions Suggested** | **Target Date** |
| 1 | Present the website in the meeting | Present the website, operate how to login, how to manage cart. |  |
| 2 | Gather feedback | All requirements are present. |  |
| 3 | Confirm that website meets all functional and dynamic requirements. | All requirements are present and meets all functional and dynamic requirements. |  |
| 4 | Obtain sign off | Approved |  |

**Performance criteria checklist for unit assessment task:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Trainer/ Assessor to complete** | | | |
| **Does the candidate meet the following criteria** | **Yes** | **No** | **Trainer/Assessor Comments** |
| Conduct a meeting:   * Present the website in the meeting * Gather feedback * Confirm that website meets all functional and dynamic requirements. * Obtain sign off * Completed the given meeting minutes template |  |  |  |

# Assessment Task 2

**Comments:**

|  |
| --- |
| **Submission Type:  Initial submission |  1st Resubmission  2nd Resubmission** |
| **Result:  Satisfactory |  Not Yet Satisfactory** |

**Unit Completion Sheet**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Student Name: | Ben(Zhijian) Wen | | | Student ID No: | | s20242427 |
| Course Code & Title | ICT50220 Diploma of Information Technology | | | | | |
| Unit Code & Name: | ICTWEB514 Create dynamic web pages | | | | | |
| The following assessments have been completed, assessed as either ‘Satisfactory’ or ‘Not yet satisfactory’, and submitted to Administration with all required documentation completed and signed. | | | | | Result S = Satisfactory  NYS = Not yet satisfactory  C = Competent  NYC = Not yet competent | |
| Assessment Task 1 | | Written questions | | | S |  NYS | |
| Assessment Task 2 | | Unit Project | | | S |  NYS | |
| For a ‘Competent’ result, all assessment tasks must be graded ‘Satisfactory’. | | | | | | |
| Final Assessment Result for this Unit | | | | | C |  NYC | |
| Assessor Declaration:  I declare that I have conducted the assessment with this student and have provided appropriate feedback. | | | Name and Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |

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