Ollscoil Teicneolaíochta an Atlantaigh

Atlantic Technological University

**Higher Diploma in Science in Data Analytics**

# Web Applications Development

## Final Assessment

This assessment is worth 70% of the marks for this module Due Date: Tuesday, 23rd May, 2023 @ 11:59pm

## BUSINESS WEBSITE DEVELOPMENT ASSIGNMENT

For this assignment, you must create a business e-commerce website that employs the principles of HTML5, CSS and JavaScript which meets the requirements specified below.

The 'business' can be of your choosing (or it can be a personal site, meeting the requirements outlined below). You should employ a common design theme/style and colour scheme throughout.

## Requirements

Your website should:

1. Allow the customer to enter their login details and have login details validated (via a login screen) before receiving a summary of the order - You can implement the login feature any way you wish using JavaScript and/or Node. The credentials for your website should be **user** and **pass** (all lowercase);
2. Create a form and perform form validation through JavaScript or HTML to ensure that:
    a. text fields are not empty
    b. a valid email address is entered
3. Include a slideshow or carousel which displays a different image each time the page is loaded;
4. Allow the user to 'purchase'* items from the site;
5. Use an object or an array in JavaScript;
6. Use at least one custom module in Node;
7. Include capability for handling 'post' and 'get' requests;
8. Include both static and dynamic content;
9. Include the use of Templates in Node;
10. Include error messages to provide feedback to users in case of any issues or errors;
11. Connect to a MySQL database that contains relevant site information (eg., product info) using Node. Your database name should be your ATU ID, eg, G00345678, both username and password should be **root**;
12. Use the bootstrap version 5 framework (via CDN).

**For this assignment, 'purchase' can mean that the user is presented with the possibility to choose a product or item, select a quantity, and if the purchased button is clicked, they will be presented with a total cost.*

You should also provide a document briefly outlining the details of your project illustrating if/how you have implemented each of the items above, along with any other information you deem is relevant. An example document is provided – you can use this as a template or alternatively create your own.

*Your submission should also follow the submission guidelines provided below:*

# Submission Guidelines

*Please ensure you **submit the following** when uploading your project:*

1. ***A zip file of your project***
2. ***A backup of your database in SQL format***

### ZIP FILE: Project Files and Folders

- Provide a Zip/compressed file of your project folder – any standard compressed file format is acceptable, such as zip, rar, gzip, tar. On windows, this is possible by right-clicking on your project folder and selecting “Send to” then “Compressed (zipped) folder”.

### Database Backup

- Provide a backup of your Database in *.sql* format

## Please note the following on your code and comments

All major blocks of code (HTML, CSS, JavaScript) should include comments that describe its function.
All classes and ID's ***created by you*** must be accompanied by comments describing their purpose.
All functions in JavaScript **must** include a comment describing their purpose.

# Format of comments in your project

### HTML and BOOTSTRAP

- Lines of comments should relate to the line or block of code directly underneath and should provide a brief description of the purpose of the code

```
<!-- Bootstrap "Card" component for Movie Purchase -->
<!-- shadow-lg class added to add shadow to card -->
<div class="card collapse shadow-lg" id="myCard" style="width: 30%;">
  <img src="cloud.JPG" class="card-img-top" >
  <div class="card-body">
    <h5 class="card-title">Purchase</h5>
    <p class="card-text">Purchase Movie</p>
    <!-- Card button, with onlclick event to trigger purchaseMovie() function -->
    <a href="#" class="btn btn-primary" onclick="purchaseMovie()">Save</a>
  </div>
</div>
<!-- END OF Bootstrap "Card" component -->
```

### CSS

- Lines of comments should relate to the code directly underneath and should provide a brief description of the purpose of the line of code. All classes and IDs should have comments describing their purpose

*Example:*

```
/* Red Border class for input box on pages 2 and 3 */
.inputBoxBorder {
      border: thin solid red;
     }

/* Type class for paragraphs on all pages */
#setTypeRed {
      font-weight: bold;
      color: red;
     }
```

## JavaScript Example

- Lines of comments should relate to the line of code directly underneath and should provide a brief description of the purpose of the line of code

*Example:*

```
//Declare variable to record product code
var choice;

//Function to save value in inbox to choice variable
function specifyProduct(){
    //Make choice variable equal to value in input box with id
    of 'inbox'
    choice = document.getElementById("inbox").value;
}
```

*If you have code you wish to use but you are unsure of how it works, or code you have sourced from an external location (such as w3schools), it **must be referenced** in the following manner:*

*HTML/Bootstrap code from an external source, such as W3Schools, getBootstrap.com, etc:*

```
<!-- Code block taken from: https://getbootstrap.com/docs/4.3/components/jumbotron/ -->
<!-- Unsure as to working of this code - this displays a Jumbotron -->
<div class="jumbotron jumbotron-fluid">
  <div class="container">
    <h1 class="display-4"></h1>
    <p class="lead">My Data is Here</p>
  </div>
</div>
<!-- End Code Block -->
```

You can use the document provided to outline your implementation details, or you can use your own format.

An example of what you may include in the document is shown below:

## Project Requirements Implementation

| ITEM 1 | Reference |
|---|---|
| *Allow the customer to enter their login details:* | See page "login.html" and the associated JavaScript functions from login.js |
| *Login details validated (via a login screen) before receiving a summary of the order:* | Validation performed using HTML5 on "login.html" page |
| *Username:* | user |
| *Password:* | pass |
| *Brief description of how this was implemented:* | Used HTML5 validation for username and password, and the authentication was via the JavaScript function called "authenticate()" in the login.js page. The function uses a DOM query to extract both the values and checks against the values stored in the database. |