

## Sultan's Dine Semester Project :

### Theory Part of Sultan's Dine Website -

#### Introduction

Sultan's Dine is a catering service dedicated to providing high-quality food for private and corporate events. The project aims to develop a professional user-friendly and responsive website for Sultan's Dine, ensuring smooth navigation, an appealing design, and easy access to essential information for potential customers. The website highlights Sultan's Dine's services including menu details, customer services and contact information. With a simple yet effective structure, the site ensures that visitors can quickly find the information they need to, at a glance.

## Part A - HTML

To successfully develop the website for Sultan's Dine, the project must meet specific requirements. The website will be created using HTML5, incorporating a minimum of five interlinked pages while ensuring user-friendliness and responsiveness. Additionally, it must adhere to the following essential criteria:-

### Task - A

#### (1) Developing a website with optimal user experience

To create a successful website, it is essential to follow fundamental web design principles. This ensures a clear layout, intuitive navigation, and user-friendly accessibility. Below are the key factors to create this website:-

(a) clear layout and structure:- A well structured website layout improves readability and

enhance the user experience to achieve a clean and professional design.

• Consistent design: Use a uniform color scheme, font styles, and spacing throughout the website.

• Grid-Based Layout: Using CSS flexbox and Grid ensures a well-aligned and balanced structure.

• Whitespace Usage: Proper spacing between elements improves readability and prevents clutter.

• Readable fonts: Use web-safe fonts like Roboto, Poppins, or Arial with appropriate font sizes.

The website uses a consistent color scheme, well-structured sections, and readable typography for an element design.

(2) Intuitive Navigation : Easy navigation ensures that users can move around the website efficiently.

Fixed Navigation Bar : A sticky navigation bar allows users to access links without scrolling back-up.

Clear Navigation Labels : Simple and direct menu items like Home, Menu, About, Gallery, Contact, Reviews and about me helps user understand their purpose.

Clickable Buttons and links : Ensures all navigation elements are properly styled and functional and animated..

In my project, A fixed navigation bar improves accessibility and well defined menu categories help users find information quickly.

### (3) User-friendly Accessibility :

A website should be accessible to all users including those with disabilities. Ways to improve accessibility include:-

Alt text for image: Helps visually impaired users understand images through screen readers.

Keyboard Navigation Support: Users should be able to navigate using the tab key.

Contrast and color Selection: Improves readability for users with visual impairments.

By following these principles, the website is visually appealing, easy to navigate, accessible, a well designed website enhances the user experience, ensuring visitors stay engaged.

## (2) Designing a website for standard Desktop Screen Resolution:

Ensuring that a website fits within standard desktop screen resolutions is crucial for a seamless user experience. A well designed layout prevents horizontal scrolling, maintains readability, and accessibility across different screen sizes. Below are the key principle to achieve this :-

### (a) Using a responsive Layout :-

A responsive design ensures that the website adapts to different screen sizes without requiring users to scroll horizontally. This is achieved through CSS Flexbox and grid. These layout techniques help create dynamic, flexible structure

that adjust automatically.

III. container-width Limitation: Setting a maximum width (like `max-width: 1200px`) ensures content does not stretch beyond standard resolutions.

IV. viewport Meta tag: `<meta name="viewport" content="width=device-width, initial-scale=1.0">` ensures the website adapts properly across devices.

My website is built using CSS Grid and Flexbox, ensuring the content remains within the optimal width range.

(b) Setting standard width for Desktop screens: - website should be designed to fit within common desktop resolutions such as  $1920 \times 1080$  px  $\rightarrow$  Recommended:  $1280 - 1400$  px  
 $1366 \times 768$  px  $\rightarrow$  content should not exceed  $1280$  px  
 $1440 \times 900$  px  $\rightarrow$  A flexible layout works best.

To create this, we use :-

- container {

- max-width: 1200px;

- margin: 0 auto;

- padding: 20px;

- }

My website uses a centered container with a max-width to ensure no content overflow, the screenwidth.

(3) Preventing overflow and horizontal scrolling: To avoid unwanted horizontal scrolling use (overflow: hidden); to prevent elements from exceeding the viewport width. Ensure images and videos are responsive using (max-width: 100%); so they don't exceed their container.

By following these principles; the website remains fully visible on standard desktop screens, eliminating the need for horizontal scrolling.

content scrolling. A structured, responsive design enhances readability, improves navigation and provides a smooth user experience.

(3) Designing a well structure form for Effective user information capture :

Forms play a crucial role in gathering user data, enabling smooth communication between business and customers. A well-structured form should be designed to ensure clarity, ease of use, and efficiency, while collecting the necessary information. Below are the key principles for creating an effective form:-

(1) Clear and Logical Layout :- A well-organized form should follow a logical flow, guiding users through the input fields effortlessly. Grouping related fields together, such as personal details, contact

(2) Diverse Input elements : To collect a wide range of information a form should be includ:-

■ Text fields : For names, email address and other text based data.

■ Dropdown menus : Useful for selecting pre defined options such as events types.

■ Checkbox : Ideal for allowing multiple selections.

■ Radio button : Helps user select single options.

■ Buttons : Includes submit and reset buttons for easy form interaction.

### (3) User-friendly and Accessible Design

Labels and placeholders should be provided for each input field to ensure clarity.

Error handling and validation should be implemented to prevent incorrect submissions.

By implementing these principles, the form enhances the overall user experience, making it intuitive, functional and effective.

### Task - B

#### (1) Site structure Diagram

My website consists of several interlinked pages, each serving a specific purpose:-

(1) Home:- The landing page that welcomes visitors and provides an overview of Sultan's Dine.

(1) Menu:- Display available dishes and special event menu.

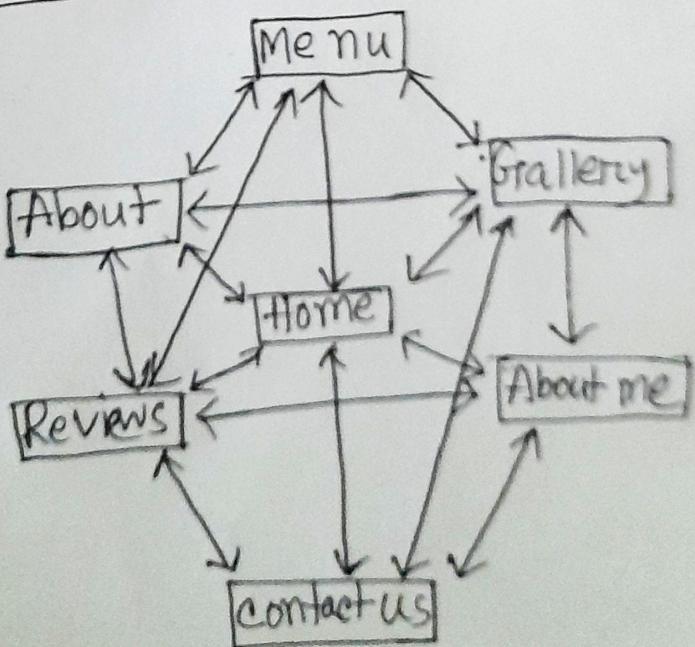
(ii) About :- Describe the business & it's history and mission.

(iv) Gallery :- showcase food and event images

(v) Contact us :- Provides an inquiry form, location, and content details.

(vi) Reviews :-

(vii) About me :- Details about me - site-structure diagrams.



All pages are interconnected through a consistent navigation bar, ensuring smooth user experience and accessibility.

(2) Browser testing and Analysis : To ensure compatibility and a consistent user experience, the Sultan's Dine website was tested on Google chrome and Mozilla Firefox. The testing focused on appearance, responsiveness and functionality across both browsers.

Browser-(1): (Google chrome)

Appearance : The website displayed correctly with all elements properly aligned. Fonts, colors and images loaded as expected.

Functionality : Navigation, interactive elements (buttons, forms) and animations worked smoothly.

Responsiveness: The layout adjusted well on different screen size, maintaining readability and structure.

2) Browser(2): (Mozilla Firefox):

Appearance: Overall, the website looked the same as in chrome, however, slight differences in text rendering were noticed due to firefox's font smoothing.

Functionality issue: Some CSS animation appeared slightly slower compared to chrome.

Responsiveness: The contact form had minor alignment issues on smaller screen, likely due to Firefox handling flexbox properties differently.

Analysis:

CSS Rendering Differences: Browsers use different engines (chrome: Blink, firefox: Geckos).

which can cause variation in front appearance and animations.

JavaScript performance: While most interactive elements function properly minor variation in animation smoothness were noticed in Firefox.

Responsiveness variations: Minor inconsistencies in layout responsiveness were observed, requiring additional CSS adjustment for better cross-browser compatibility.

### (3) HTML validation using W3C validation:

To ensure that the Sultan's Dine website adheres to web standards, all HTML pages were validation using the W3C markup validation service. The process helps identify errors, improves code quality and enhance cross-browser compatibility.

Index.html validation report: (1) Bad value for href and src attributes

Issue: <source src="final video.mp4" type="video/mp4">

■ solution: Rename the files to remove spaces  
(e.g., final-video.mp4)

■ issue: `<a href="contact us.html">` and `<a href="about me.html">`

■ solution: Replace spaces with ·hypers.

2) `<button>` elements inside `<a>` is not allowed:

■ issue: `<button> class="menu-button">`  
`menu</button>` inside `<a>`

■ solution: Use a `<div>` or `<span>` inserted

About me.html validation Report:

Error: (1) Incorrect -href values with spaces  
same .index.html .

About.html Validation Report:

(1) Unclosed `<footer>` and stray ·end tags ·

■ issue: `<footer>` is not properly ·closed ·

■ solution: Ensure `<footer>` is properly  
nested within `<body>`.

## Contact us html validation report:

(1) Invalid width value in <iframe>:-

■ Issue: width = 100%

■ Solution: use width = "100" or -set width using css.

(2) Unclosed section:-

<section tag left open.

## menu.html validation report:

(1) Same as contact.us.html

■ space in href filenames.

■ <iframe> width issue.

■ Unclosed section.

review.html validation report:- Same as menu.html.

Rename all files to remove spaces. Use correct closing tag. Ensure all elements are properly nested.

After fixing these issues, revalidate using w3c validation to confirm all errors are resolved.

## Part B - CSS

### Developing an External CSS File for Website styling :-

To ensure a visually appealing and well structured website, I have used external CSS files to control the design and layout of all HTML pages. The following CSS files have been linked to the website :

(1) Priority.css : The file contains the core styling of the website, including typography, layout, colors, buttons, and other design elements.

(2) Media.css : The file is specially used for responsive design, ensuring the website adapts to different screen sizes and devices using media queries.

## 7) Key CSS properties used and their purpose:

### (1) Layout and structure:

8) display: flex; → used to create flexible layouts, making it easier to align elements in a row or column.

8) grid-template-columns: repeat(3, 1fr); → helps in designing a grid-based layout for a structure website.

8) position: relative; / absolute; / fixed; → used for positioning elements precisely on the page.

### (2) Typography:

8) font-family: Roboto; → defines the font style to enhance readability.

8) font-size: 16px; → controls the text size for better visibility.

8) color: sets text color according to the website's theme.

text-align: center: Aligns text properly within sections.

### (5) Spacing and Alignment :-

\* margin: 20px; provides space around elements to avoid congestion.

\* padding: 10px; adds space inside elements for better structure.

\* gap: 10px: creates spacing between elements in flexbox or grid layouts.

### (6) Background and Borders : background-color: #666666 → Applies

border-radius: 10px: rounds the corners of buttons, images, and boxes for a modern look.

box-shadow: 0px 4px 0px #000000 → Adds a slight shadow effect for depth.

## 5) Responsive Design (media.css):

media (max-width: 768px) { ... } → Applies styles specifically for devices with a screen width of 768px or less.

width: 100%. Ensures elements adjust properly on smaller screen.

## 6) Footer Styling:-

\* position: relative; bottom: 0; width: 100px

Ensure footer stays at the bottom.

text-align: center; centers footer content.

By using CSS, the website maintains a consistent design across all pages. The combination of flexbox, grid, typography, and media queries ensures that the website is both visually appealing and fully responsive.

## Part C - Javascript

Developing an External Javascript file (script.js) for web site behavior :-

To enhance the interactivity and user experience of the website, I have created an external javascript file (script.js) that is linked to HTML pages. The Javascript file (script.js) adds dynamic behaviours such as a header slider in the <sup>hero</sup> section and a scroll-to-top button for better usability.

### (1) Javascript header slider in the hero section :

A Header slider (also known as an image carousel) is used in the hero section of the website to showcase multiple images or messages in a sliding effect. This improves the website's visual appeal and engagement.

■ Javascript dynamically changes the active slide after a few seconds using setInterval().

■ When the slide changes, the previous image fades out, the next image fades in smoothly.

key Javascript function used:

■ query selector () and query selector All ()

→ Used to select the slider container and images.

■ set Interval() → Automatically changes the image after a certain time interval.

■ addEventListener() → Detects user click for normal navigation.

■ css classes manipulator (classList.add) → Creates smooth transition effect.

(2) scroll-to-Top Button: A scroll-to-Top button allows user to quickly return to the top of the page. Improving navigation and user connectivity.

■ The button remains hidden when the page is at the top.

■ As the user scrolls down, JavaScript detects the scroll position and makes the button visible.

■ When clicked, the page smoothly scrolls back to top.

Key Javascript function used :-

■ `window.scrollY` → Detects the vertical scroll position.

■ `scroll({top: 0, behavior: "smooth"})` → scrolls

the page smoothly to the top.

■ Add `EventListener("scroll", function() {})` → Listener for user scrolling.

■ `classList.toggle()` → Shows or hides the button dynamically.

The implementation of Javascript for the slider and scroll-to-top button significantly improves the website's aesthetic appeal, navigation and user engagement.

#### Part-D : Critical Evaluation

##### Critical Evaluation of the website :

The submitted website effectively preserves its intended purpose with a visually appealing designs and user-friendly navigation. The use of responsive designs ensure accessibility across different devices. While external CSS and JavaScript enhance both aesthetics and interactivity. The integration of a header slider and a scroll-to-top button improves user engagement and smooth navigation.

## Recommendations for Further Development:

(1) Optimize Website Speed: Implement Lazy loading for images, use efficient caching strategies and minimize HTTP request to ensure a faster browsing experience.

■ Enhancing Mobile Experience :- Currently the website is functional on mobile device but could be further refined for a smoother and more visually appealing experience. Some elements, such as spacing, font sizes and button placements, may need adjustments to improve readability and ease of navigation. Implementing better media queries, optimizing image scaling and ensuring touch-friendly interaction will enhance the mobile user experience significantly.

## 4) Expand Content :-

Add a testimonial section and FAQs to improves user engagement,

By implementing these improvements, the website can achieve higher efficiency, better accessibility, and an enhanced user experience.

## Conclusion

The project was a comprehensive journey in web development, integrating HTML, CSS, and JavaScript to create a functional and visually appealing website. Each section of the website was carefully designed to ensure responsiveness, interactivity and user engagement. The external CSS and JS files helped maintain a structured

And efficient coding approach; making the website scalable for further improvement while the project successfully meets its object, there is always room for further improvement. In performance optimization, mobile responsiveness and user experience could elevate the overall quality of the website.

The website serves as a strong foundation that can be expanded.

### References :

- (1) MDN Web Docs : HTML, CSS, and Javascript Documentation.
- (2) W3Schools : Web development tutorials and Examples.