UI/UX SPECIALIST (UCS542)

Submitted

by

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3033



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Assignment 5

i. Write a JavaScript program to take two numbers as input from the user and display their sum, difference, product, and quotient.

```
// Predefined numbers
let num1 = 12;
let num2 = 4;

// Calculations
let sum = num1 + num2;
let difference = num1 - num2;
let product = num1 * num2;
let quotient = num1 / num2;

// Display the results
console.log("Number 1:", num1);
console.log("Number 2:", num2);
console.log("Sum:", sum);
console.log("Difference:", difference);
console.log("Product:", product);
console.log("Quotient:", quotient);
```

```
Number 1: 12
Number 2: 4
Sum: 16
Difference: 8
Product: 48
Quotient: 3
PS C:\Users\dksin\OneDrive\Desktop\coding>
```

ii. Write a JavaScript program to create an array of 5 numbers and: Find the largest and smallest number.

Sort the array in ascending and descending order.

```
// Create an array of 5 numbers
let numbers = [23, 7, 45, 12, 89];
console.log("Original Array:", numbers);
```

```
// Find largest and smallest manually
let largest = numbers[0];
let smallest = numbers[0];
for (let i = 1; i < numbers.length; i++) {</pre>
    if (numbers[i] > largest) {
        largest = numbers[i];
    if (numbers[i] < smallest) {</pre>
        smallest = numbers[i];
    }
console.log("Largest Number:", largest);
console.log("Smallest Number:", smallest);
// Sort in ascending order using Selection Sort
let ascending = [...numbers];
for (let i = 0; i < ascending.length - 1; i++) {</pre>
    let minIndex = i;
    for (let j = i + 1; j < ascending.length; j++) {</pre>
        if (ascending[j] < ascending[minIndex]) {</pre>
            minIndex = j;
        }
    // Swap
    let temp = ascending[i];
    ascending[i] = ascending[minIndex];
    ascending[minIndex] = temp;
console.log("Ascending Order:", ascending);
// Sort in descending order using Selection Sort
let descending = [...numbers];
for (let i = 0; i < descending.length - 1; i++) {</pre>
    let maxIndex = i;
    for (let j = i + 1; j < descending.length; j++) {</pre>
        if (descending[j] > descending[maxIndex]) {
            maxIndex = j;
        }
    }
    // Swap
```

```
let temp = descending[i];
  descending[i] = descending[maxIndex];
  descending[maxIndex] = temp;
}
console.log("Descending Order:", descending);
```

```
Original Array: [ 23, 7, 45, 12, 89 ]
Largest Number: 89
Smallest Number: 7
Ascending Order: [ 7, 12, 23, 45, 89 ]
Descending Order: [ 89, 45, 23, 12, 7 ]
PS C:\Users\dksin\OneDrive\Desktop\coding>
```

iii. Create a simple form with fields for name, email, and age. Write JavaScript to validate that:

The name field is not empty.

The email is in the correct format.

The age is between 18 and 100.

HTML Code:

```
<!DOCTYPE html>
<html>
<head>
   <title>Form Validation</title>
</head>
<body>
   <h2>Simple Form</h2>
   <form id="myForm" onsubmit="return validateForm()">
        <label for="name">Name:</label>
       <input type="text" id="name"><br><br>
       <label for="email">Email:</label>
       <input type="text" id="email"><br><br>
        <label for="age">Age:</label>
        <input type="text" id="age"><br><br>
        <button type="submit">Submit</button>
   </form>
```

JavaScript Code:

```
function validateForm() {
    // Get values
    let name = document.getElementById("name").value.trim();
    let email = document.getElementById("email").value.trim();
    let age = document.getElementById("age").value.trim();
    let errorMsg = "";
    // Validate name
    if (name === "") {
        errorMsg += "Name cannot be empty.<br>";
    // Validate email (just check for '@')
    if (!email.includes("@")) {
        errorMsg += "Email must contain '@' symbol.<br>";
    }
    // Validate age (must be a number between 18 and 100)
    let ageNum = parseInt(age);
    if (isNaN(ageNum) \mid \mid ageNum < 18 \mid \mid ageNum > 100) {
        errorMsg += "Age must be a number between 18 and 100.<br>";
    // Display error messages if any
    document.getElementById("error").innerHTML = errorMsg;
    // If there are errors, prevent form submission
    return errorMsg === "";
```

Output:

Simple Form		
Name:		
Email:		
Age:		
Submit		

iv. Write a JavaScript program to create an object representing a student (with properties like name, age, grades) and perform the following operations:

Add a new property class.

Update the student's grade.

Display all the student's information.

```
// Create a student object
let student = {
   name: "John Doe",
   age: 20,
   grades: 85
};
// Display original student information
console.log("Original Student Info:", student);
// Add a new property 'class'
student.class = "12th Grade";
console.log("After Adding Class:", student);
// Update the student's grade
student.grades = 90;
console.log("After Updating Grade:", student);
// Display all student's information
console.log("Final Student Information:");
```

```
for (let key in student) {
    console.log(key + ": " + student[key]);
}
```

Output:

```
Original Student Info: { name: 'John Doe', age: 20, grades: 85 }

After Adding Class: { name: 'John Doe', age: 20, grades: 85, class: '12th Grade' }

After Updating Grade: { name: 'John Doe', age: 20, grades: 90, class: '12th Grade' }

Final Student Information:

name: John Doe

age: 20

grades: 90

class: 12th Grade

PS C:\Users\dksin\OneDrive\Desktop\coding>
```

v. Create a function that takes an array of numbers and uses the array's built-in methods (like map(), reduce(), and filter()) to:

Remove all odd numbers.

Multiply the remaining numbers by 2.

Find the sum of the resulting numbers.

```
// Function to process the array
function processArray(numbers) {
    // 1. Remove all odd numbers
    let evenNumbers = numbers.filter(num => num % 2 === 0);

    // 2. Multiply remaining numbers by 2
    let doubledNumbers = evenNumbers.map(num => num * 2);

    // 3. Find the sum of resulting numbers
    let sum = doubledNumbers.reduce((acc, num) => acc + num, 0);

    return sum;
}

// Example usage
let arr = [1, 2, 3, 4, 5, 6];
let result = processArray(arr);
console.log("Result:", result);
```

Output :

Result: 24

PS C:\Users\dksin\OneDrive\Desktop\coding>

Assignment-3

Objective: Build a multi-page website for a college event information and participant registration with following pages:

- 1) Homepage with Event name, date, and short description
- 2) Events page listing different competitions (use or)
- 3) A schedule or result table for events
- 4) Registration form for participants
- 5) A photo gallery page with multiple pictures in grid form.
- 6) Contact and FAQs page

Use list to display events information with formatting, table for event schedule or results, form to register for events, links to social media and previous year gallery.

Index.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>College Fest 2025</title>
<link rel="stylesheet" href="style.css">
</head>
<body>
<header>
   <h1>SATURNALIA</h1>
   Celebrating Talent, Technology & Teamwork
</header>
<nav>
   <a href="index.html">Home</a>
   <a href="events.html">Events</a>
   <a href="schedule.html">Schedule</a>
   <a href="register.html">Register</a>
   <a href="gallery.html">Gallery</a>
   <a href="contact.html">Contact</a>
</nav>
<div class="container">
   <div class="hero">
       <h1>Welcome to College Fest 2025</h1>
       Date: 15th - 17th October 2025 | Venue: Fete Area Thapar
Institute
       Join us for 3 days of exciting competitions, workshops, and
```

```
cultural events!
   </div>
</div>
<footer>
   © 2025 College Fest | Follow us on
       <a href="#">Facebook</a> | <a href="#">Instagram</a>
   </footer>
</body>
</html>
```

events.html:

```
<!DOCTYPE html>
<html>
<head>
<title>Events | College Fest 2025</title>
<link rel="stylesheet" href="style.css">
</head>
<body>
<header><h1>Events</h1></header>
<nav>
   <a href="index.html">Home</a>
   <a href="events.html">Events</a>
   <a href="schedule.html">Schedule</a>
   <a href="register.html">Register</a>
   <a href="gallery.html">Gallery</a>
   <a href="contact.html">Contact</a>
</nav>
<div class="container">
   <h2>Our Competitions</h2>
   <u1>
       Code Sprint (Hackathon)
       Robo Race
       Quiz Competition
       Photography Contest
       Dance Battle
   </div>
<footer>
   © 2025 College Fest
</footer>
</body>
```

```
</html>
```

schedule.html:

```
<!DOCTYPE html>
<html>
<head>
<title>Schedule | College Fest 2025</title>
<link rel="stylesheet" href="style.css">
</head>
<body>
<header><h1>Event Schedule</h1></header>
<nav>
  <a href="index.html">Home</a>
   <a href="events.html">Events</a>
   <a href="schedule.html">Schedule</a>
   <a href="register.html">Register</a>
   <a href="gallery.html">Gallery</a>
   <a href="contact.html">Contact</a>
</nav>
<div class="container">
   Event
         Date
         Time
         Venue
      Code Sprint
         15 Oct
         10:00 AM
         Lab 1
      Robo Race
         15 Oct
         2:00 PM
         Ground
      Main Singer (Mohit Chauhan) 
         16 Oct
```

register.html:

```
<!DOCTYPE html>
<html>
<head>
<title>Register | College Fest 2025</title>
<link rel="stylesheet" href="style.css">
</head>
<body>
<header><h1>Participant Registration</h1></header>
<nav>
    <a href="index.html">Home</a>
   <a href="events.html">Events</a>
   <a href="schedule.html">Schedule</a>
   <a href="register.html">Register</a>
   <a href="gallery.html">Gallery</a>
    <a href="contact.html">Contact</a>
</nav>
```

```
<div class="container">
   <form>
       <label>Name:</label>
       <input type="text" required>
       <label>Email:</label>
       <input type="email" required>
       <label>Phone:</label>
       <input type="tel" required>
       <label>Select Event:</label>
       <select>
           <option>Code Sprint</option>
           <option>Robo Race
           <option>Concert Ticket</option>
           <option>Photography Contest</option>
       </select>
       <button type="submit">Register Now</button>
   </form>
</div>
<footer>
   © 2025 College Fest
```

```
</footer>
</body>
</html>
```

gallery.html:

```
<!DOCTYPE html>
<html>
<head>
<title>Gallery | College Fest 2025</title>
<link rel="stylesheet" href="style.css">
</head>
<body>
<header><h1>Photo Gallery</h1></header>
<nav>
    <a href="index.html">Home</a>
    <a href="events.html">Events</a>
    <a href="schedule.html">Schedule</a>
    <a href="register.html">Register</a>
    <a href="gallery.html">Gallery</a>
    <a href="contact.html">Contact</a>
</nav>
<div class="container gallery">
src="https://www.tribuneindia.com/sortd-service/imaginary/v22-01/jpg/large
/high?url=dGhldHJpYnVuZS1zb3J0ZC1wcm8tcHJvZC1zb3J0ZC9tZWRpYTc0M2M5MzQwLWE2
MGMtMTFlZi1hNjI2LWQ5ZDRhZTViZWQ1Ni5qcGc=" alt="Event 1">
    <img src="https://pbs.twimg.com/media/GAkaewQXAAAbf7D.jpg:large"</pre>
```

contact.html:

```
<!DOCTYPE html>
<html>
<head>
<title>Contact | College Fest 2025</title>
link rel="stylesheet" href="style.css">
</head>
<body>
<header><h1>Contact & FAQs</h1></header>
<a href="index.html">Home</a>
<a href="events.html">Events</a>
<a href="events.html">Schedule</a>
<a href="register.html">Register</a>
<a href="register.html">Register</a>
```

```
<a href="gallery.html">Gallery</a>
   <a href="contact.html">Contact</a>
</nav>
<div class="container">
   <h2>Contact Us</h2>
   Email: saturnalia2025@thapar.edu
   Phone: 0180 252 864
   <h2>FAQs</h2>
   <u1>
       <strong>Q:</strong> Is there any registration fee?
<br><strong>A:</strong> No, it's free!
       <strong>Q:</strong> Can I register for multiple events?
<br><strong>A:</strong> Yes, you can.
   </div>
<footer>
   © 2025 College Fest
</footer>
</body>
</html>
```

style.css:

```
/* General Styles */
body {
   font-family: Arial, sans-serif;
   margin: 0;
   padding: 0;
   background: #f8f8f8;
   color: #333;
header {
   background: #4a90e2;
   color: #fff;
   padding: 15px 0;
   text-align: center;
nav {
   background: #333;
   text-align: center;
   padding: 10px 0;
nav a {
```

```
color: #fff;
    text-decoration: none;
   padding: 10px 15px;
    display: inline-block;
nav a:hover {
    background: #4a90e2;
   border-radius: 4px;
.container {
    width: 80%;
   margin: auto;
   padding: 20px;
/* Home Page */
.hero {
    text-align: center;
   margin: 40px 0;
.hero h1 {
```

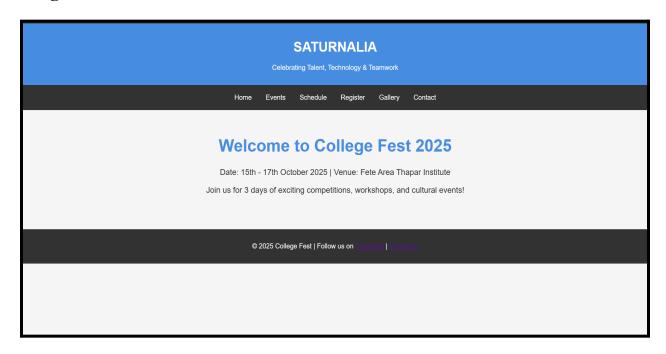
```
font-size: 2.5em;
    color: #4a90e2;
.hero p {
    font-size: 1.2em;
/* Events Page */
ul, ol {
   margin: 20px;
   padding: 20px;
   background: #fff;
   border-radius: 6px;
   list-style-type: square;
ul li {
   padding: 10px 0;
   font-size: 1.1em;
/* Table Styles */
table {
```

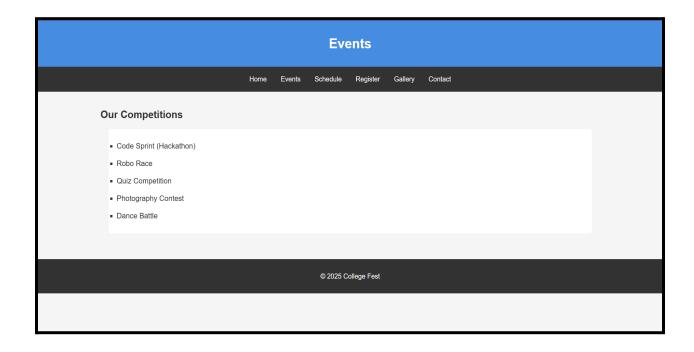
```
width: 100%;
    border-collapse: collapse;
    background: #fff;
    margin-top: 20px;
    border-radius: 6px;
    overflow: hidden;
th, td {
    border: 1px solid #ccc;
   padding: 12px;
    text-align: center;
th {
    background: #4a90e2;
    color: white;
/* Form Styles */
form {
    background: #fff;
   padding: 20px;
    border-radius: 6px;
```

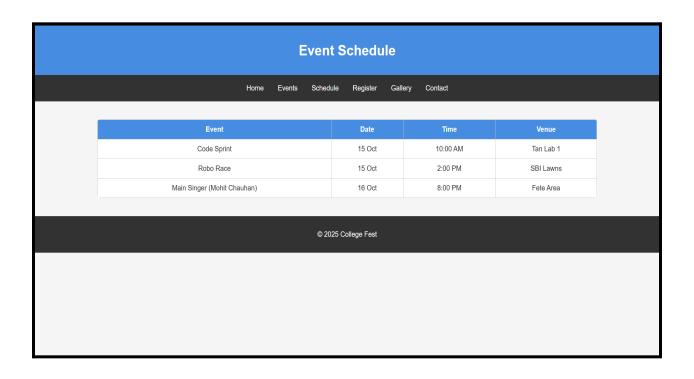
```
input, select, textarea {
   width: 100%;
   padding: 10px;
   margin: 10px 0;
   border: 1px solid #ccc;
   border-radius: 4px;
button {
    background: #4a90e2;
    color: white;
   border: none;
   padding: 12px;
   border-radius: 4px;
    cursor: pointer;
button:hover {
    background: #357abd;
/* Gallery */
```

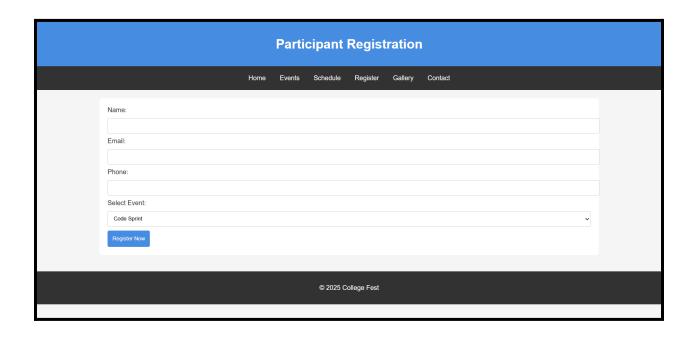
```
.gallery {
   display: grid;
   grid-template-columns: repeat(3, 1fr);
   gap: 15px;
   margin-top: 20px;
.gallery img {
   width: 300px; /* Set fixed width */
   height: 200px; /* Set fixed height */
   object-fit: cover; /* Crops and fits image without distortion */
   border-radius: 6px;
/* Footer */
footer {
   background: #333;
   color: white;
   text-align: center;
   padding: 15px;
   margin-top: 20px;
```

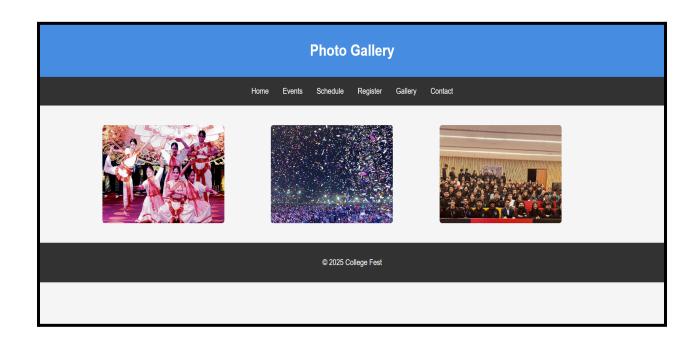
Images:

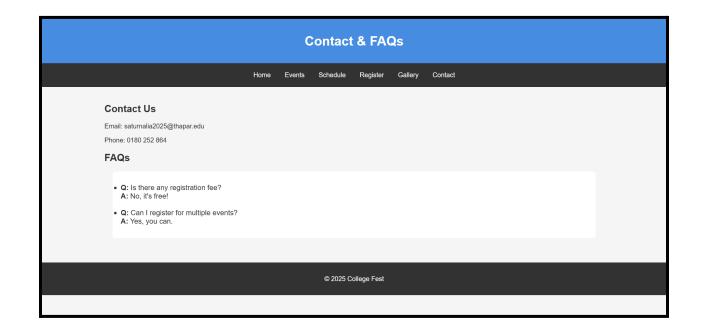












Assignment-2

Objective: Create a multipage website for a travel agency with following pages:

- Home page with an introduction and banner image
- Packages page with tour package details in a table
- A booking form (name, dates, destination, package selection)
- Gallery page with destination images and captions
- About Us or Contact Us page with social media links

Use a table to show packages with price, duration, destination, booking form with multiple inputs and dropdowns, list of travel tips or must-visit places, embedded images with proper attributes and styling for layout.

Booking Page:

```
<!DOCTYPE html>
<html>
<head>
<title>Wanderlust Travels - Booking</title>
link rel="stylesheet" href="style.css">
</head>
<body>
<header>
<hl>>Book Your Trip</hl>
</header>
</nav>
<a href="index.html">Home</a>
<a href="packages.html">Packages</a>
<a href="booking.html">Packages</a>
<a href="gallery.html">Gallery</a>
<a href="gallery.html">Contact Us</a>
<a href="contact.html">Contact Us</a>
</nav>
</div class="container">
<form onsubmit="alert('Thank you! Your booking request has been assessment, by your follows.")</pre>
```

```
input type="text" name="name" required>
label>Travel Start Date:</label>
input type="date" name="start-date" required>
label>Travel End Date:</label>
input type="date" name="end-date" required>
label>Destination:</label>
input type="text" name="destination" required>
label>Select Package:</label>
label>Additional Requests:</label>
input type="submit" value="Book Now">
```

Contact Us Page:

```
<header>
   <h1>Contact Us</h1>
</header>
<nav>
   <a href="index.html">Home</a>
   <a href="packages.html">Packages</a>
   <a href="booking.html">Booking</a>
   <a href="gallery.html">Gallery</a>
   <a href="contact.html">Contact Us</a>
</nav>
<div class="container">
   Email: info@wanderlusttravels.com
   Phone: +1 234 567 890
   Follow us on:
   <u1>
       <a href="#">Facebook</a>
       <a href="#">Instagram</a>
       <a href="#">Twitter</a>
   </div>
</body>
</html>
```

Gallery Page:

```
<nav>
   <a href="index.html">Home</a>
   <a href="packages.html">Packages</a>
   <a href="booking.html">Booking</a>
   <a href="gallery.html">Gallery</a>
   <a href="contact.html">Contact Us</a>
</nav>
<div class="container gallery">
   <figure>
        <img src="https://picsum.photos/300/200?paris" alt="Paris">
        <figcaption>Romantic Paris</figcaption>
   </figure>
   <figure>
        <img src="https://picsum.photos/300/200?bali" alt="Bali">
        <figcaption>Sunny Bali</figcaption>
   </figure>
   <figure>
        <img src="https://picsum.photos/300/200?newyork" alt="New York">
        <figcaption>Vibrant New York</figcaption>
   </figure>
</div>
</body>
</html>
```

Main Landing Page:

```
<h1>Wanderlust Travels</h1>
</header>
<nav>
   <a href="index.html">Home</a>
   <a href="packages.html">Packages</a>
   <a href="booking.html">Booking</a>
   <a href="gallery.html">Gallery</a>
   <a href="contact.html">Contact Us</a>
</nav>
<img src="image.png" alt="Travel Banner" class="banner">
<div class="container">
   <h2>Your Gateway to the World</h2>
   We provide the best travel packages to exotic locations worldwide.
Whether you're looking for a relaxing beach holiday, a thrilling
adventure, or a cultural escape — we've got you covered!
   <h3>Travel Tips:</h3>
   <u1>
       Pack light but smart.
       Keep important documents safe.
       Learn basic local phrases.
       Always have travel insurance.
   </div>
</body>
</html>
```

Packages:

```
<header>
  <h1>Our Travel Packages</h1>
</header>
<nav>
  <a href="index.html">Home</a>
  <a href="packages.html">Packages</a>
  <a href="booking.html">Booking</a>
  <a href="gallery.html">Gallery</a>
  <a href="contact.html">Contact Us</a>
</nav>
<div class="container">
  Destination
        Duration
        Price
     Paris, France
        5 Days
        $1500
     Bali, Indonesia
        7 Days
        $1200
     New York, USA
        4 Days
        $1000
     </div>
</body>
</html>
```

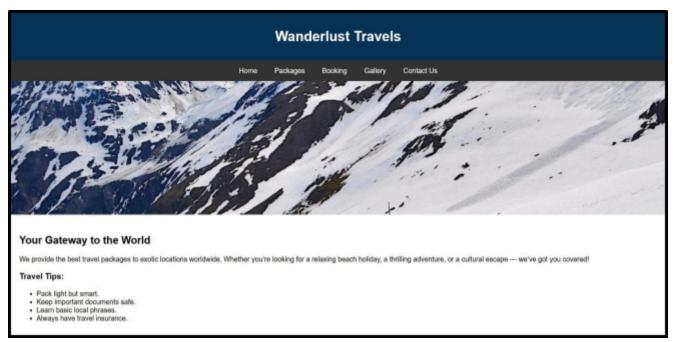
CSS:

```
body {
    font-family: Arial, sans-serif;
    margin: 0;
    padding: 0;
header {
    background-color: #073356;
    color: white;
   padding: 15px;
    text-align: center;
nav {
    background-color: #333;
    overflow: hidden;
    display: flex;
    justify-content: center; /* Centers the nav links */
nav a {
   color: white;
    text-align: center;
    padding: 14px 20px;
    text-decoration: none;
nav a:hover {
    background-color: #575757;
.banner {
   width: 100%;
    height: 300px;
    object-fit: cover;
container {
```

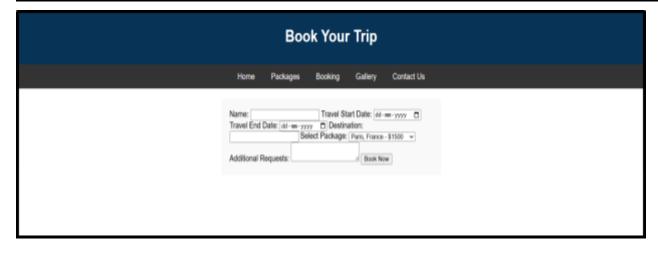
```
padding: 20px;
table {
   width: 100%;
   border-collapse: collapse;
   margin: 20px 0;
table, th, td {
   border: 1px solid #ddd;
th, td {
    padding: 12px;
    text-align: center;
form {
   max-width: 500px;
   margin: auto;
   background: #f9f9f9;
   padding: 20px;
   border-radius: 8px;
```

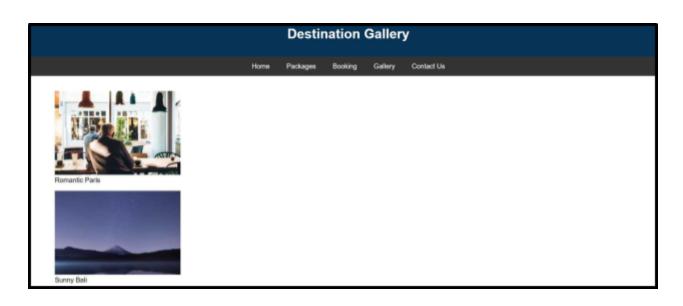
Output:

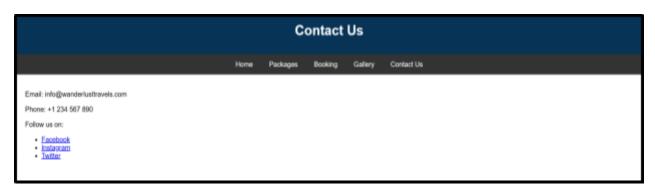
It is present on the next page since there is less space.



Our Travel Packages					
Hor	ne Packages	Booking Gallery Contact Us			
Destination		Duration	Price		
Paris, France		5 Days	\$1500		
Ball, Indonesia		7 Days	\$1200		
New York, USA		4 Days	\$1000		







Assignment-1

CODE:

```
<title>Daksh Raj - Portfolio</title>
   <h1>DAKSH RAJ</h1>
   <strong>Electronics & Computer Engineering Student | Full-Stack
Developer | Tech Enthusiast</strong>
   <em>Patiala, Punjab | +91 7082269244</em>
   <h2 id="about">About Me</h2>
width="250" height="300" title="Daksh Raj - Electronics & Computer
Engineering
Student">
    I am a passionate <strong>Electronics & Computer
Engineering</strong> student at <em>Thapar Institute of Engineering and
Technology</em> with a CGPA of 8.81. Currently pursuing my B.Tech degree
(2023-2027), I am dedicated to exploring the intersection of technology
and innovation.
    Sased in <strong>Patiala, Punjab</strong></strong>, I am
enthusiastic about <em>full-stack development</em></em>, web technologies,
and creating innovative solutions that make a difference. My academic
journey has equipped me with a solid foundation in both theoretical
concepts and practical applications.
   I believe in continuous learning and strive to stay updated with
the latest technological advancements. My goal is to contribute
meaningfully to the tech industry while building impactful projects that
solve real-world problems.
```

```
<h2 id="education">Education</h2>
           Institution
           >Degree/Class
           Year
           CGPA/Percentage
           <strong>Thapar Institute of Engineering
and Technology</strong>
           B.Tech - Electronics and Computer Engineering
           2023 - 2027
           8.81 CGPA
           <strong>M.L.B International
School</strong>
           Class 12 (CBSE) 
           2023
           80.2%
           <strong>Delhi Public School</strong>
           Class 10 (CBSE) 
           2021
           94.2%
  <h2 id="skills">Technical Skills</h2>
  <h3>Programming Languages</h3>
```

```
JavaScript
      ARM Assembly Language
   <h3>Web Technologies</h3>
      HTML
      CSS
      Tailwind CSS
      React
      Node.js
   <h3>Database Technologies</h3>
      MongoDB
      SQL
      MySQL
   <h3>Core CS Concepts</h3>
      Data Structures and Algorithms
      Object-Oriented Programming
      Computer Networks
      Database Management Systems
   <h2 id="projects">Projects</h2>
   <h3><strong>StayEase</strong> - Full-Stack Rental Web Application</h3>
   StayEase is a <em>full-stack Airbnb-inspired platform</em> that
enables users to register, log in, and list or browse rental properties.
The backend is built with <strong>Node.js</strong> and
<strong>Express</strong>, while <strong>MongoDB</strong> handles data
persistence. Dynamic pages are rendered using <strong>EJS
templates</strong>, and sessions are securely managed using
<strong>cookies</strong>. The project is designed for both development and
production environment configuration.
```

```
<h3><strong>Interactive Tic-Tac-Toe Game</strong></h3>
   Suilt a responsive Tic-Tac-Toe game using <strong>HTML5</strong>,
<strong>CSS</strong>, and <strong>JavaScript</strong>. Implementing
win/draw logic through game-based pattern checks and move history
tracking. Added features like <em>undo moves</em> and <em>real-time winner
detection</em> while maintaining clean, performant code architecture.
   <h2 id="achievements">Achievements & Leadership</h2>
       <strong>Discipline Head of Hostel</strong> - maintained
discipline and coordinated with hostel authorities
       <strong>Captained intra-hostel cricket team</strong> - winner
of inter-hostel cricket tournament
       <strong>Active participant in football and cricket</strong> at
university level
   <h2 id="contact">Contact Information</h2>
   <h3>Email</h3>
   <a href="mailto:dakshpr17@gmail.com">dakshpr17@gmail.com</a>
   <h3>Phone</h3>
   <strong>+91 7082269244</strong>
   <h3>LinkedIn</h3>
   <a href="https://linkedin.com/in/dakshRaj17"</p>
target=" blank">linkedin.com/in/dakshRaj17</a>
   <h3>GitHub</h3>
   <a href="https://github.com/dakshRGit17"</p>
target=" blank">github.com/dakshRGit17</a>
   <h3>LeetCode</h3>
   <a href="https://leetcode.com/daksh codess"</p>
target=" blank">leetcode.com/daksh codess</a>
       <em>"Made by Daksh Raj"</em>
```

```
</footer>
</body>
</html>
```

Output:

