AMRITA INSTITUTIONS

श्रद्धावान् लभते ज्ञानम्

A web application project on

Restaurant Management System

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1. INTRODUCTION

Introduction to Restaurant Management Website:

In today's digital age, having an online presence is crucial for businesses, and the restaurant industry is no exception. A restaurant management website serves as a powerful tool that enables restaurant owners and managers to streamline their operations, enhance customer experiences, and ultimately drive success. This introduction provides an overview of a typical restaurant management website and highlights its key features and benefits.

A restaurant management website is designed to centralize and automate various aspects of running a restaurant, including menu management, table reservations, order processing, inventory management, staff scheduling, customer feedback, and more. It acts as a digital hub that connects a restaurant's essential functions into a cohesive platform.

One of the primary features of a restaurant management website is menu management. It allows owners to easily update and customize their menus, add new items, modify prices, and provide detailed descriptions and visuals of dishes. This ensures that customers have access to the most up-to-date information about the restaurant's offerings.

Table reservation functionality is another crucial aspect of such a website. It enables customers to conveniently make reservations online, specifying the date, time, and party size. This feature enhances customer convenience and helps restaurant staff efficiently manage seating arrangements and reduce waiting times.

Staff scheduling is simplified with the help of a restaurant management website. It allows managers to create and manage employee schedules, assign shifts, and track attendance. This feature ensures optimal staffing levels, reduces scheduling conflicts, and improves overall workforce management.

Customer feedback and reviews play a vital role in a restaurant's success. A restaurant management website typically includes a feedback system that allows customers to leave reviews, ratings, and comments about their dining experiences. This feedback helps the restaurant monitor and improve its services and build a positive online reputation.

In conclusion, a restaurant management website offers numerous advantages to restaurant owners and managers. It centralizes and automates essential operations, enhances customer experiences, improves efficiency, and provides valuable insights for decision-making. With a well-designed and user-friendly website, restaurants can effectively adapt to the digital landscape and stay ahead in the highly competitive food industry.

2. Languages used

2.1 HTML[HYPERTEXT MARKUP LANGUAGE]

It is the standard markup language used to create and structure the content of webpages. It provides a set of tags or elements that define the structure and layout of a webpage.

1. HTML is the backbone of the World Wide Web, serving as the foundation for creating webpages and websites.
2. It uses tags to mark up different elements of a webpage, such as headings, paragraphs, links, images, and tables.
3. HTML documents are structured using a hierarchical system of tags, with a root element called the `<html>` tag.
4. It allows for the inclusion of other resources, such as CSS (Cascading Style Sheets) for styling and JavaScript for interactive functionality.
5. HTML tags provide semantic meaning to the content, making it easier for search engines to understand and index webpages.
6. It supports the use of hyperlinks, allowing users to navigate between different webpages by clicking on linked text or images.
7. HTML tags can be used to add multimedia elements to webpages, such as images, audio, video, and embedded content from other sources.
8. It provides a variety of form elements and attributes for creating interactive forms on webpages, enabling user input and data submission.
9. HTML is a platform-independent language, meaning that webpages created with HTML can be accessed and rendered on various devices and browsers.
10. It is constantly evolving, with new versions and updates being released to introduce new features, improve functionality, and enhance accessibility standards.

2.2 CSS[CASCADING STYLE SHEET]

It is a programming language used to describe the presentation and style of a document written in HTML. Here is a description of CSS in 10 lines:

1. CSS is a powerful styling language that complements HTML by defining how web pages should look and be presented.
2. It allows web designers and developers to control the appearance of various elements on a webpage, such as fonts, colors, layout, and spacing.
3. CSS follows a cascading style hierarchy, where styles can be defined at different levels and cascade down to affect multiple elements.
4. It separates the content of a webpage from its presentation, making it easier to update and maintain the design aspects separately.
5. CSS provides a wide range of selectors that allow precise targeting of specific elements or groups of elements for styling.
6. Styles can be applied inline within HTML tags, within the `<style>` element in the `<head>` section, or in an external CSS file linked to the HTML document.
7. CSS supports a variety of properties and values that control aspects like background, border, text, positioning, animation, and more.

8. It enables the use of media queries, which allow the design to adapt and respond to different screen sizes and devices, creating responsive websites.
9. CSS provides flexibility through inheritance and the ability to define classes and IDs, allowing for consistent styles across multiple elements or specific elements.
10. With CSS preprocessors like Sass or Less, developers can use advanced features like variables, mixins, and functions to streamline the styling process and improve code organization.

In summary, CSS empowers web designers and developers to create visually appealing and consistent webpages by controlling the presentation and style of HTML documents.

2.3 BOOTSTRAP

Bootstrap is a popular open-source front-end framework that simplifies web development. Here's a brief description of Bootstrap in 10 lines:

1. Bootstrap is a responsive and mobile-first framework that helps developers create modern and visually appealing websites.
2. It provides a set of pre-built CSS and JavaScript components, such as navigation bars, buttons, forms, modals, and more, which can be easily customized and integrated into web pages.
3. With Bootstrap's grid system, developers can create responsive layouts that automatically adjust to different screen sizes and devices, ensuring a consistent user experience.
4. Bootstrap comes with a wide range of reusable CSS classes, making it easy to style and structure elements without writing extensive custom CSS code.
5. It includes a comprehensive collection of ready-to-use themes and templates, allowing developers to quickly prototype and design websites with a professional look and feel.
6. Bootstrap's JavaScript plugins enhance website functionality, offering features like carousels, tooltips, modals, and form validation, among others.
7. It supports cross-browser compatibility, ensuring that websites built with Bootstrap work consistently across various web browsers.
8. Bootstrap is constantly updated and maintained by a large community of developers, which means it receives regular updates, bug fixes, and new features.
9. The framework's documentation is extensive and well-documented, providing clear instructions and examples for developers to learn and utilize Bootstrap effectively.
10. Bootstrap is highly flexible and can be easily customized to suit specific design requirements, making it a versatile choice for both beginner and experienced developers looking to streamline their web development process.

2.4 JAVASCRIPT

JavaScript is a high-level, interpreted programming language primarily used for front-end web development. Here's a description of JavaScript in 10 lines:

1. JavaScript is a versatile scripting language that adds interactivity and dynamic functionality to web pages.
2. It runs on the client side, meaning it is executed by the web browser on the user's device.

3. JavaScript allows developers to manipulate and modify HTML elements, handle user interactions, and respond to events.
4. It supports variables, data types, conditionals, loops, and functions, making it a powerful programming language.
5. JavaScript can be used for form validation, data manipulation, and calculations, enhancing the user experience.
6. It enables the creation of dynamic web content by modifying the DOM (Document Object Model) of a webpage.
7. JavaScript can fetch data from servers using AJAX (Asynchronous JavaScript and XML) requests without reloading the page.
8. It supports object-oriented programming principles, allowing for the creation of reusable and modular code.
9. JavaScript frameworks and libraries, such as React, Angular, and Vue.js, extend its capabilities and simplify web development.
10. With Node.js, JavaScript can also be used for server-side development, allowing developers to build full-stack web applications.

Overall, JavaScript is a versatile and powerful language that empowers developers to create interactive and engaging web applications with ease.

3. OPERATING PLATFORM

VISUAL CODE

Visual Studio Code, commonly referred to as VS Code, is a lightweight and powerful source code editor developed by Microsoft. It provides a wide range of features and extensions that make it a popular choice among developers. Here's a description of Visual Studio Code in 10 lines:

1. Visual Studio Code is a versatile source code editor designed for developers.
2. It offers a lightweight and fast performance, making it suitable for various programming languages and projects.
3. The editor provides a user-friendly and customizable interface, allowing developers to personalize their coding environment.
4. VS Code supports syntax highlighting, code completion, and IntelliSense, which provides smart suggestions and auto-completion for code snippets and libraries.
5. It offers built-in Git integration, enabling seamless version control and collaboration on projects.
6. Visual Studio Code provides a robust debugging experience with breakpoints, stepping through code, and variable inspection.
7. It supports a wide range of extensions that enhance functionality, such as language support, linters, debuggers, and productivity tools.
8. VS Code includes a powerful integrated terminal, allowing developers to run commands and scripts directly within the editor.
9. It provides extensive customization options, enabling users to install themes, tweak settings, and configure keybindings to suit their preferences.

10. Visual Studio Code is cross-platform and runs on Windows, macOS, and Linux, making it accessible to developers across different operating systems.

4 System Design

4.1.1 List of Modules/Webpages

1. Our Galley
2. Sign Up Page
3. Login Page

4.1.2 Home Page

Index Page

4.2.1 Functional Description

1. Login Page

   The login page of a restaurant management application serves as the gateway for authorized access to the system. Here's a description in five lines:

   1. The login page of the restaurant management application is the entry point for restaurant owners, managers, and staff to securely access their accounts.
   2. It presents a simple and intuitive interface where users can enter their unique credentials, such as usernames and passwords.
   3. The login page ensures the security and confidentiality of sensitive restaurant data by authenticating users and verifying their credentials.
   4. Upon successful login, users gain access to the comprehensive features and functionalities of the restaurant management application, such as menu management, reservations, orders, and reports.
   5. In case of forgotten or misplaced credentials, the login page often provides a password recovery or reset option to assist users in regaining access to their accounts.

2. Home Page

   The homepage of a restaurant management application serves as a digital gateway to the system, providing users with an overview of its features and functionalities. Here's a brief description of the homepage in five lines:

   1. The homepage of our restaurant management application welcomes users with an intuitive and visually appealing interface.
   2. It offers a comprehensive overview of key features, including menu management, table reservations, order processing, inventory control, and staff scheduling.

3. Users can easily navigate through the homepage to access specific sections and perform tasks efficiently.

4. The homepage showcases real-time analytics and performance metrics, providing owners and managers with valuable insights into their restaurant's operations.

5. With its user-friendly design and seamless integration of essential functionalities, our restaurant management application's homepage is designed to optimize efficiency and enhance the overall dining experience.

5. Source Code
5.1   Main Page

```html
<body>

  <div class="menu">

    <ul>
      <li><a href="C:\Users\prajn\OneDrive\Desktop\4th SEM\Web Technology\Web technology Lab\Sign_Up.html">Sign Up</a></li>
      <li><a href="C:\Users\prajn\OneDrive\Desktop\4th SEM\Web Technology\Web technology Lab\Login.html">Login</a></li>
      <li><a href="C:\Users\prajn\OneDrive\Desktop\4th SEM\Web Technology\Web technology Lab\Restaurantly\Restaurantly\whatweoff.html">Our Gallery</a></li>
    </ul>

  </div>
<aside>
<h1>Craving something ?</h1>
<p>Let's get you started !</p><form action="https://goo.gl/maps/nYVHfzfsh5qbir3u7">

<input type="text" value="Let us know the location." class="transparent-textfield"  readonly>
<input type="submit" value="Search" class="transparent-button" class="circular-button">
</form>
</aside>
<script>
  function validateForm() {
  var username = document.getElementById("username").value;
  var password = document.getElementById("password").value;

  if (username === "" || password === "") {
    alert("Please fill in all fields");
```

```
     return false; // Prevent form submission
  }

  return true; // Allow form submission
}


</script>
  </body>
```

5.2   Our Gallery

```
<body>

     <section id="gallery" class="gallery">

       <div class="container" data-aos="fade-up">
         <div class="section-title">
          <p>Ambience</p>
         </div>
       </div>

       <div class="container-fluid" data-aos="fade-up" data-aos-delay="100">

         <div class="row g-0">

           <div class="col-lg-3 col-md-4">
             <div class="gallery-item">
               <a href="https://www.mook-
group.de/franziska/images/gallery/large/4S3A9504.jpg" class="gallery-lightbox"
data-gall="gallery-item">
                  <img src="https://www.mook-
group.de/franziska/images/gallery/large/4S3A9504.jpg" class="img-fluid">
               </a>
             </div>
           </div>

           <div class="col-lg-3 col-md-4">
             <div class="gallery-item">
               <a href="https://www.mook-
group.de/franziska/images/gallery/large/4S3A0067.jpg" class="gallery-lightbox"
data-gall="gallery-item">
                  <img src="https://www.mook-
group.de/franziska/images/gallery/large/4S3A0067.jpg" class="img-fluid">
               </a>
             </div>
           </div>

           <div class="col-lg-3 col-md-4">
             <div class="gallery-item">
```

```html
                    <a href="https://www.mook-
group.de/franziska/images/gallery/large/4S3A8751.jpg" class="gallery-lightbox"
data-gall="gallery-item">
                        <img src="https://www.mook-
group.de/franziska/images/gallery/large/4S3A8751.jpg" class="img-fluid">
                    </a>
                </div>
            </div>

            <div class="col-lg-3 col-md-4">
                <div class="gallery-item">
                    <a href="https://www.mook-
group.de/franziska/images/gallery/large/4S3A0194.jpg" class="gallery-lightbox"
data-gall="gallery-item">
                        <img src="https://www.mook-
group.de/franziska/images/gallery/large/4S3A0194.jpg" class="img-fluid">
                    </a>
                </div>
            </div>

            <div class="col-lg-3 col-md-4">
                <div class="gallery-item">
                    <a href="https://www.mook-
group.de/franziska/images/gallery/large/4S3A0079.jpg" class="gallery-lightbox"
data-gall="gallery-item">
                        <img src="https://www.mook-
group.de/franziska/images/gallery/large/4S3A0079.jpg" class="img-fluid">
                    </a>
                </div>
            </div>

            <div class="col-lg-3 col-md-4">
                <div class="gallery-item">
                    <a href="https://www.mook-
group.de/franziska/images/gallery/large/4S3A9191.jpg" class="gallery-lightbox"
data-gall="gallery-item">
                        <img src="https://www.mook-
group.de/franziska/images/gallery/large/4S3A9191.jpg" class="img-fluid">
                    </a>
                </div>
            </div>

            <div class="col-lg-3 col-md-4">
                <div class="gallery-item">
                    <a href="https://www.mook-
group.de/franziska/images/gallery/large/4S3A8772.jpg" class="gallery-lightbox"
data-gall="gallery-item">
```

```html
                    <img src="https://www.mook-
group.de/franziska/images/gallery/large/4S3A8772.jpg" class="img-fluid">
                </a>
            </div>
        </div>

        <div class="col-lg-3 col-md-4">
            <div class="gallery-item">
                <a href="https://www.mook-
group.de/franziska/images/gallery/large/4S3A0207.jpg" class="gallery-lightbox"
data-gall="gallery-item">
                    <img src="https://www.mook-
group.de/franziska/images/gallery/large/4S3A0207.jpg" class="img-fluid">
                </a>
            </div>
        </div>

        <div class="col-lg-3 col-md-4">
            <div class="gallery-item">
                <a href="https://www.mook-
group.de/franziska/images/gallery/large/4S3A0114.jpg" class="gallery-lightbox"
data-gall="gallery-item">
                    <img src="https://www.mook-
group.de/franziska/images/gallery/large/4S3A0114.jpg" class="img-fluid">
                </a>
            </div>
        </div>

        <div class="col-lg-3 col-md-">
            <div class="gallery-item">
                <a href="https://www.mook-
group.de/franziska/images/gallery/large/4S3A0079.jpg" class="gallery-lightbox"
data-gall="gallery-item">
                    <img src="https://www.mook-
group.de/franziska/images/gallery/large/4S3A0079.jpg" class="img-fluid">
                </a>
            </div>
        </div>

        <div class="col-lg-3 col-md-4">
            <div class="gallery-item">
                <a href="https://www.mook-
group.de/franziska/images/gallery/large/4S3A0284.jpg" class="gallery-lightbox"
data-gall="gallery-item">
                    <img src="https://www.mook-
group.de/franziska/images/gallery/large/4S3A0284.jpg" class="img-fluid">
                </a>
            </div>
```

```
                    </div>

                    <div class="col-lg-3 col-md-4">
                      <div class="gallery-item">
                        <a href="https://www.mook-
group.de/franziska/images/gallery/large/4S3A0228.jpg" class="gallery-lightbox"
data-gall="gallery-item">
                          <img src="https://www.mook-
group.de/franziska/images/gallery/large/4S3A0228.jpg" class="img-fluid">
                        </a>
                      </div>
                    </div>

                </div>

              </div>
          </section>
```

5.3   Login Page

```
  <body >


  <aside>


    <form action=" C:\Users\prajn\OneDrive\Desktop\4th SEM\Web Technology\Web
technology Lab\Restaurantly\Restaurantly\index.html" method="post" alighn:"centre"
onsubmit="return validateForm()">
        <center><h1>Login</h1></center>
        UserName: <br><br>
        <input type="text" id="username" name="uname" size"100px"
class="transparent-textfield">
        <br><br>
        Password: <br><br>
        <input type="text" id="password" name="cpwd"  size="100px"
class="transparent-textfield">
        <br><br>
        <input type="submit" value="Login"class="transparent-button">
        <input type="reset" value="Reset"class="transparent-button">
        </form>

</aside>
<script>
 function validateForm() {
  var username = document.getElementById("username").value;
  var password = document.getElementById("password").value;

  if (username === "" || password === "") {
```

```
      alert("Please fill in all fields");
      return false; // Prevent form submission
  }

  return true;
  if (username === "" && password === "") {
      alert("Please fill in all fields");
      return false; // Prevent form submission
  }

  return true; // Allow form submission
}

</script>
</body>
```

5.4   Sign Up Page

```
<body >

    <aside>

      <form action="C:\Users\prajn\OneDrive\Desktop\4th SEM\Web Technology\Web
technology Lab\Login.html" method="post" alighn:"centre" onsubmit="return
validateForm()">
            <center><h1>SIGN UP</h1></center>
            Email: <br><br>
            <input type="text" id="email" name="eml" size="100px"
class="transparent-textfield">
            <br><br>
            UserName: <br><br>
            <input type="text" id="username" name="uname" size"100px"
class="transparent-textfield">
            <br><br>
            Create Password: <br><br>
            <input type="text" id="password" name="cpwd"  size="100px"
class="transparent-textfield">
            <br><br>
            <input type="submit" value="Sigh Up"class="transparent-button">
            <input type="reset" value="Reset"class="transparent-button">
            </form>

  </aside>
  <script>
    function validateForm() {
    var username = document.getElementById("username").value;
    var password = document.getElementById("password").value;
    var email = document.getElementById("email").value;
      if (username === " "|| password === " " || email==="") {
```

```
    alert("Please fill in all fields");
    return false; // Prevent form submission
  }

  if (username === " "&& password === " " && email==="") {
    alert("Please fill in all fields");
    return false; // Prevent form submission
  }
  return true; // Allow form submission
}
</script>
</body>
```

5.5   Home page

```html
<div class="container" data-aos="fade-up">

    <div class="row mt-5">

       <div class="col-lg-4">
         <div class="info">
           <div class="address">
             <i class="bi bi-geo-alt"></i>
             <h4>Location:</h4>
             <p>Hainer Weg 72,   <br>
               60599 Frankfurt am Main, Germany<br><br></p>
           </div>
           <div class="open-hours">
             <i class="bi bi-clock"></i>
             <h4>Open Hours:</h4>
             <p>
               Monday-Saturday:<br>
               11:00 AM - 23:00 PM
             </p>
           </div>
           <div class="email">
             <i class="bi bi-envelope"></i>
             <h4>Email:</h4>
             <p>mook-fraziska@gmail.com</p>
           </div>
           <div class="phone">
             <i class="bi bi-phone"></i>
             <h4>Call:</h4>
             <p>+49 30 901820</p>
           </div>
         </div>
       </div>
```
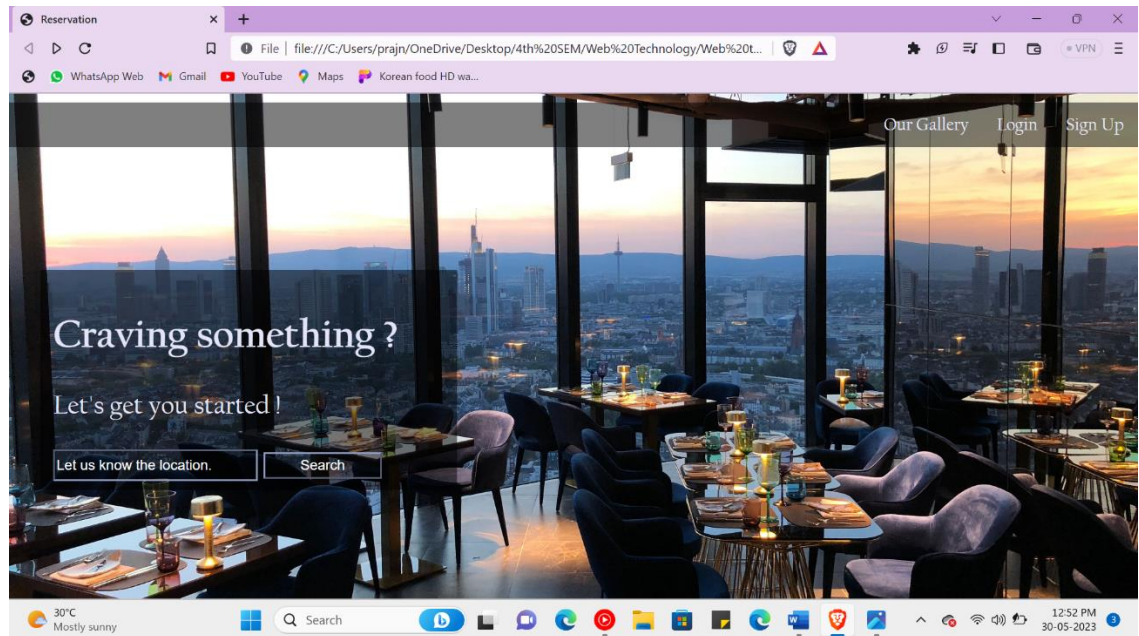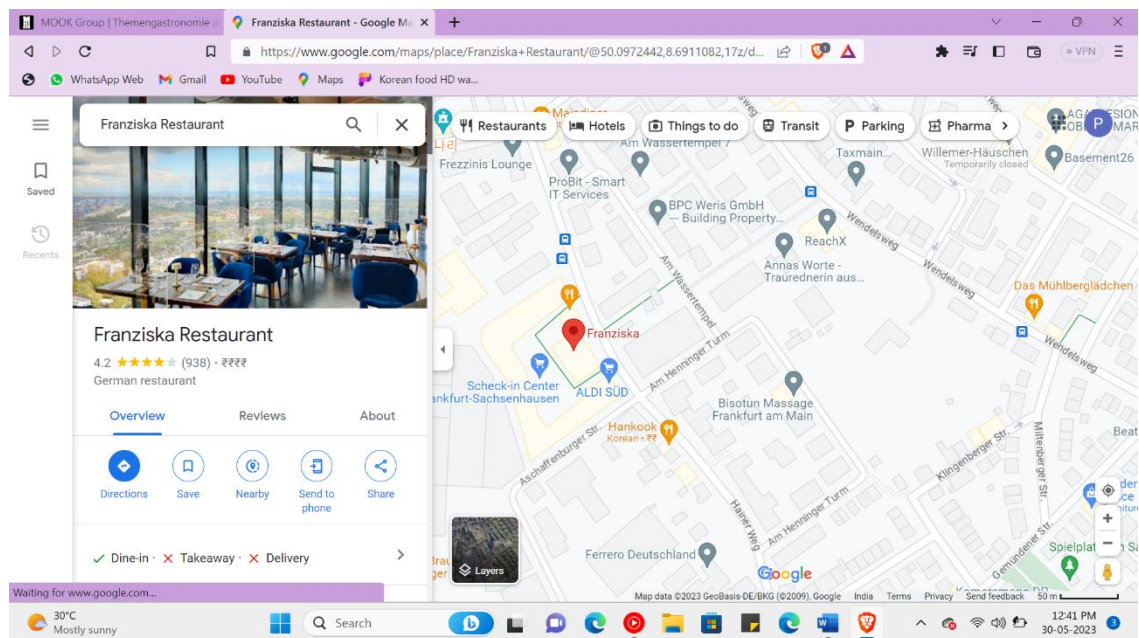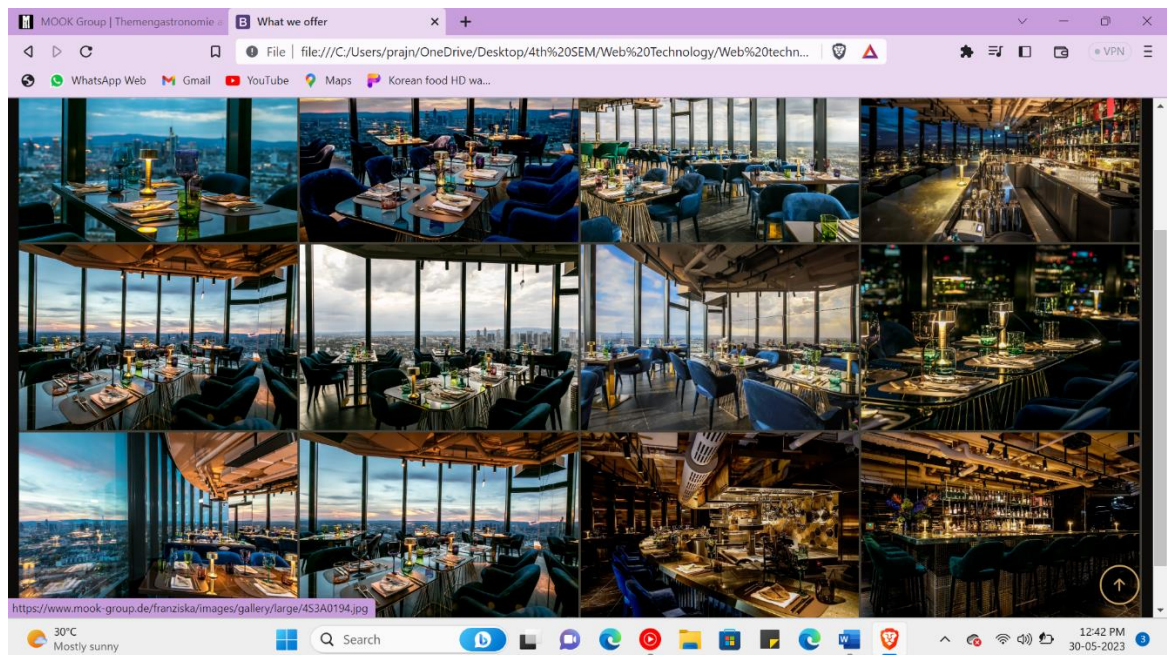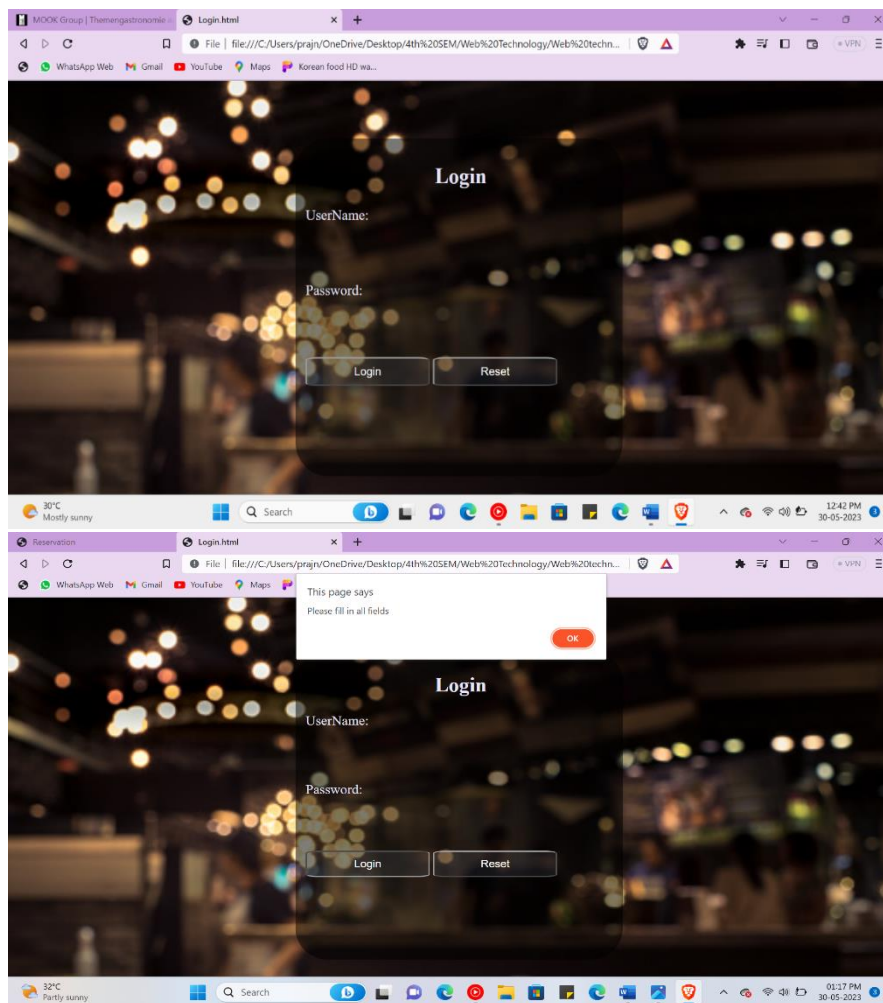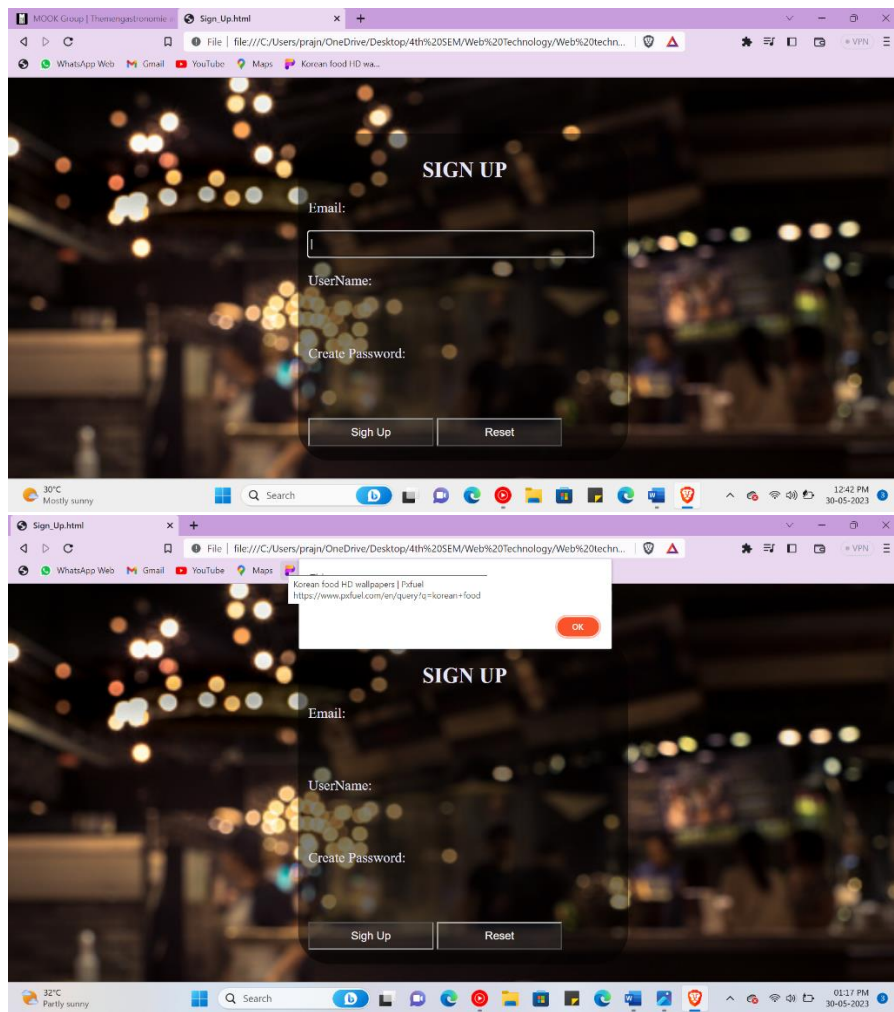
6. Output
6.1   References
https://www.mook-group.de/

6.2   Web Pages
1.   Main Page

2.   Location
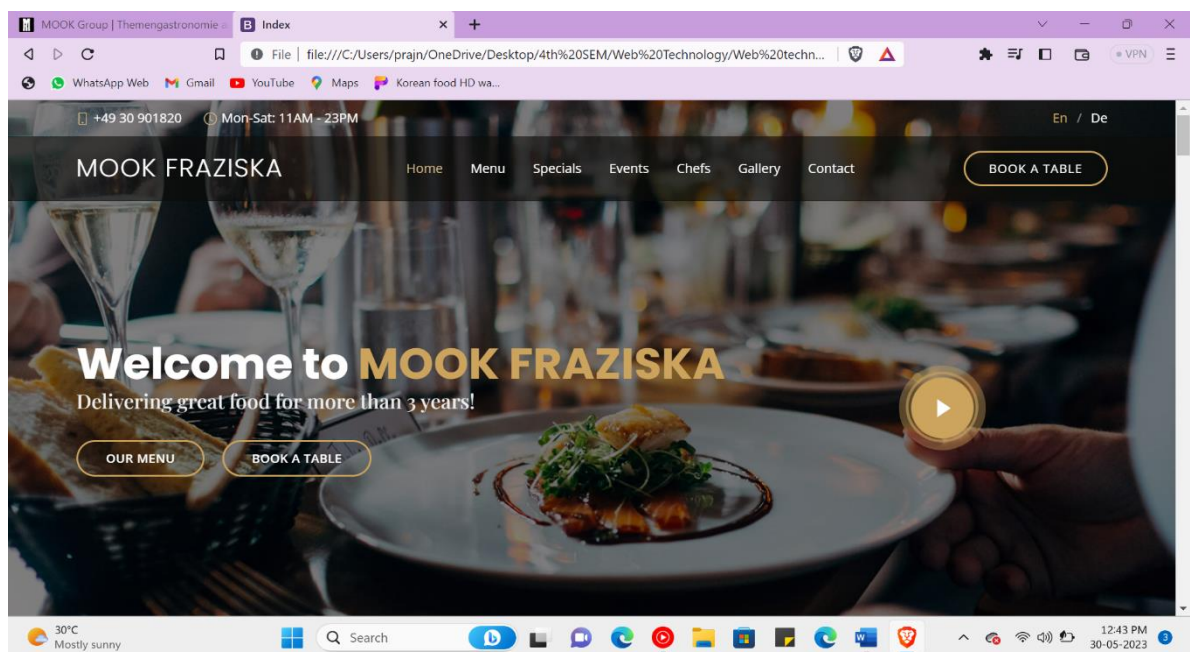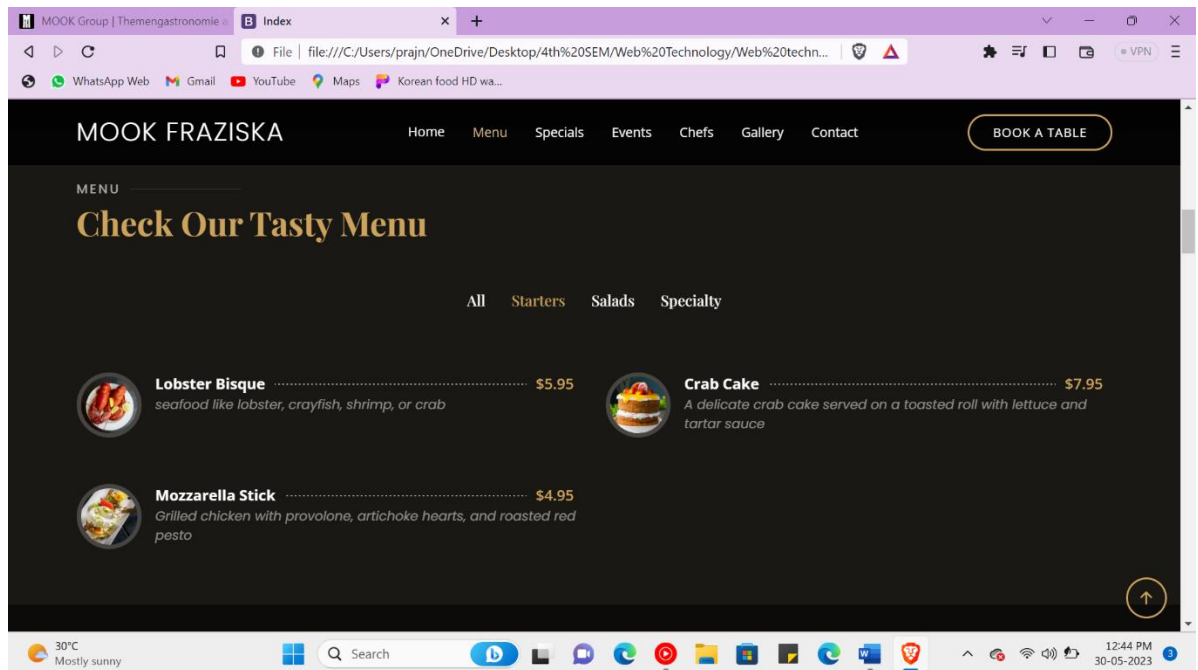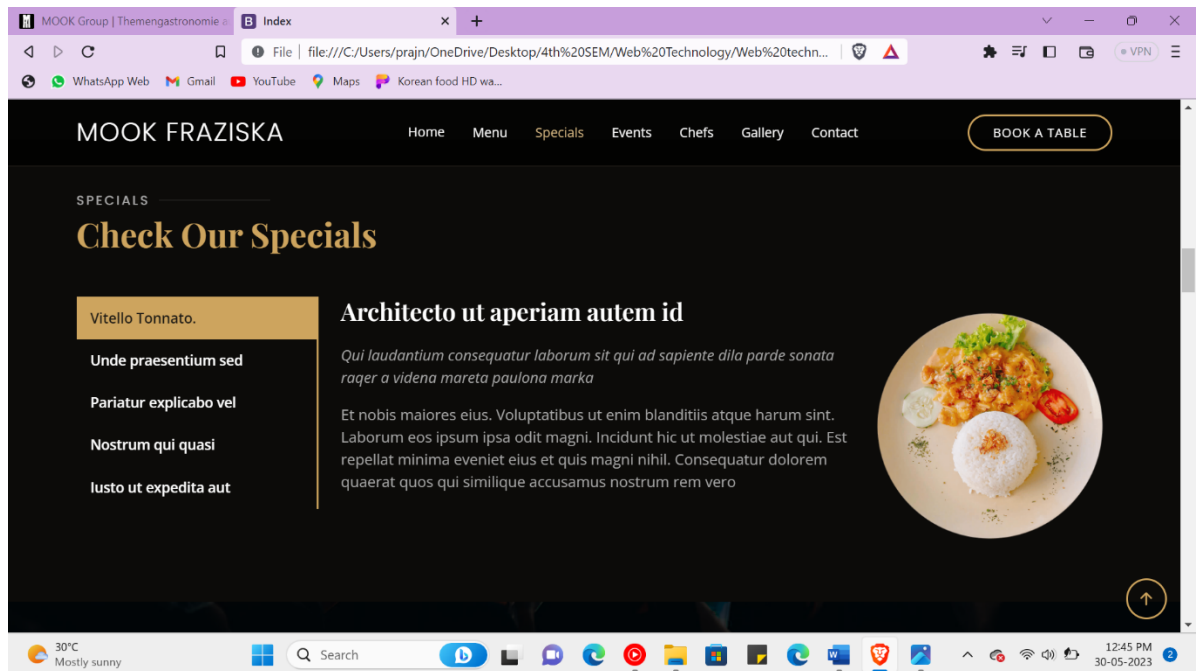
3. Our Gallery

4. Login Page with Alert
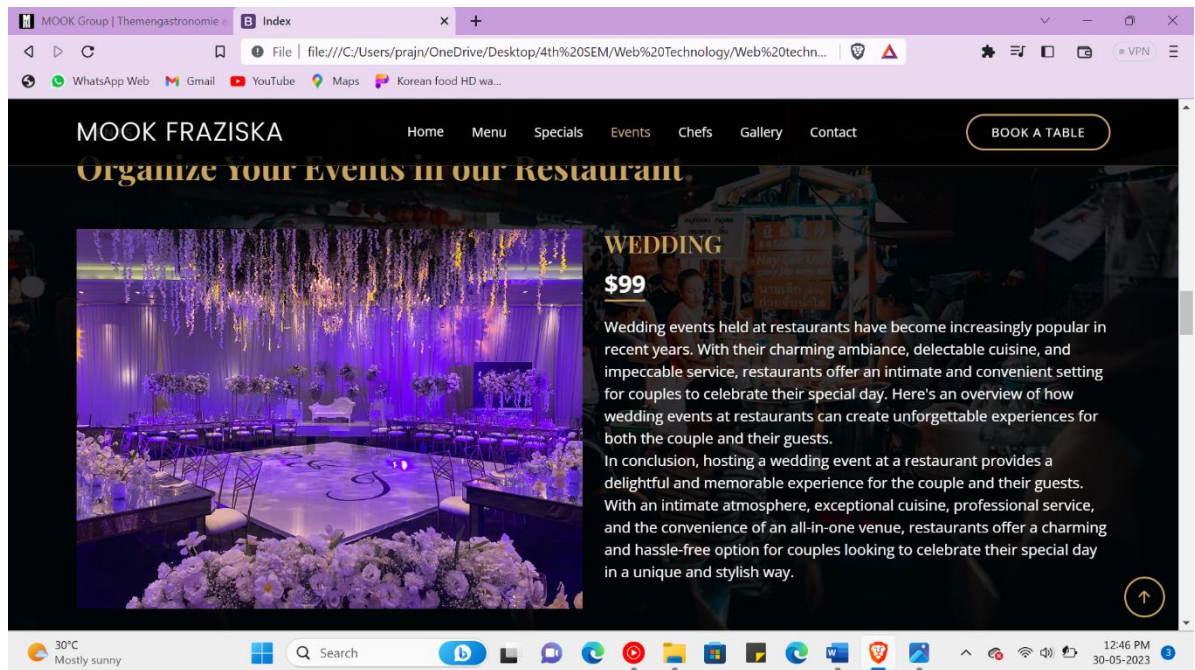
5. Sign Up Page with Alert

6. Home page

7. Menu

8. Specials

9. Events

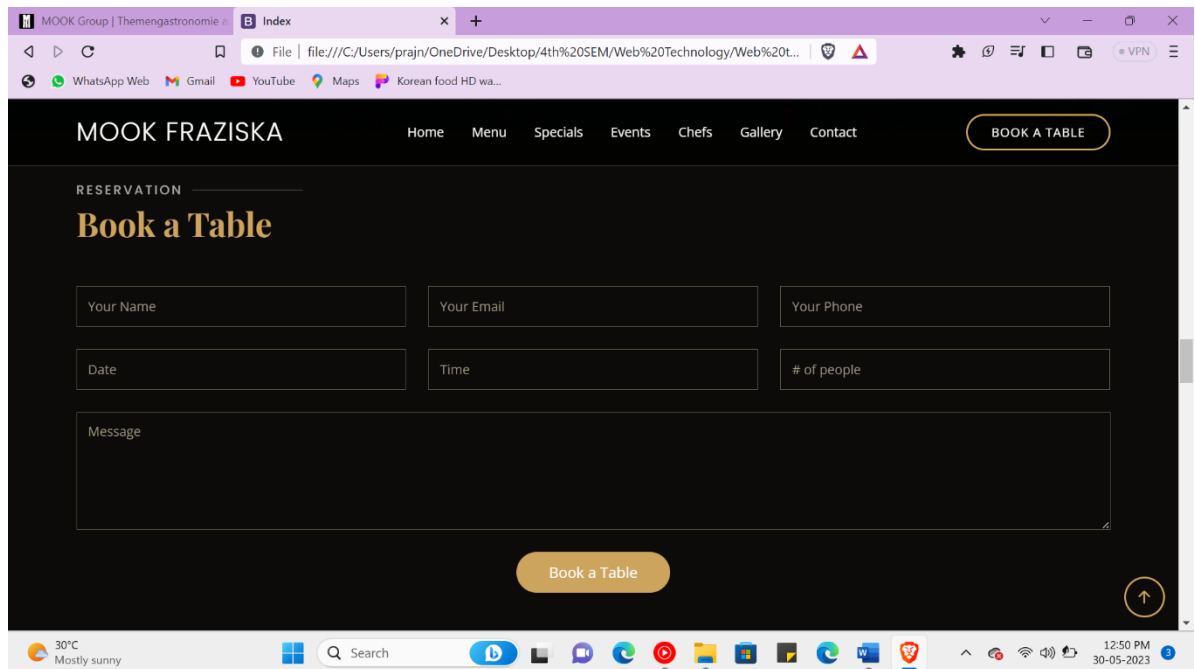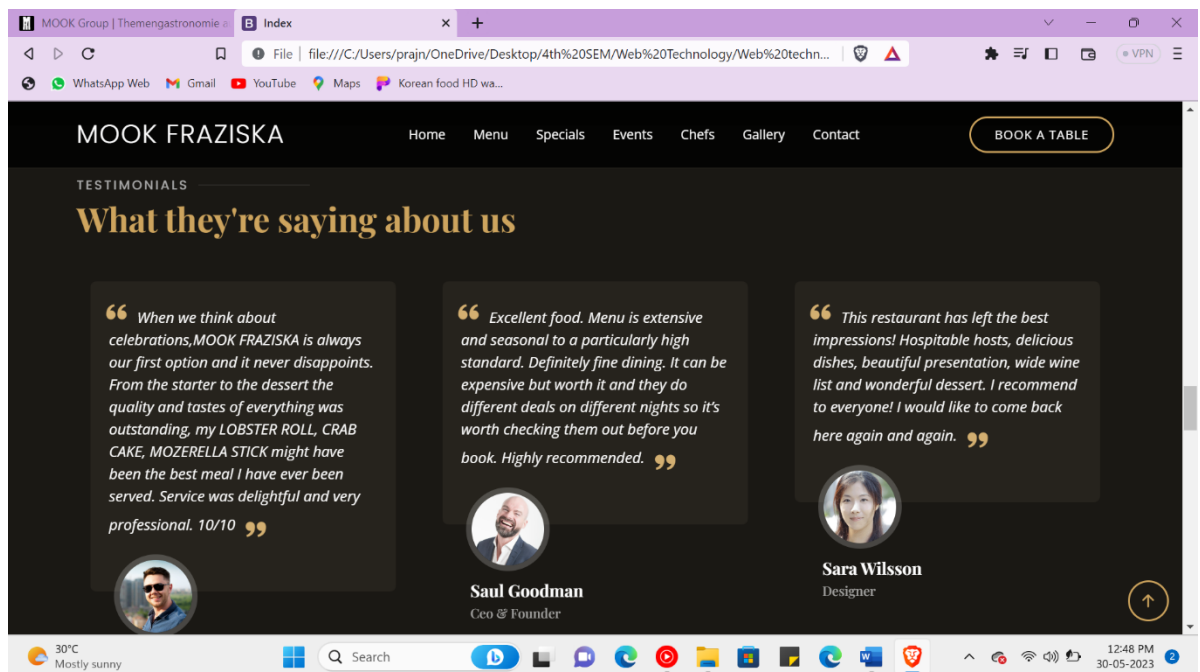## 10. Book A Table

11. Testimonials

12. Chefs

13. Gallery

14. Contact Us