Exercise 5

1)

Output:

Code:

```html
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <title>EX5</title>
 <style>
   .traffic-light {
     width: 100px;
     height: 300px;
     background-color: #333;
     display: flex;
     flex-direction: column;
     justify-content: space-around;
     align-items: center;
```
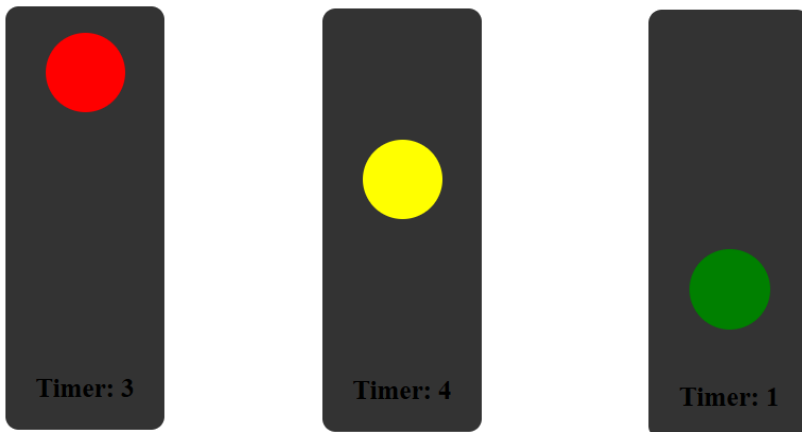
```css
      padding: 10px;

      border-radius: 10px;

    }


    .light {

      width: 60px;

      height: 60px;

      border-radius: 50%;

      background-color: #333;

    }


    .red {

      background-color: red;

    }


    .yellow {

      background-color: yellow;

    }


    .green {

      background-color: green;

    }


    .timer {

      margin-top: 20px;

      font-size: 20px;

      font-weight: bold;

    }
  </style>
```

```html
</head>
<body>
  <div class="traffic-light">
    <div id="red" class="light red"></div>
    <div id="yellow" class="light yellow"></div>
    <div id="green" class="light green"></div>
    <div id="timer" class="timer">Timer: 5</div>
  </div>

  <script>
    let redLight = document.getElementById("red");
    let yellowLight = document.getElementById("yellow");
    let greenLight = document.getElementById("green");
    let timerDisplay = document.getElementById("timer");

    let timer = 5;
    let currentLight = "red";

    function switchLight() {

      redLight.style.backgroundColor = "#333";
      yellowLight.style.backgroundColor = "#333";
      greenLight.style.backgroundColor = "#333";

      if (currentLight === "red") {
        redLight.style.backgroundColor = "red";
        timerDisplay.innerHTML = "Timer: 5";
        currentLight = "yellow";
        timer = 5;
```

```
      } else if (currentLight === "yellow") {

        yellowLight.style.backgroundColor = "yellow";

        timerDisplay.innerHTML = "Timer: 5";

        currentLight = "green";

        timer = 5;

      } else if (currentLight === "green") {

        greenLight.style.backgroundColor = "green";

        timerDisplay.innerHTML = "Timer: 5";

        currentLight = "red";

        timer = 5;

      }

    }


    function updateTimer() {

      if (timer > 0) {

        timer--;

        timerDisplay.innerHTML = `Timer: ${timer}`;

      } else {

        switchLight();

      }

    }


    setInterval(updateTimer, 1000);
  </script>
</body>
</html>
```

2)

Output:

♥️ **FLAMES** ♥️

First Person Name: [   ]

Second Person Name: [   ]

[Find you relationship]

Matching as:

Names not entered

Code:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>EX5</title>
    <style>
        body{
            display: flex;
            justify-content: center;
            align-items: center;
            background-color: rgba(255, 255, 255);
            height: 100vh;
        }
        .container {
            width: 50%;
            text-align: center;
```

```html
        }
        input {
            padding: 5px;
            width: 50%;
        }
        button {
            padding: 5px 10px;
            background-color: #ff00d9;
            color: white;
            box-shadow: 2px 2px 0px 0px rgba(255, 3, 230, 0.477);
        }
    </style>
</head>

<body>
    <div class="container">
        <h1 style="font-family:Verdana, Geneva, Tahoma, sans-serif"> ❤️ FLAMES ❤️ </h1>
            <label for="person1">First Person Name:</label>
            <input type="text" name="person1" id="person1" required>
            <br><br>
            <label for="person2">Second Person Name:</label>
            <input type="text" name="person2" id="person2" required>
            <br><br>
            <button type="submit">Find you relationship</button>
            <div>
                <h2>Matching as:</h2>
                <p id="output"></p>
            </div>
    </div>
```

```html
</body>

<script>
    document.querySelector('button').addEventListener('click', function() {
        var person1 =
document.getElementById('person1').value.toLowerCase().replace(/\s+/g, '');
        var person2 =
document.getElementById('person2').value.toLowerCase().replace(/\s+/g, '');


        if (person1 === '' || person2 === '') {
            document.getElementById('output').innerText = 'Names not entered';

            return;

        }


        for (var i = 0; i < person1.length; i++) {
            var char = person1[i];
            if (person2.includes(char)) {
                person1 = person1.replace(char, '');

                person2 = person2.replace(char, '');

                i--;

            }

        }


        var count = person1.length + person2.length;


        var flames = ['Friends', 'Love', 'Affection', 'Marriage', 'Enemy', 'Siblings'];

        var index = 0;


        while (flames.length > 1) {

            index = (index + count - 1) % flames.length;
```
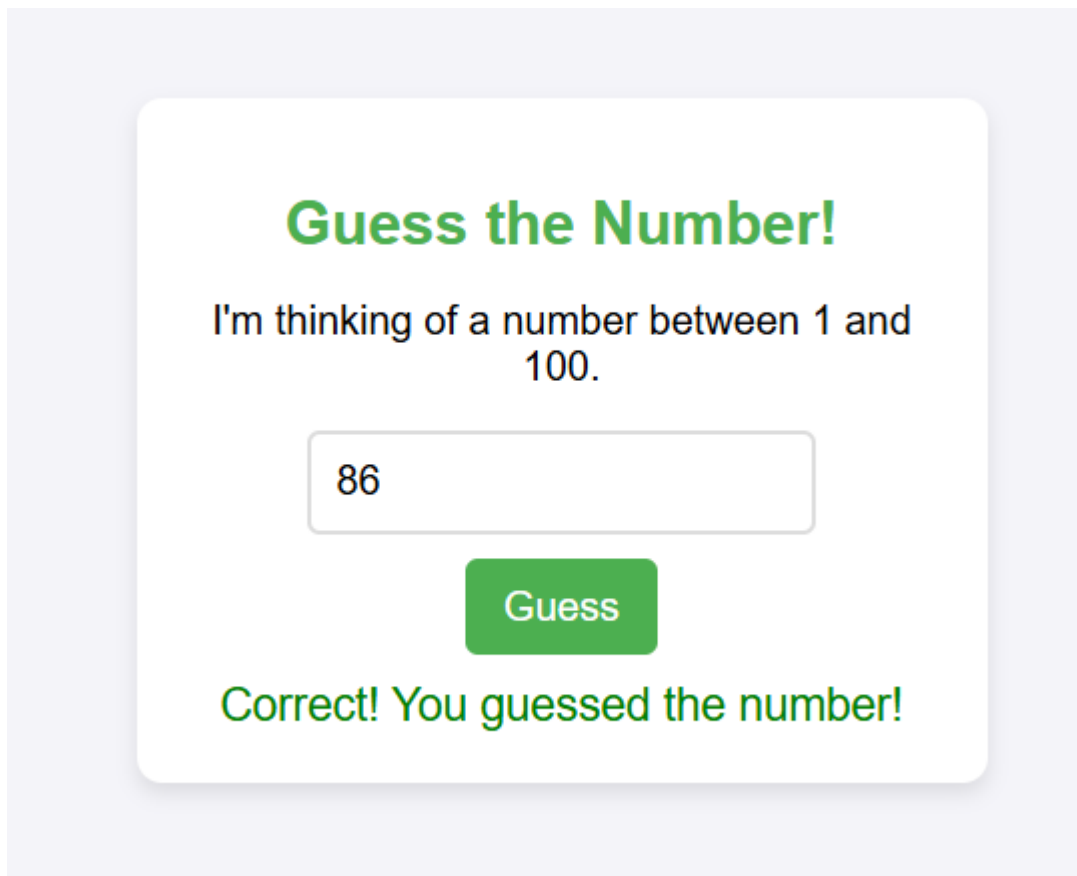
```
            flames.splice(index, 1);

        }


        document.getElementById('output').innerText = flames[0];

        }

    );
```

</script>

</html>

3)

Output:

Code:

<!DOCTYPE html>

```html
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>EX5</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      background-color: #f4f4f9;
      display: flex;
      justify-content: center;
      align-items: center;
      height: 100vh;
      margin: 0;
    }

    .game-container {
      background-color: #fff;
      padding: 20px;
      border-radius: 10px;
      box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);
      width: 300px;
      text-align: center;
    }

    h1 {
      color: #4CAF50;
      font-size: 24px;
    }
```

```css
.input-field {
  margin: 10px 0;
}

.input-field input {
  width: 60%;
  padding: 10px;
  font-size: 16px;
  border: 2px solid #ddd;
  border-radius: 5px;
}

button {
  padding: 10px 15px;
  background-color: #4CAF50;
  color: white;
  border: none;
  border-radius: 5px;
  font-size: 16px;
  cursor: pointer;
}

button:hover {
  background-color: #45a049;
}

.result {
  margin-top: 10px;
```

```
      font-size: 18px;

    }


    .correct {

      color: green;

    }


    .incorrect {

      color: red;

    }

  </style>

</head>

<body>


  <div class="game-container">

    <h1>Guess the Number!</h1>

    <p>I'm thinking of a number between 1 and 100.</p>

    <div class="input-field">

      <input type="number" id="guessInput" placeholder="Enter your guess" min="1"
max="100">

    </div>

    <button onclick="checkGuess()">Guess</button>

    <div class="result" id="result"></div>

  </div>


  <script>


    let randomNumber = Math.floor(Math.random() * 100) + 1;


    function checkGuess() {
```

```javascript
let userGuess = document.getElementById("guessInput").value;

let resultDiv = document.getElementById("result");


if (userGuess === "") {
  resultDiv.innerHTML = "Please enter a number!";
  resultDiv.className = "result incorrect";
  return;
}


userGuess = parseInt(userGuess);


if (userGuess < 1 || userGuess > 100) {
  resultDiv.innerHTML = "Please enter a number between 1 and 100!";
  resultDiv.className = "result incorrect";
  return;
}


if (userGuess === randomNumber) {
  resultDiv.innerHTML = "Correct! You guessed the number!";
  resultDiv.className = "result correct";
}
else if (userGuess>randomNumber && userGuess-randomNumber<=5) {
  resultDiv.innerHTML = "little high! Try again.";
  resultDiv.className = "result incorrect";
}
else if (userGuess<randomNumber && randomNumber-userGuess<=5) {
  resultDiv.innerHTML = "little low! Try again.";
  resultDiv.className = "result incorrect";
}
```
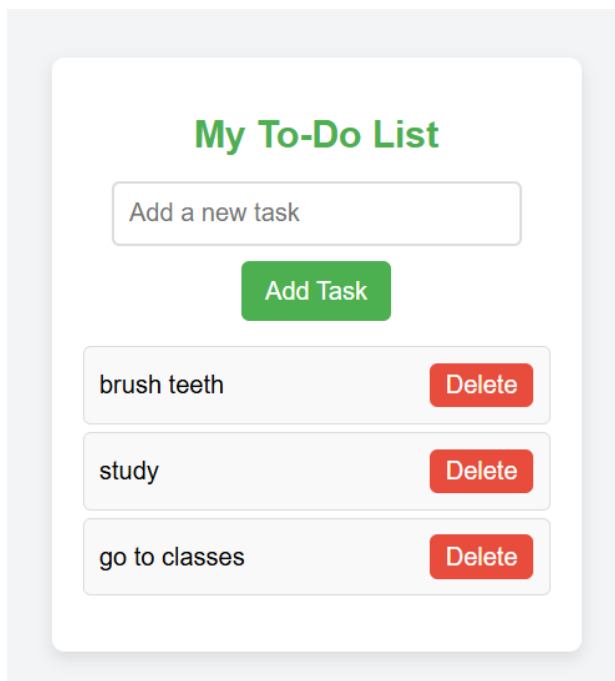
```
    else if (userGuess<randomNumber) {

      resultDiv.innerHTML = "Too low! Try again.";

      resultDiv.className = "result incorrect";

    } else if (userGuess > randomNumber) {

      resultDiv.innerHTML = "Too high! Try again.";

      resultDiv.className = "result incorrect";

    }

  }

 </script>


</body>
</html>
```

4)

Output:

Code:

```
<!DOCTYPE html>
```

```html
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>EX5</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      background-color: #f3f4f6;
      display: flex;
      justify-content: center;
      align-items: center;
      height: 100vh;
      margin: 0;
    }

    .todo-container {
      background-color: #fff;
      padding: 20px;
      border-radius: 8px;
      box-shadow: 0 4px 10px rgba(0, 0, 0, 0.1);
      width: 300px;
      text-align: center;
    }

    h1 {
      color: #4CAF50;
      font-size: 24px;
    }
```

```css
input[type="text"] {
  width: 80%;
  padding: 10px;
  font-size: 16px;
  border: 2px solid #ddd;
  border-radius: 5px;
  margin-bottom: 10px;
}

button {
  padding: 10px 15px;
  background-color: #4CAF50;
  color: white;
  border: none;
  border-radius: 5px;
  font-size: 16px;
  cursor: pointer;
}

button:hover {
  background-color: #45a049;
}

ul {
  list-style-type: none;
  padding: 0;
}
```

```css
    li {
      padding: 10px;

      margin: 5px 0;

      background-color: #f9f9f9;

      border: 1px solid #ddd;

      border-radius: 5px;

      display: flex;

      justify-content: space-between;

      align-items: center;

    }


    .delete {

      background-color: #e74c3c;

      color: white;

      border: none;

      border-radius: 5px;

      padding: 5px 10px;

      cursor: pointer;

    }


    .delete:hover {

      background-color: #c0392b;

    }
  </style>
</head>
<body>

  <div class="todo-container">
    <h1>My To-Do List</h1>
```

```html
  <input type="text" id="taskInput" placeholder="Add a new task" />
  <button onclick="addTask()">Add Task</button>
  <ul id="taskList"></ul>
</div>

<script>

  function addTask() {
    let taskInput = document.getElementById("taskInput");
    let taskText = taskInput.value.trim();

    if (taskText === "") {
      alert("Please enter a task.");
      return;
    }

    let li = document.createElement("li");
    li.textContent = taskText;

    let deleteButton = document.createElement("button");
    deleteButton.textContent = "Delete";
    deleteButton.classList.add("delete");
    deleteButton.onclick = function() {
      li.remove();
    };

    li.appendChild(deleteButton);

    document.getElementById("taskList").appendChild(li);
```

```
      taskInput.value = "";

    }

  </script>


</body>

</html>
```
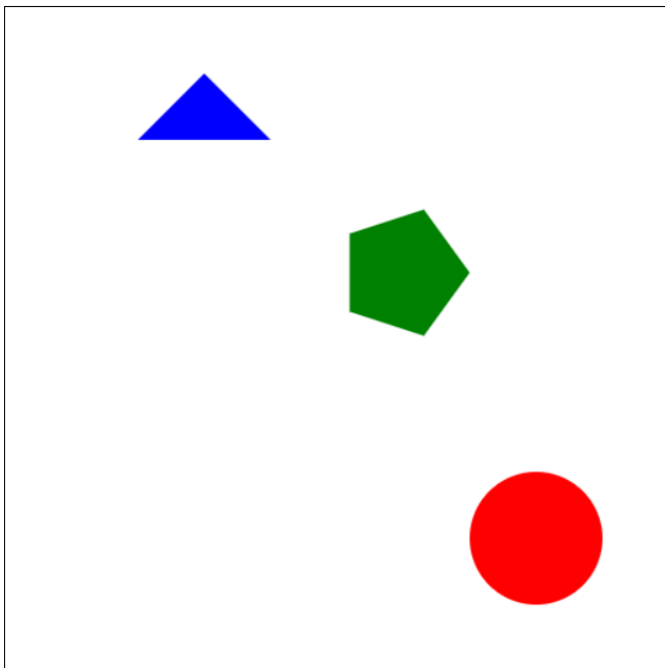
5)

Output:

Code:

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>EX5</title>
```

```html
    <style>
      body {
        font-family: Arial, sans-serif;
        text-align: center;
        margin-top: 20px;
      }


      canvas {
        border: 1px solid #000;
      }
    </style>
</head>
<body>
  <canvas id="myCanvas" width="500" height="500"></canvas>


  <script>
    const canvas = document.getElementById("myCanvas");
    const ctx = canvas.getContext("2d");


    ctx.beginPath();
    ctx.moveTo(100, 100);
    ctx.lineTo(150, 50);
    ctx.lineTo(200, 100);
    ctx.closePath();
    ctx.fillStyle = "blue";
    ctx.fill();


    ctx.beginPath();
    const pentagonCenterX = 300;
```

```
    const pentagonCenterY = 200;

    const pentagonRadius = 50;

    const sides = 5;

    for (let i = 0; i < sides; i++) {

      let angle = (i * 2 * Math.PI) / sides;

      let x = pentagonCenterX + pentagonRadius * Math.cos(angle);

      let y = pentagonCenterY + pentagonRadius * Math.sin(angle);

      if (i === 0) {

        ctx.moveTo(x, y);

      } else {

        ctx.lineTo(x, y);

      }

    }

    ctx.closePath();

    ctx.fillStyle = "green";

    ctx.fill();


    ctx.beginPath();

    ctx.arc(400, 400, 50, 0, 2 * Math.PI);

    ctx.closePath();

    ctx.fillStyle = "red";

    ctx.fill();

  </script>


</body>
</html>
```

6)

Output:

Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <title>EX5</title>
 <style>
  body {
    font-family: Arial, sans-serif;
    background-color: #f0f0f0;
    display: flex;
    justify-content: center;
    align-items: center;
    height: 100vh;
    margin: 0;
  }
```

```css
.emoji-container {
  text-align: center;
  background-color: #fff;
  padding: 20px;
  border-radius: 8px;
  box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);
  width: 300px;
}

h1 {
  color: #4CAF50;
  font-size: 24px;
}

.emoji {
  font-size: 60px;
  margin: 20px 0;
}

button {
  padding: 10px 20px;
  background-color: #4CAF50;
  color: white;
  border: none;
  border-radius: 5px;
  font-size: 16px;
  cursor: pointer;
  transition: background-color 0.3s ease;
}
```

```html
    button:hover {

      background-color: #45a049;

    }

  </style>

</head>

<body>


  <div class="emoji-container">

    <h1>Random Emoji Generator</h1>

    <div class="emoji" id="emojiDisplay">😃 </div>

    <button onclick="generateRandomEmoji()">Generate Emoji</button>

  </div>


  <script>

    const emojis = [

      '😃','😄','😁','😆','😅','😂','🤣','😜','😎','😍','😝','😛','😘','😊','😌',
'😔','😢','😭','😞','😳','😖','😩','😨','😡'

    ];


    function generateRandomEmoji() {

      const randomIndex = Math.floor(Math.random() * emojis.length);

      const randomEmoji = emojis[randomIndex];

      document.getElementById("emojiDisplay").textContent = randomEmoji;

    }

  </script>


</body>

</html>
```

Done By: Yagav Akhilesh S R (23BRS1408)