Full Stack Development Experiments (EXP 1 to 5)

# EXP-1a

## 1a.js

// Script to log "Hello, World!" to the console  
console.log("Hello, World!");  
  
// Script to calculate the sum of two numbers and display the result  
function calculateSum(a, b) {  
 return a + b;  
}  
  
if (typeof alert === "function") {  
 alert("The sum of 5 and 7 is: " + calculateSum(5, 7));  
} else {  
 console.log("The sum of 5 and 7 is: " + calculateSum(5, 7));  
}

## 1a.html

<!DOCTYPE html>  
<html>  
<head>  
 <title>JavaScript Example</title>  
</head>  
<body>  
 <script src="1a.js"></script>  
</body>  
</html>

# EXP-1b

## 1b.js

let input = prompt("Enter 5 cities separated by commas:");  
let cities = input.split(',').map(city => city.trim());  
console.log("Initial cities:", cities);  
  
console.log("Total number of cities:", cities.length);  
  
let newCity = prompt("Enter a city to add to the end:");  
cities.push(newCity);  
console.log("Cities after adding a new one:", cities);  
  
console.log("Removing the first city:", cities[0]);  
cities.shift();  
console.log("Cities after removing the first one:", cities);  
  
let searchCity = prompt("Enter a city to find its index:");  
let cityIndex = cities.indexOf(searchCity);  
console.log("Index of " + searchCity + ":", cityIndex !== -1 ? cityIndex : "City not found");

## 1b.html

<!DOCTYPE html>  
<html lang="en">  
<head>  
 <meta charset="UTF-8">  
 <meta name="viewport" content="width=device-width, initial-scale=1.0">  
 <title>Dynamic Cities Array</title>  
</head>  
<body>  
 <h1>Dynamic Cities Array</h1>  
 <script src="1b.js"></script>  
</body>  
</html>

# EXP-2

## 2a.html

<!DOCTYPE html>  
<html>  
<head>  
 <title>String Manipulation</title>  
 <script>  
 function isPalindrome1(str) {  
 for (let i = 0; i < str.length / 2; i++) {  
 if (str.charAt(i) !== str.charAt(str.length - 1 - i)) {  
 return false;  
 }  
 }  
 return true;  
 }  
  
 let userInput = prompt("Enter a string:");  
 let lengthOfString = userInput.length;  
  
 let extractedWord = userInput.includes("JavaScript") ?  
 userInput.substring(userInput.indexOf("JavaScript"), userInput.indexOf("JavaScript") + "JavaScript".length) :  
 "JavaScript not found";  
  
 let newString = userInput.replace("JavaScript", "TypeScript");  
 let palindromeCheck = isPalindrome1(userInput);  
  
 console.log(`New String after Replacement: ${newString}`);  
  
 alert(`Length: ${lengthOfString}\nExtracted Word: ${extractedWord}\nNew String: ${newString}\nPalindrome: ${palindromeCheck}`);  
 </script>  
</head>  
<body></body>  
</html>

# EXP-3

## 3.html

<!DOCTYPE html>  
<html>  
<head>  
 <title>Dynamic Student Object</title>  
 <script>  
 function createStudent() {  
 let student = {  
 name: prompt("Enter the student's name:"),  
 grade: parseInt(prompt("Enter the student's grade:")),  
 subjects: prompt("Enter the student's subjects separated by commas:")  
 .split(',')  
 .map(subject => subject.trim())  
 };  
 return student;  
 }  
  
 function displayInfo(student) {  
 console.log("Student Details:");  
 for (let key in student) {  
 if (typeof student[key] !== 'function') {  
 console.log(`${key}: ${student[key]}`);  
 }  
 }  
 console.log("Passed:", student.passed ? "Yes" : "No");  
 }  
  
 let student = createStudent();  
 student.passed = student.grade >= 40;  
 displayInfo(student);  
 </script>  
</head>  
<body></body>  
</html>

# EXP-4

## 4.html

<!DOCTYPE html>  
<html>  
<head>  
 <title>Event Listeners Example</title>  
</head>  
<body>  
 <button id="clickButton">Click Me</button>  
 <img id="exampleImage" src="https://www.w3schools.com/html/img\_chania.jpg"  
 alt="Example Image" width="200">  
  
 <script>  
 document.getElementById('clickButton').addEventListener('click', function () {  
 console.log("Button clicked!");  
 });  
  
 document.getElementById('exampleImage').addEventListener('mouseover', function () {  
 this.style.border = '5px solid red';  
 });  
  
 document.getElementById('exampleImage').addEventListener('mouseout', function () {  
 this.style.border = 'none';  
 });  
  
 document.addEventListener('keydown', function (event) {  
 console.log("Key pressed: " + event.key);  
 });  
 </script>  
</body>  
</html>

# EXP-5

## IssueList.jsx

import React from 'react';  
  
const issues = [  
 { id: 1, title: 'Bug in Login', description: 'Error 404 on login', status: 'Open' },  
 { id: 2, title: 'UI Issue on Dashboard', description: 'Misaligned elements', status: 'Closed' },  
 { id: 3, title: 'API Timeout', description: 'Delayed response from server', status: 'Open' },  
];  
  
function IssueList() {  
 return (  
 <div>  
 <h1>Issue Tracker</h1>  
 <ul>  
 {issues.map(issue => (  
 <li key={issue.id}>  
 <h2>{issue.title}</h2>  
 <p>{issue.description}</p>  
 <p>Status: {issue.status}</p>  
 </li>  
 ))}  
 </ul>  
 </div>  
 );  
}  
  
export default IssueList;

## App.jsx

import React from 'react';  
import './App.css';  
import IssueList from './IssueList';  
  
function App() {  
 return (  
 <div>  
 <IssueList />  
 </div>  
 );  
}  
  
export default App;