



UNIVERSITI MALAYSIA TERENGGANU

CSM3103 – FRONT-END PROGRAMMING

BACHELOR OF COMPUTER SCIENCE (MOBILE COMPUTING) WITH HONORS

LAB 4

SEMESTER II 2023/2024

Prepared for:

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(S67250)

Link Github :

https://github.com/Shazrul-Izzuan/S67250_Lab-4Front.git

Task 1 – JavaScript Function

Code :

Html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Task 1</title>
  <script src="Task 1.js" defer></script>
</head>
<body>
  <h1> JavaScript Function</h1>
  <div id="output"></div>

  <button onclick="findSquare()">Find Square</button>
  <button onclick="sumOfCubes()">Sum of Cubes</button>
  <button onclick="reverseNumber()">Reverse Number</button>
  <button onclick="divisibleByZ(parseInt(prompt('Enter a number to find divisible numbers
between 1 and 100:')))">Divisible Numbers</button> </body>
</html>
```

Js

```
function findSquare() { let number = parseInt(prompt("Enter a
number to find its square:")); let square = number * number;
document.getElementById("output").innerText = `Square of ${number} is: ${square}`;
}

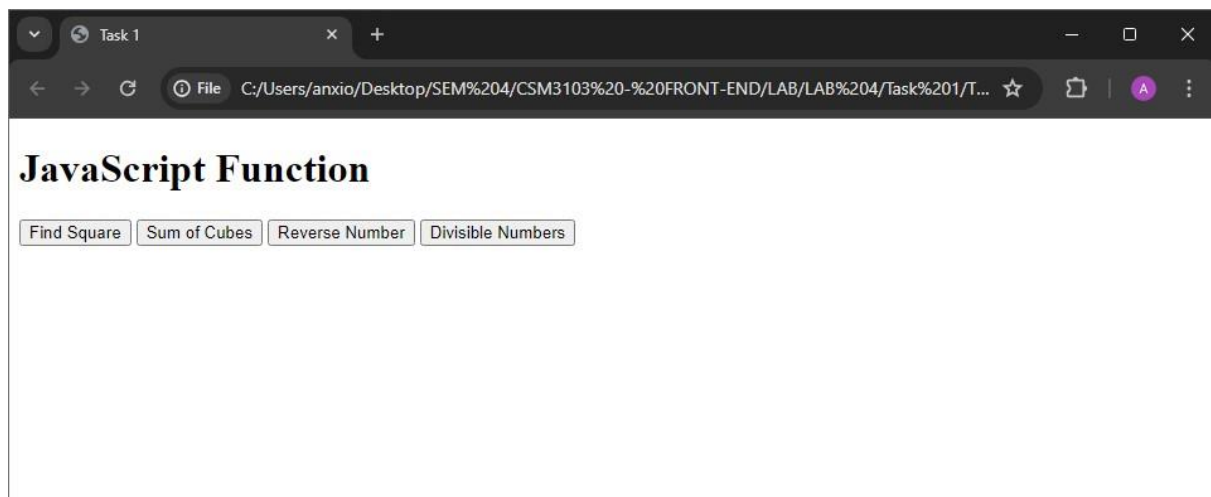
function sumOfCubes() {
let num1 = parseInt(prompt("Enter the first number:")); let num2 =
parseInt(prompt("Enter the second number:")); let sum = Math.pow(num1, 3) +
Math.pow(num2, 3); document.getElementById("output").innerText = `Sum of cubes of
${num1} and ${num2} is: ${sum}`;
}

function reverseNumber() {
let number = parseInt(prompt("Enter a number to reverse:"));
let reversed = 0; while (number > 0) {
reversed = (reversed * 10) + (number % 10);
number = Math.floor(number / 10);
}

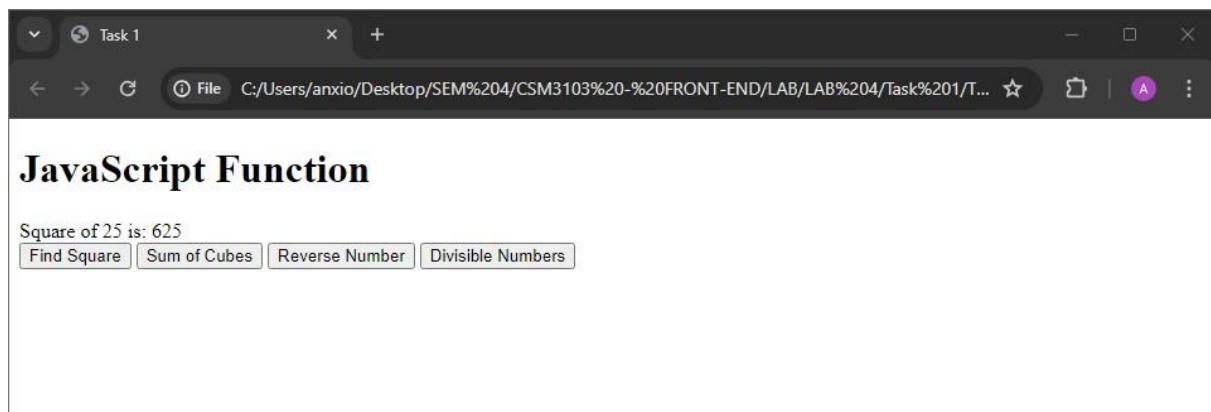
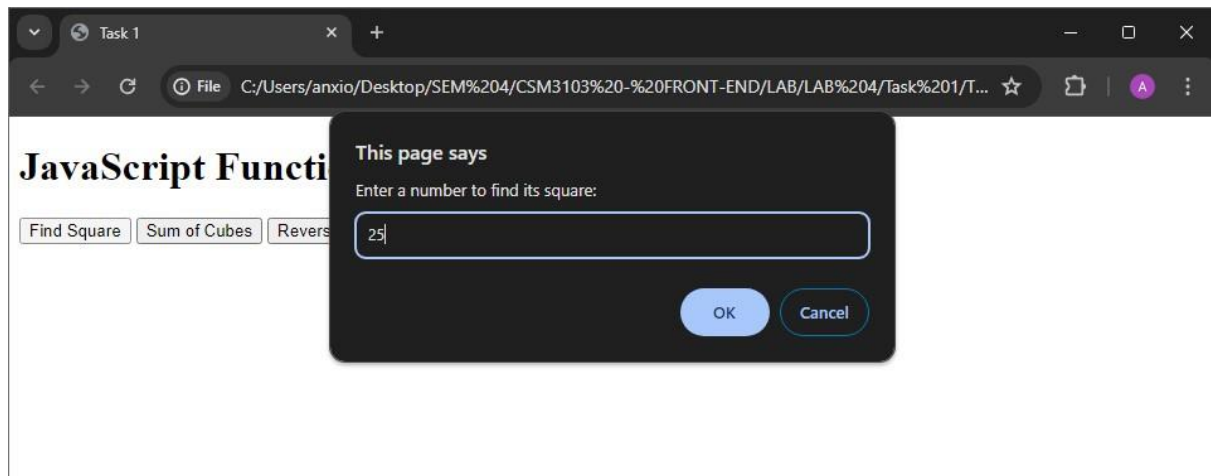
document.getElementById("output").innerText = `Reversed number is: ${reversed}`;
}

function divisibleByZ(z) {
let output = ""; for (let i =
1; i <= 100; i++) { if (i % z
=== 0) {
output += i + ", ";
}
}
document.getElementById("output").innerText = `Numbers between 1 and 100 divisible
by ${z} are: ${output}`;
}
```

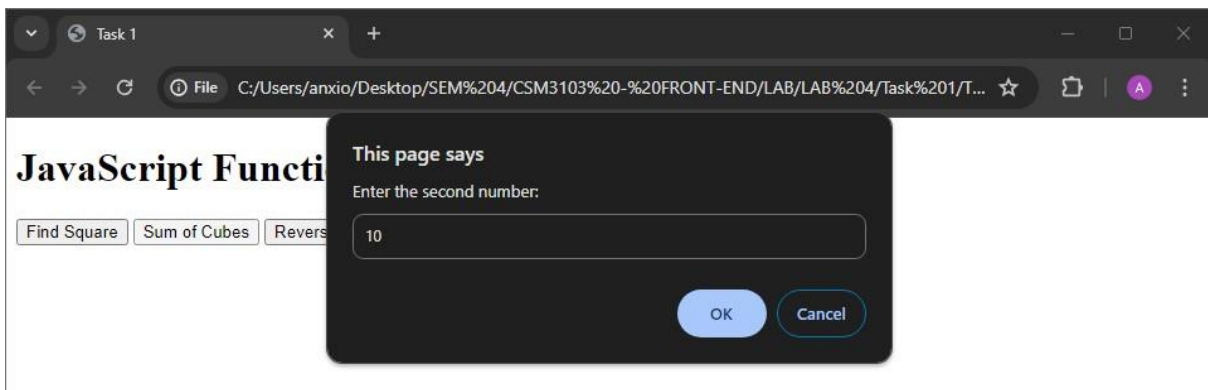
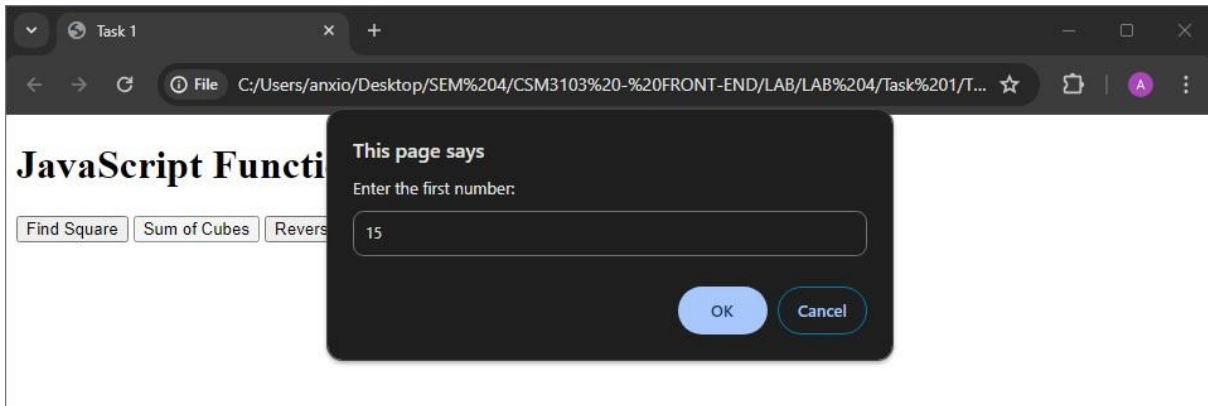
Output :



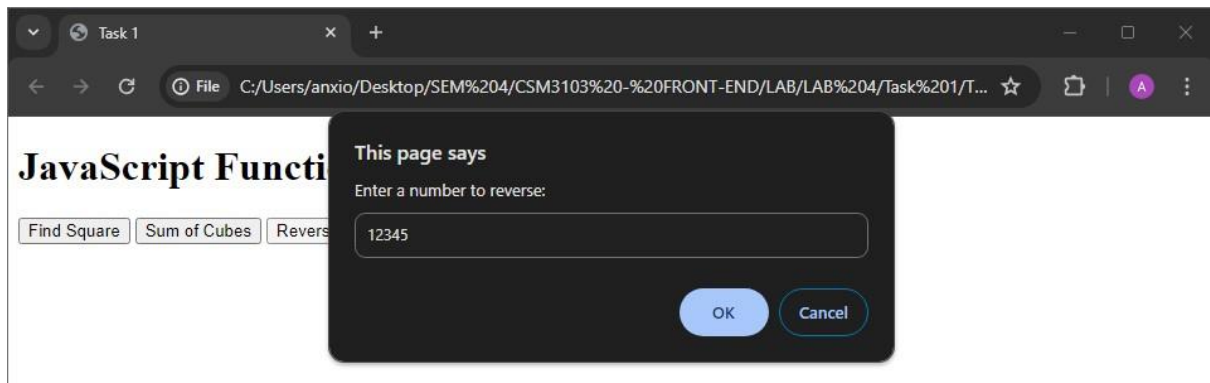
Find Square



Sum of Cubes

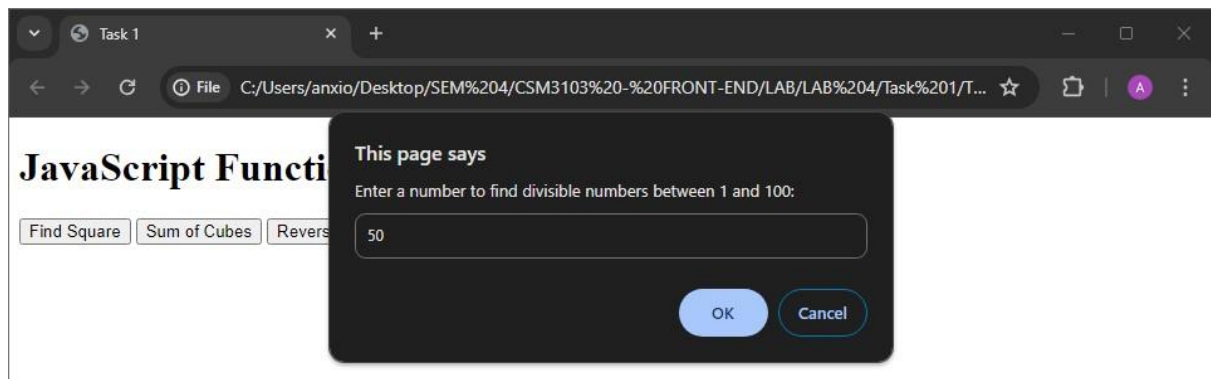


•



Reverse Number

-
- Divisible Numbers



Task 2 - JavaScript Recursion Function

Code :

Html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Task 2</title>
  <script src="Task 2.js" defer></script>
</head>
<body>
  <h1>Recursion Functions</h1>
<div id="output"></div>

  <button onclick="sumOfDigits()">Sum of Digits</button>
  <button onclick="power(parseInt(prompt('Enter base:')), parseInt(prompt('Enter
exponent:')))">Power</button>
</body>
</html>
```

Js

```
function sumOfDigits() {
  let number = parseInt(prompt("Enter a number to find sum of its digits:"));
  let sum = calculateSumOfDigits(number);
  document.getElementById("output").innerText = `Sum of digits of ${number} is: ${sum}`;
}

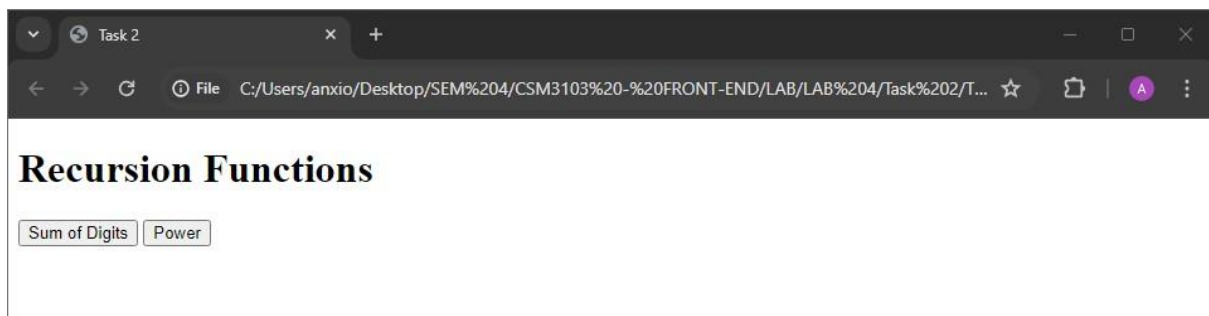
function calculateSumOfDigits(number) {
  if (number === 0) {
    return 0;
  } else {
    return (number % 10) + calculateSumOfDigits(Math.floor(number / 10));
  }
}

function power(x, y) {
  let result = calculatePower(x, y);
  document.getElementById("output").innerText = `${x} raised to the power ${y} is:
${result}`;
}

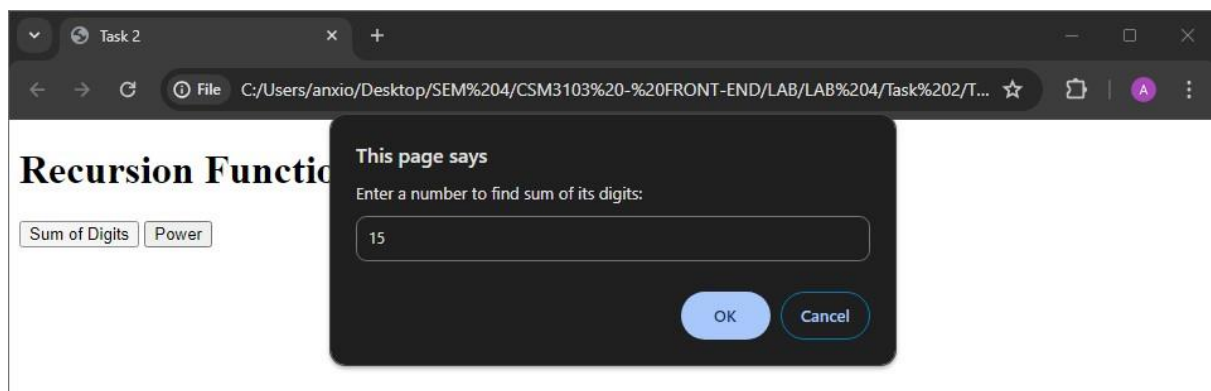
function calculatePower(x, y) {
  if (y === 0) {
    return 1;
  }
}
```

```
} else if (y > 0) {  
    return x * calculatePower(x, y - 1);  
} else {  
    return 1 / calculatePower(x, -y);  
}  
}
```

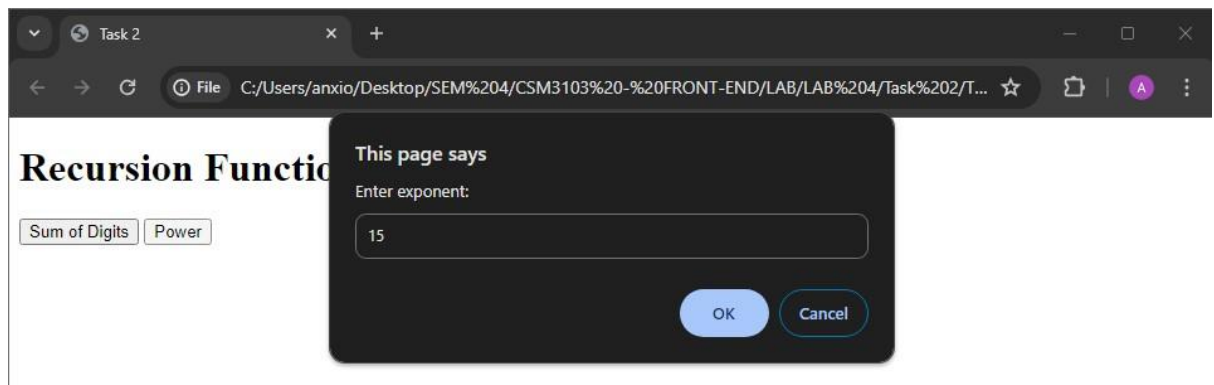
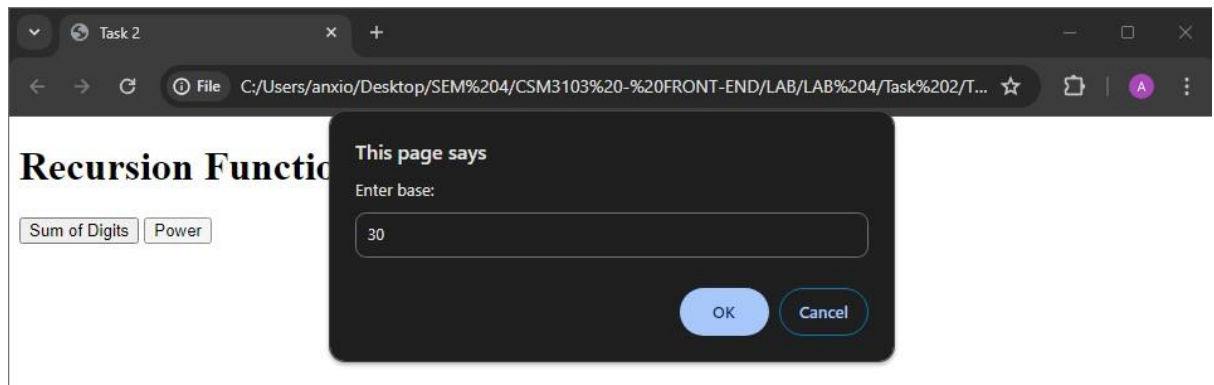
Output :



- Sum of digits



- Power



Task 3 – JavaScript Object and Prototype

Code :

Html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Task 3</title>
</head>
<body>
  <h2>Product Details</h2>
  <form id="productForm">
    <label for="productName">Product Name:</label>
    <input type="text" id="productName" required><br><br>
    <label for="quantity">Quantity:</label>
    <input type="number" id="quantity" required><br><br>
    <label for="price">Price:</label>
    <input type="number" id="price" required><br><br>
    <button type="button" onclick="addProduct()">Add Product</button>
  </form>

  <h2>Book Details</h2>
  <form id="bookForm">
    <label for="bookName">Book Name:</label>
    <input type="text" id="bookName" required><br><br>
    <label for="authorName">Author Name:</label>
    <input type="text" id="authorName" required><br><br>
    <label for="bookPrice">Price:</label>
    <input type="number" id="bookPrice" required><br><br>
    <button type="button" onclick="addBook()">Add Book</button>
  </form>

  <h2>Output</h2>
  <div id="output"></div>

  <script src="Task 3.js"></script>
</body>
</html>
```

Js

```
function Product(name, quantity, price) {
  this.name = name; this.quantity =
  quantity; this.price = price;
}

function addProduct() {
  const productName = document.getElementById('productName').value;
  const quantity = parseInt(document.getElementById('quantity').value); const
  price = parseFloat(document.getElementById('price').value);

  const product = new Product(productName, quantity, price);

  displayOutput(product);
}

function Book(bookName, authorName) {
  this.bookName = bookName;
  this.authorName = authorName;
}

Book.prototype.price = null;

function addBook() {
  const bookName = document.getElementById('bookName').value; const
  authorName = document.getElementById('authorName').value; const
  bookPrice = parseFloat(document.getElementById('bookPrice').value);

  const book = new Book(bookName, authorName); book.price
  = bookPrice;

  displayOutput(book);
}

function displayOutput(obj) {
  let outputDiv = document.getElementById('output');
  let outputHTML = "";

  for (let prop in obj) {
    if (obj.hasOwnProperty(prop)) {
      outputHTML += `<strong>${prop}:</strong> ${obj[prop]}<br>`;
    }
  }

  outputDiv.innerHTML += outputHTML + '<br>';
}
```

Output :

Task 3

File C:/Users/anxio/Desktop/SEM%204/CSM3103%20-%20FRONT-END/LAB/LAB%204/Task%203/T...

Product Details

Product Name:

Quantity:

Price:

Add Product

Book Details

Book Name:

Author Name:

Price:

Add Book

Output

Task 3

File C:/Users/anxio/Desktop/SEM%204/CSM3103%20-%20FRONT-END/LAB/LAB%204/Task%203/T...

Product Details

Product Name:

Quantity:

Price:

Add Product

Book Details

Book Name:

Author Name:

Price:

Add Book

Output

Output

bookName: Fly Away
authorName: Jony Loh
price: 10

name: Book
quantity: 50
price: 500

Task 4 – Event Manager

Code :

Html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Task 4</title>
  <style>
    #paragraph {
padding: 20px;      border:
1px solid black;    cursor:
pointer;
    }

    #textfield {
padding: 10px;
font-size: 16px;
    transition: all 0.3s ease;
    }
  </style>
</head>
<body>
  <h1>Number 1 - Change the paragraph color</h1>
  <p id="paragraph">Click me!</p>

  <h1>Number 2 - Text Field Events</h1>
  <input type="text" id="textfield" placeholder="Type something...">

  <script src="eventmanager.js"></script>
<script src="textfield.js"></script>
</body>
</html>
```

Js (eventmanager)

```
const paragraph = document.getElementById('paragraph');

paragraph.onclick = function() {
  paragraph.style.backgroundColor = 'yellow';
};

paragraph.ondblclick = function() {
  paragraph.style.backgroundColor = 'blue';
};
```



```
paragraph.onmouseover = function() {  
    paragraph.style.backgroundColor = 'red';  
};  
  
paragraph.onmouseout = function() {    paragraph.style.backgroundColor = 'green';  
};
```

Js (textfield)

```
const textfield = document.getElementById('textfield');  
  
textfield.onchange = function() {  
    textfield.style.border = '2px solid blue';  
};  
  
textfield.onfocus = function() {    textfield.style.backgroundColor = '#f0f0f0';  
};  
  
textfield.onblur = function() {  
    textfield.style.backgroundColor = 'white';  
};
```

Output :



Task 5

Code :

Html

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0"> <title>Task
5</title>
</head>
<body>

<h2>Dynamic Table</h2>

<table id="myTable" border="1">
  <thead>
    <tr>
      <th>#</th>
      <th>Name</th>
      <th>Email</th>
      <th>Phone</th>
    </tr>
  </thead>
  <tbody>
  </tbody>
</table>

<br>

<input type="text" id="name" placeholder="Enter Name">
<input type="text" id="email" placeholder="Enter Email">
<input type="text" id="phone" placeholder="Enter Phone"> <button
onclick="addRow()">Add Record</button>

<script src="Task 5.js"></script>

</body>
</html>
```

Js

```
function addRow() {
    var table = document.getElementById("myTable").getElementsByTagName('tbody')[0];
    var newRow = table.insertRow(table.rows.length);
    var cells = [];
    for (var i = 0; i < 4; i++) {
        cells.push(newRow.insertCell(i));
    }
    cells[0].innerHTML = table.rows.length;
    cells[1].innerHTML = document.getElementById("name").value;
    cells[2].innerHTML = document.getElementById("email").value;
    cells[3].innerHTML = document.getElementById("phone").value;

    document.getElementById("name").value = "";
    document.getElementById("email").value = "";
    document.getElementById("phone").value = "";
}

window.onload = function() {
    var table = document.getElementById("myTable");
    var header = table.createTHead();
    var row = header.insertRow(0);
    var headerCells = [];
    for (var i = 0; i < headerCells.length; i++) {
        var cell = row.insertCell(i);
        cell.innerHTML = headerCells[i];
    }
}

document.addEventListener('DOMContentLoaded', function() {
    var table = document.getElementById("myTable");
    table.onclick = function(e) {
        if (e.target.tagName.toLowerCase() === 'td') {
            var index = e.target.parentNode.rowIndex;
            table.deleteRow(index);
        }
    };
});
```

Output :

Task 5

File C:/Users/anxio/Desktop/SEM%204/CSM3103%20-%20FRONT-END/LAB/LAB%204/Task%205/T...

Dynamic Table

#	Name	Email	Phone
---	------	-------	-------

Enter Name Enter Email Enter Phone

Task 5

File C:/Users/anxio/Desktop/SEM%204/CSM3103%20-%20FRONT-END/LAB/LAB%204/Task%205/T...

Dynamic Table

#	Name	Email	Phone
1	Ahmad Faisal	ahmadfaisal@gmail.com	0199088888
2	Ismail Sabri	isabri@mail.com	0199076760
3	Fateh Yakin	ffateh@hotmail.com	0176067762

Enter Name Enter Email Enter Phone

Task 6

Code :

Html

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0"> <title>Task
6</title>
<style>
    #container {
position: relative;
width: 400px;
height: 400px;
border: 2px solid black;
    }
    .small-square {
position: absolute;
width: 20px;
height: 20px;
background-color: red;
    }
</style>
</head>
<body>
<div id="container">
    <div id="square1" class="small-square"></div>
    <div id="square2" class="small-square"></div> </div>
    <button id="startBtn">Start Animation</button>
    <button id="stopBtn">Stop Animation</button>
    <script src="Task 6.js"></script>
</body>
</html>
```

Js

```
let intervalId;

function moveSquares() {
    const container = document.getElementById('container');
    const square1 = document.getElementById('square1');
    const square2 = document.getElementById('square2');
    const containerWidth = container.clientWidth;
    const containerHeight = container.clientHeight;
    const squareWidth = square1.clientWidth;

    const squareHeight = square1.clientHeight;

    intervalId = setInterval(() => {
        const randomX1 = Math.floor(Math.random() * (containerWidth - squareWidth));
        const randomY1 = Math.floor(Math.random() * (containerHeight - squareHeight));
        const randomX2 = Math.floor(Math.random() * (containerWidth - squareWidth));
        const randomY2 = Math.floor(Math.random() * (containerHeight - squareHeight));

        square1.style.left = randomX1 + 'px';
        square1.style.top = randomY1 + 'px';
        square2.style.left = randomX2 + 'px';
        square2.style.top = randomY2 + 'px';
    }, 1000);
}

function stopAnimation() {
    clearInterval(intervalId);
}

document.getElementById('startBtn').addEventListener('click', moveSquares);
document.getElementById('stopBtn').addEventListener('click', stopAnimation);
```

Output :

