**TMF3973 / TMS3853 / TMN3223 / TMT3693**

**Web-Based System Development**

**PROJECT**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **ACKNOWLEDGING YOUR USE OF AI**  If you completed any work with the aid of an AI tool, assuming a setting in which the instructor gave permission for such tools to be used, you should always acknowledge the use. Using the outputs of an AI tool without proper acknowledgement is equivalent to lifting or paraphrasing a paragraph from a source without citation and attracts the same sanctions. You can give this acknowledgement through a note or “methods section” at the end of the assignment explaining, e.g., which AI tools were used, in which parts of the process they were used, what were the prompts used to generate results, and what you did with the outputs to add value.  One way this can be done is in a tabular form as shown below:   |  |  |  | | --- | --- | --- | | AI Tool used | Prompt and output | How the output was used in the assignment | |  |  |  | |  |  |  |   Alternatively, if an AI tool was used to generate a more extensive set of intermediate outputs that were then developed into a final product, you should preserve a full transcript of the relevant interactions with the AI as an appendix for submission with your assignment. Your instructor may also require you to explicitly declare if AI tools were not used in a part of your assignment, or for the whole assignment. In all cases, seek advice from your course instructor.  *Source: extracted from https://libguides.nus.edu.sg/new2nus/acadintegrity* |

**Instruction**

This is a group project of 5 students. Please divide tasks amongst group members (recommend - pair programming), as individual contribution will be assess via peer grading, demo & QA**.**

The developed web application must be hosted online and should be accessible at any given time throughout the semester (until ***23rd February 2025***) for evaluation and grading.

**Requirements**

This project expects the web application to have these necessary features:

1. **THREE (3) User Types**, each having their own set of permissions
   1. Public User
   2. Registered Member
   3. Administrator
2. For Public User,
   1. Able to **browse** by category, **search** and add items/products/services to cart.
   2. Able to direct user to the Member Registration page upon clicking the checkout/make payment button.
3. **Member Registration**. Following fields are **MUST** in the registration form,
4. Full name – alphabet (uppercase, lowercase or mix)
5. Email
6. Password

* 6-8 digits
* Must contain ONE uppercase, ONE numeric, ONE special character, number and no space
* Hidden password

1. Any other fields necessary
2. Dashboard for Registered Member,
   1. Able to **Login** and **Logout**, **edit** profile detail.
   2. Able to **browse** by category and **search** items/products/services, **add** to cart, **view** transaction details (date, time, price, quantity, sub-total/total, and any other necessary fields).
   3. Able to checkout/make payment (support \*\***dummy transactions**).
   4. Able to show payment receipt (on-screen or pdf).
   5. Able to send **email notification** to user.
3. Dashboard for Administrator,
   1. Able to **Login** and **Logout**.
   2. Able to perform **read** actions on registered member accounts.
   3. Able to perform **create**, **read**, **update** and **delete** actions on items/products/services and prices.
   4. Able to **view** a summary of transaction records with filters (daily/weekly/monthly).
   5. Able to **generate** transaction report (on-screen or pdf).
4. Note on dashboard design

[*https://www.justinmind.com/blog/dashboard-design-best-practices-ux-ui/*](https://www.justinmind.com/blog/dashboard-design-best-practices-ux-ui/)

[*https://www.w3schools.com/w3css/tryw3css\_templates\_analytics.htm*](https://www.w3schools.com/w3css/tryw3css_templates_analytics.htm)

**Other Requirements**

* 1. Responsive Web Design.
  2. Should covers website security
     1. XSS, directory traversal and file inclusion
     2. SQL injection
  3. **Chrome browser** will be used to access the web application later (so make sure it is compatible).
  4. The main page of the web application **MUST** starts with ***index.html*** or ***index.php***
  5. Create DHTML using HTML, CSS, JavaScript and DOM. The libraries and APIs allowed:
     1. Animation – anime.js or three.js
     2. Data visualization – D3.js, Victory, React-vis, V charts or chart.js; Canvas API, WebGL
     3. Any 3rd party APIs
  6. Content management system (eg. Wix/WordPress/Drupal/Joomla etc) is NOT allowed.
  7. Front-end or back-end framework (eg. Bootstrap/ Angular/ React/ Node/ Yii/ Cake/ Laravel etc) should use sparingly (**MUST** indicate clearly which and how the tools are used).
  8. **MUST** indicate clearly if AI tools are used in report.

**\*Group\* submission to eLeap by 5pm, 3rd January 2025 (Friday):**

1. Name the zip file / compress folder as **“<your programme> - <your group name> -project.zip**”.
2. Official assignment cover page with signing of all member, acknowledging use of AI and,
3. Shared folder link of the group prototype files (Microsoft OneDrive or Google Drive). Make sure it set to **public** shared and **DO NOT** required login.
4. URL of group prototype web hosting address, which must be accessible using a web browser over the Internet.
5. The username and password of the web hosting account that was utilised (**DO NOT** used “Log in with Facebook/Google” or else you need to share your password).
6. Proof of group discussion.

\*\* Any late submissions will be penalised accordingly (minus 1 mark per day) \*\*

~ Have fun ~

**RUBRIC FOR PROJECT PROTOTYPE (100%)**

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| --- | --- | --- | --- | --- | --- | --- |
| **Criteria** | **Weightage** | **Poor**  **(2 mark)** | **Needs improvement**  **(4 marks)** | **Satisfactory**  **(6marks)** | **Good**  **(8 marks)** | **Excellent**  **(10 marks)** |
| **Hosting -** able to deploy to hosting provider; successfully displaying *index.html / index.php* inside web browser after typing URL. | 1 |  |  |  |  |  |
| **Responsiveness & layout -** able to implement using fluid layout (percentage-based/anchoring/flexbox), adaptive typography (text size, spacing, layout, etc), responsive images/videos/animation; used of HTML5 and CSS3. | 1 |  |  |  |  |  |
| **Interactivity & Navigation -** able to implement buttons clicking, content changing, pop-up, form validation by utilising the use of HTML DOM; used of JavaScript libraries. | 1 |  |  |  |  |  |
| **User Dashboard & Data Analytics –** using template to fit to project’s needs; able to create and display graphical chart(s) using 3rd party libraries or APIs based on dynamic data from database; able to customise / filter output. | 2 |  |  |  |  |  |
| **Security –**able to implement filtering and validation of data from forms, securing files and folders, database, etc; able to handle error and email send notification. | 2 |  |  |  |  |  |
| **User authentication & authorization -** able to verify user as registered member or administrator; able to set user permissions to view files and data. | 1 |  |  |  |  |  |
| **Database -** able to create based on design single/multiple databases containing more than one table (**MySQLi**); able to connect all databases. | 1 |  |  |  |  |  |
| **Response & Answer -** able to explain design and implementation; answer reflects understanding and related to the assigned tasks / functions. | 1 |  |  |  |  |  |