

MANGA MAPS REPORT



SULTAN QABOOS UNIVERSITY DEPARTMENT OF COMPUTER SCIENCE

COMP3700-INTRODUCTION TO WEB COMPUTING - FALL 2025 Instructor: Dr. Mohammed Al-Soleimani

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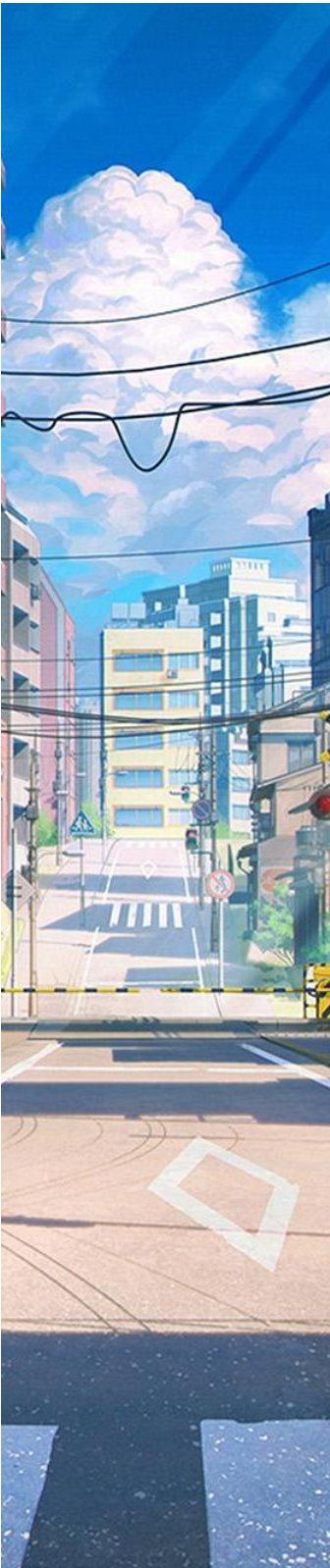
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1. OVERVIEW

In this third phase of the MangaMaps project, our team successfully migrated the static website to the **Bootstrap Framework** and implemented **Dynamic JavaScript** functionality. The website now adheres to modern responsive design standards and features interactive elements such as a cost calculator, a quiz game, and dynamic data tables.

The project now consists of **12 pages**, including the newly added calculator.html , funPage.html , questionnaire.html , and dynamic-tables.html.

2. BOOTSTRAP INTEGRATION

We removed all previous custom CSS rules and exclusively used Bootstrap 5.3.2 classes to ensure a consistent, responsive layout across all devices.

A. Grid System & Layout

We structured all pages using Bootstrap's responsive grid system (container, row, col-*).

- **Implementation:** On the **Tours** and **Fun Page**, we used col-12 col-md-6 col-lg-4 to create cards that stack vertically on mobile screens but display in a 3-column grid on desktop screens.

B. Forms & Validation

We applied Bootstrap styling to all form elements (form-control, form-select, form-check) to enhance usability.

- **Feedback:** We implemented Bootstrap's validation classes (is-invalid, invalid-feedback) to provide clear visual cues (red borders and text) when user input is incorrect.

C. Navigation & Components

- **Navbar:** A responsive navigation bar (navbar-expand-lg) was added to every page, featuring a hamburger menu for mobile users.
- **Components:** We integrated a **Carousel** for the image gallery on the Index page and **Modals** on the Fun Page to display game results dynamically.

3. JAVASCRIPT IMPLEMENTATION

A. Dynamic Content (Objects & Arrays)

We updated the table pages to use JavaScript objects and arrays.

- **Object Constructors:** We defined two constructors, `Tour()` and `Review()`, in `dynamic.js` to standardize data.
- **Arrays:** Data is stored in `tours[]` and `reviews[]` arrays.
- **Dynamic Loading:** The `loadToursTable()` function dynamically generates HTML `<tr>` rows based on the array data.
- **Add Functionality:** A form allows users to input new data, which is pushed to the array and immediately rendered in the table using the `addTour()` function.

B. Questionnaire Page (Form Validation)

We created a feedback form satisfying the requirement for 5+ controls and custom validation.

- **Validation Logic:**
 - **Name:** Uses Regex to allow only letters.
 - **Age:** Ensures the input is between 10 and 100.
 - **Comments:** Checks for a minimum length of 15 characters.
 - **Selection:** Validates that at least one radio button and one checkbox are selected before submission.

C. Calculator Page

We developed a "Tour Cost Calculator" to estimate trip expenses.

- **Logic:** The script calculates (Base Price × Travelers).
- **Conditions:**
 - If travelers > 4, a **10% Group Discount** is applied.
 - If the user enters the code `#MANGAWINNER` (won from the Fun Page), a **40% Discount** is applied.
- **Output:** The script dynamically updates the DOM to show the Base Cost, Discount, Tax (5%), and Final Total.

D. Fun Page (Interactive Game)

We included a "Japan Landmarks Quiz" where users match images to names.

- **Dynamic HTML:** JavaScript generates the game cards from an array of image objects.
- **Logic:** A checking function compares user selection against the correct answer stored in the object.
- **Reward:** A **Bootstrap Modal** displays the score and provides the discount code if the user answers all questions correctly.

E. Index Page Updates

- **Banner:** A scrolling text banner displays a welcome message with the current live date and time using JavaScript's Date object.
- **Gallery:** A rotating photo gallery (Bootstrap Carousel) cycles through images every 3 seconds.

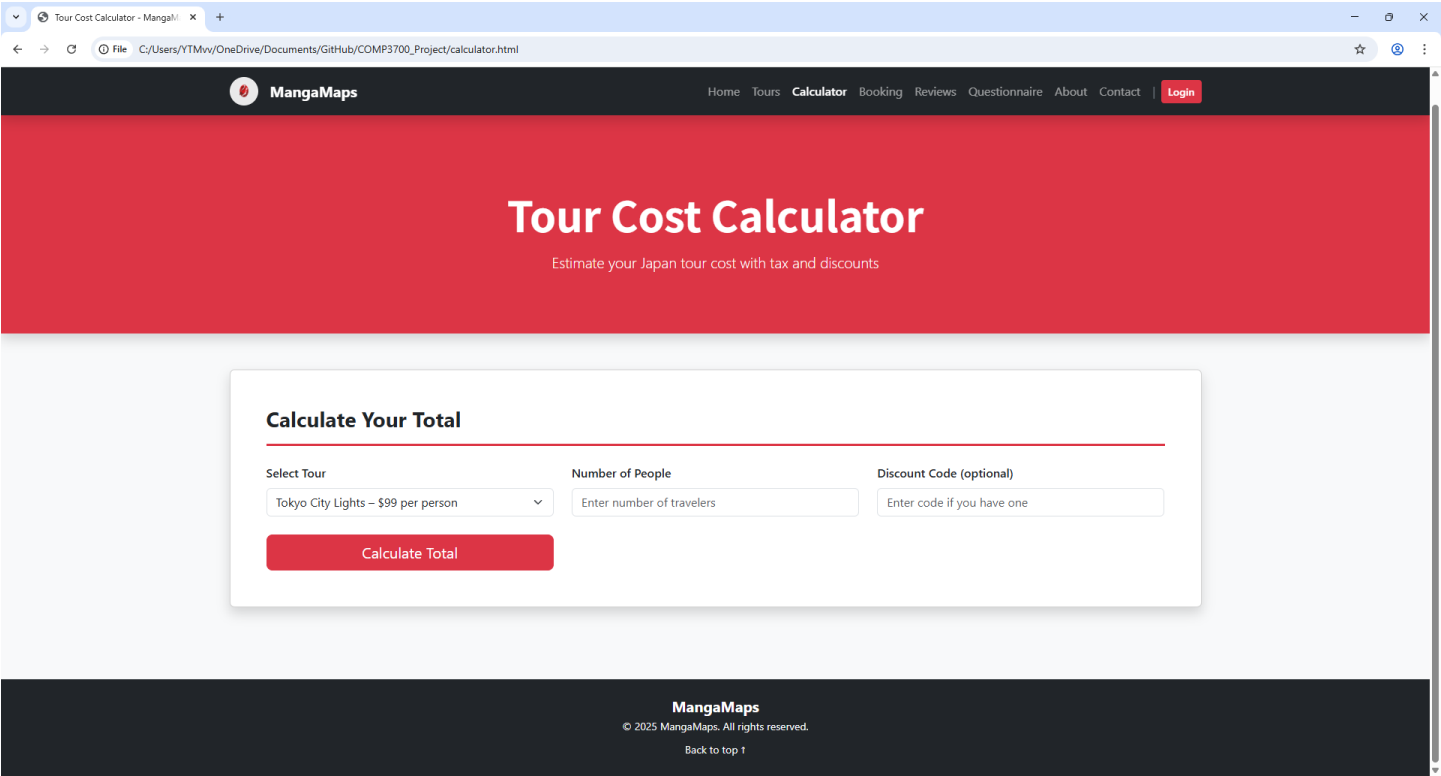
4. TEAM COLLABORATION

GitHub Repository: https://github.com/yohikami/COMP3700_Project.git

Task	Team Member	%Contribution	Description of Work
Bootstrap Layout	Loai	100%	Migrated all pages to Grid system; styled Navbar and Footer.
Dynamic Tables (JS)	Loai	100%	Created dynamic.js, Object Constructors, and Array logic.
Questionnaire Page	Mohammed	100%	Designed form and implemented Regex validation logic.
Calculator Page	Loai	100%	Implemented math calculations and conditional discount logic.
Fun Page (Game)	Mohammed	100%	Created Quiz logic, array shuffling, and Modal integration.
Report & Testing	Loai & Mohammed	40% / 60%	Compiled report, managed GitHub repo, and tested features.

5. SCREENSHOTS

5.1 Calculator Page



5.2 Dynamic Tables

Dynamic Tables - MangaMaps

C:/Users/YTMvw/OneDrive/Documents/GitHub/COMP3700_Project/dynamic-tables.html#top

Dynamic Data Tables

Tours Table

Name	Price	Duration
Tokyo City Lights	99	3 days
Osaka Food Adventure	50	3 days
Kyoto Heritage Escape	89	3 days

Reviews Table

Name	Rating	Comment
Sarah Johnson	5	Our Tokyo City Lights tour was absolutely incredible!
Michael Chen	5	The Osaka Food Adventure was a culinary delight!
Emma Williams	4	Kyoto Heritage Escape was peaceful and beautiful.
David Brown	5	MangaMaps made our first trip to Japan very easy.

Add New Tour

Tour Name

Price

Duration

Add Tour

Add New Review

Name

Rating (1-5)

Comment

Add Review

MangaMaps

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5.3 Fun Page (Showing Quiz Cards)

Japan Landmarks Quiz - Manga

C:/Users/YTMvw/OneDrive/Documents/GitHub/COMP3700_Project/funPage.html

MangaMaps


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Japan Landmarks Quiz Game

Test your knowledge of famous Japanese landmarks!

How to Play


Look at each image and select the correct name of the famous Japanese landmark. Answer all 6 questions correctly to win a discount code!



Question 1

What is the name of this famous Japanese landmark?


-- Select Answer --



Question 2

What is the name of this famous Japanese landmark?


-- Select Answer --



Question 3

What is the name of this famous Japanese landmark?


-- Select Answer --



Question 4

What is the name of this famous Japanese landmark?


-- Select Answer --



Question 5

What is the name of this famous Japanese landmark?

-- Select Answer --



Question 6

What is the name of this famous Japanese landmark?

-- Select Answer --

Check Answers

5.4 Questionnaire

Questionnaire - MangaMaps

C:/Users/YTMvw/OneDrive/Documents/GitHub/COMP3700_Project/questionnaire.html

MangaMaps

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Quiz Game

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Travel Questionnaire

Tell us about your travel preferences

Survey Form

Full Name *

Your full name

Email *

your.email@example.com

Age *

Your age

How interested are you in visiting Japan? *

☐ Low

☐ Medium

☐ High

Please select one option.

Which activities are you interested in? *

☐ Food

☐ Nature

☐ Culture

☐ Shopping

Select at least one activity.

Which city are you most excited to visit?

-- Select a city --

Budget Range (USD)

Additional Comments *

Write at least 15 characters..

Submit Questionnaire

5.5 Commented JavaScript Code

The image shows a Visual Studio Code editor window with the following components:

- Explorer:** Displays the project structure for 'COMP3700_PROJECT'. It includes folders for 'assets' and 'javascript', and a list of files such as 'dynamic.js', 'about.html', 'booking.html', 'calculator.html', 'contact.html', 'dynamic-tables.html', 'funPage.html', 'index.html', 'login.html', 'questionnaire.html', 'README.md', 'Report.pdf', 'review.html', 'test.html', 'tour-kyoto.html', 'tour-osaka.html', 'tour-tokyo.html', and 'tours.html'.
- Editor:** The main workspace shows the 'dynamic.js' file. The code is as follows:

```
javascript > JS dynamicjs > ...
39 function loadToursTable(data) {
43   data.forEach(t => {
47     // Create table row
48     <td>${t.duration}</td>
49   }
50   </tr>
51   );
52 }
53
54 // Load tours table when page starts
55 loadToursTable(tours);
56
57 /*****
58  * ADD NEW TOUR
59  * -----
60  * This function reads the user's input from the
61  * three text fields, validates that all fields
62  * are filled, then creates a new Tour object and
63  * adds it to the tours array.
64  *
65  * After updating the array, it refreshes the table
66  * and clears the input boxes.
67  *****/
68 function addTour() {
69   let name = document.getElementById("newName").value;
70   let price = document.getElementById("newPrice").value;
71   let duration = document.getElementById("newDuration").value;
72
73   // Basic validation: all fields must be filled
74   if (!name || !price || !duration) {
75     alert("Please fill all fields.");
76     return;
77   }
78
79   // Create new object and push to array
80   tours.push(new Tour(name, price, duration));
81
82   // Refresh table display
83   loadToursTable(tours);
84
85   // Clear inputs after adding
86   document.getElementById("newName").value = "";
87   document.getElementById("newPrice").value = "";
88   document.getElementById("newDuration").value = "";
89 }
90
91
92
93 /*****
```
- Chat:** A chat panel on the right side of the editor. It contains a message from 'dynamicjs' that says: "give me screenshot of dynamicjs". Below this, a system message states: "You need to set up GitHub Copilot and be signed in to use Chat." At the bottom of the chat panel, there is a prompt area with the text "Describe what to build next" and a dropdown menu for "Agent" and "Pick Model".

