WEB PROGRAMMING LAB
WEEK – 3

REG. NO. - 220962262
NAME - RAYAAN MOHAMMAD SALEM
ROLL NO. - 40
CLASS - AIML B

Question 1
Code:

```html
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Simple Quiz</title>
   <style>
     body {
        font-family: Arial, sans-serif;
        padding: 20px;
        background-color: lightsteelblue;
     }

     .question {
        margin-bottom: 20px;
        padding: 10px;
        background-color: #fff;
        border: 1px solid #ddd;
        border-radius: 5px;
     }

     .answer {
        margin-top: 10px;
        padding: 8px;
        background-color: #f0f0f0;
        border: 1px solid #ccc;
        border-radius: 5px;
        cursor: pointer;
        transition: background-color 0.3s ease;
     }
```

```css
    .answer:hover {
      background-color: #e0e0e0;
    }

    .correct {
      background-color: green;
      color: white;
    }

    .incorrect {
      background-color: red;
      color: white;
    }

    .correct-answer {
      background-color: blue;
      color: white;
    }
  </style>
</head>
<body>
  <h2>SIMPLE QUIZ</h2>
  <div id="question1" class="question">
    <p>1. What is the capital of France?</p>
    <div class="answer" data-answer="A">A) Berlin</div>
    <div class="answer" data-answer="B">B) Madrid</div>
    <div class="answer" data-answer="C">C) Paris</div>
    <div class="answer" data-answer="D">D) Rome</div>
  </div>

  <div id="question2" class="question">
    <p>2. Which planet is known as the Red Planet?</p>
    <div class="answer" data-answer="A">A) Earth</div>
    <div class="answer" data-answer="B">B) Mars</div>
    <div class="answer" data-answer="C">C) Jupiter</div>
    <div class="answer" data-answer="D">D) Venus</div>
  </div>

  <div id="question3" class="question">
    <p>3. Who wrote "Romeo and Juliet"?</p>
    <div class="answer" data-answer="A">A) Charles Dickens</div>
```

```html
      <div class="answer" data-answer="B">B) William Shakespeare</div>
      <div class="answer" data-answer="C">C) Mark Twain</div>
      <div class="answer" data-answer="D">D) Jane Austen</div>
    </div>

    <div id="question4" class="question">
      <p>4. What is the largest ocean on Earth?</p>
      <div class="answer" data-answer="A">A) Atlantic Ocean</div>
      <div class="answer" data-answer="B">B) Indian Ocean</div>
      <div class="answer" data-answer="C">C) Arctic Ocean</div>
      <div class="answer" data-answer="D">D) Pacific Ocean</div>
    </div>

    <div id="question5" class="question">
      <p>5. Who painted the Mona Lisa?</p>
      <div class="answer" data-answer="A">A) Pablo Picasso</div>
      <div class="answer" data-answer="B">B) Vincent van Gogh</div>
      <div class="answer" data-answer="C">C) Leonardo da Vinci</div>
      <div class="answer" data-answer="D">D) Claude Monet</div>
    </div>

    <button class="reset-btn" onclick="resetQuiz()">Reset Quiz</button>

    <script>
      const correctAnswers = {
        question1: 'C',
        question2: 'B',
        question3: 'B',
        question4: 'D',
        question5: 'C'
      };

      const questions = document.querySelectorAll('.question');

      questions.forEach((question) => {
        const answers = question.querySelectorAll('.answer');
        answers.forEach((answer) => {
          answer.addEventListener('click', () => checkAnswer(question,
answer));
        });
      });
```

```
function checkAnswer(questionDiv, selectedAnswerDiv) {
    const selectedAnswer = selectedAnswerDiv.getAttribute('data-answer');
    const correctAnswer = correctAnswers[questionDiv.id];

    const answers = questionDiv.querySelectorAll('.answer');
    answers.forEach(answer => {
        answer.classList.remove('correct', 'incorrect', 'correct-answer');
    });

    if (selectedAnswer === correctAnswer) {
        selectedAnswerDiv.classList.add('correct');
    } else {
        selectedAnswerDiv.classList.add('incorrect');
        const correctAnswerDiv = Array.from(answers).find(answer =>
answer.getAttribute('data-answer') === correctAnswer);
        correctAnswerDiv.classList.add('correct-answer');
    }
}

function resetQuiz() {
    const answers = document.querySelectorAll('.answer');
    answers.forEach(answer => {
        answer.classList.remove('correct', 'incorrect', 'correct-answer');
    });
}
</script>

</body>
</html>
```
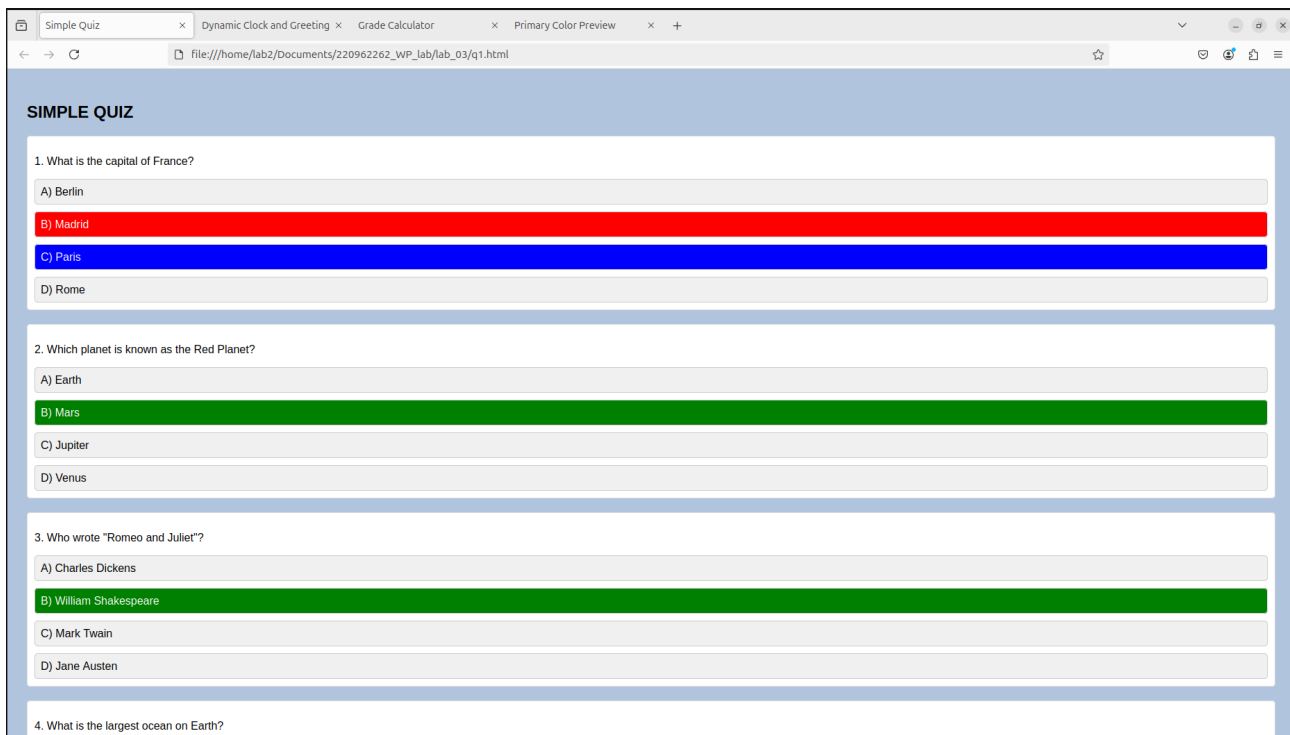
Output:

Question 2

Code:

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

        .clock {
            font-size: 50px;
```

```
            background-color: rgba(0, 0, 0, 0.5);
            padding: 20px;
            border-radius: 10px;
            margin-bottom: 20px;
        }

        .greeting {
            font-size: 25px;
            font-weight: bold;
            background-color: rgba(0, 0, 0, 0.7);
            padding: 15px;
            border-radius: 10px;
        }

        .clock {
            animation: pulse 1s infinite;
        }

    </style>
</head>
<body>
    <h1>Greeting based on the time :)</h1>
    <div id="clock" class="clock"></div>
    <div id="greeting" class="greeting"></div>

    <script>
        function getGreeting() {
            const hour = new Date().getHours();

            if (hour >= 0 && hour < 12) {
                return "Good Morning!";
            } else if (hour >= 12 && hour < 18) {
                return "Good Afternoon!";
            } else {
                return "Good Evening!";
            }
        }

        function updateClock() {
            const now = new Date();
            const hours = String(now.getHours()).padStart(2, '0');
            const minutes = String(now.getMinutes()).padStart(2, '0');
```

```
        const seconds = String(now.getSeconds()).padStart(2, '0');
        const timeString = `${hours}:${minutes}:${seconds}`;

        document.getElementById("clock").innerText = timeString;
        document.getElementById("greeting").innerText = getGreeting();
    }

    setInterval(updateClock, 1000);

    updateClock();
  </script>

</body>
</html>
```
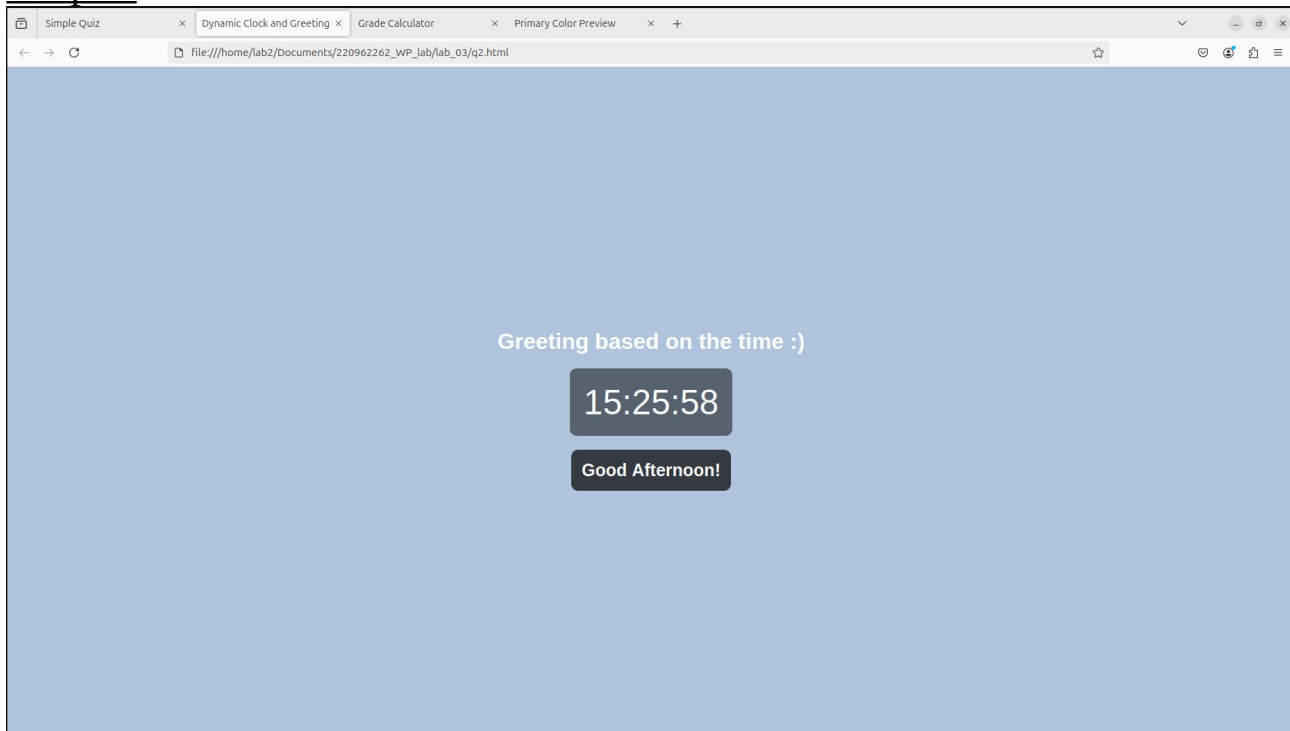
Output:

Question 3
Code:
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Grade Calculator</title>
    <style>
```

```css
body {
    font-family: Arial, sans-serif;
    padding: 20px;
    background-color: lightsteelblue;
}

h2 {
    text-align: center;
    margin-bottom: 30px;
}

.container {
    display: flex;
    flex-direction: column;
    align-items: center;
}

.input-group {
    margin-bottom: 15px;
}

.input-group label {
    font-weight: bold;
}

.input-group input {
    padding: 10px;
    width: 200px;
    margin-top: 5px;
    border-radius: 5px;
    border: 1px solid #ccc;
}

.result {
    margin-top: 20px;
    font-size: 18px;
    font-weight: bold;
    color: #333;
}

button {
    padding: 10px 20px;
```

```
            background-color: #4CAF50;
            color: white;
            border: none;
            border-radius: 5px;
            cursor: pointer;
            font-size: 16px;
        }
    </style>
</head>
<body>

    <h2>Grade Calculator</h2>
    <div class="container">
        <div class="input-group">
            <label for="marks1">Marks of Subject 1:</label>
            <input type="number" id="marks1" placeholder="Enter marks for
Subject 1">
        </div>

        <div class="input-group">
            <label for="marks2">Marks of Subject 2:</label>
            <input type="number" id="marks2" placeholder="Enter marks for
Subject 2">
        </div>

        <div class="input-group">
            <label for="marks3">Marks of Subject 3:</label>
            <input type="number" id="marks3" placeholder="Enter marks for
Subject 3">
        </div>

        <div class="input-group">
            <label for="marks4">Marks of Subject 4:</label>
            <input type="number" id="marks4" placeholder="Enter marks for
Subject 4">
        </div>

        <button onclick="calculateGrade()">Calculate Grade</button>

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

```
<script>
    function calculateGrade() {
        const marks1 = parseFloat(document.getElementById('marks1').value);
        const marks2 = parseFloat(document.getElementById('marks2').value);
        const marks3 = parseFloat(document.getElementById('marks3').value);
        const marks4 = parseFloat(document.getElementById('marks4').value);

        if (isNaN(marks1) || isNaN(marks2) || isNaN(marks3) || isNaN(marks4)) {
            document.getElementById('result').innerText = 'Please enter valid marks for all subjects.';
            return;
        }

        const average = (marks1 + marks2 + marks3 + marks4) / 4;

        let grade;
        if (average > 90) {
            grade = 'A';
        } else if (average > 80) {
            grade = 'B';
        } else if (average > 70) {
            grade = 'C';
        } else if (average > 60) {
            grade = 'D';
        } else {
            grade = 'F';
        }

        document.getElementById('result').innerText = `Your average is ${average.toFixed(2)}. Grade: ${grade}`;
    }
</script>

</body>
</html>
```
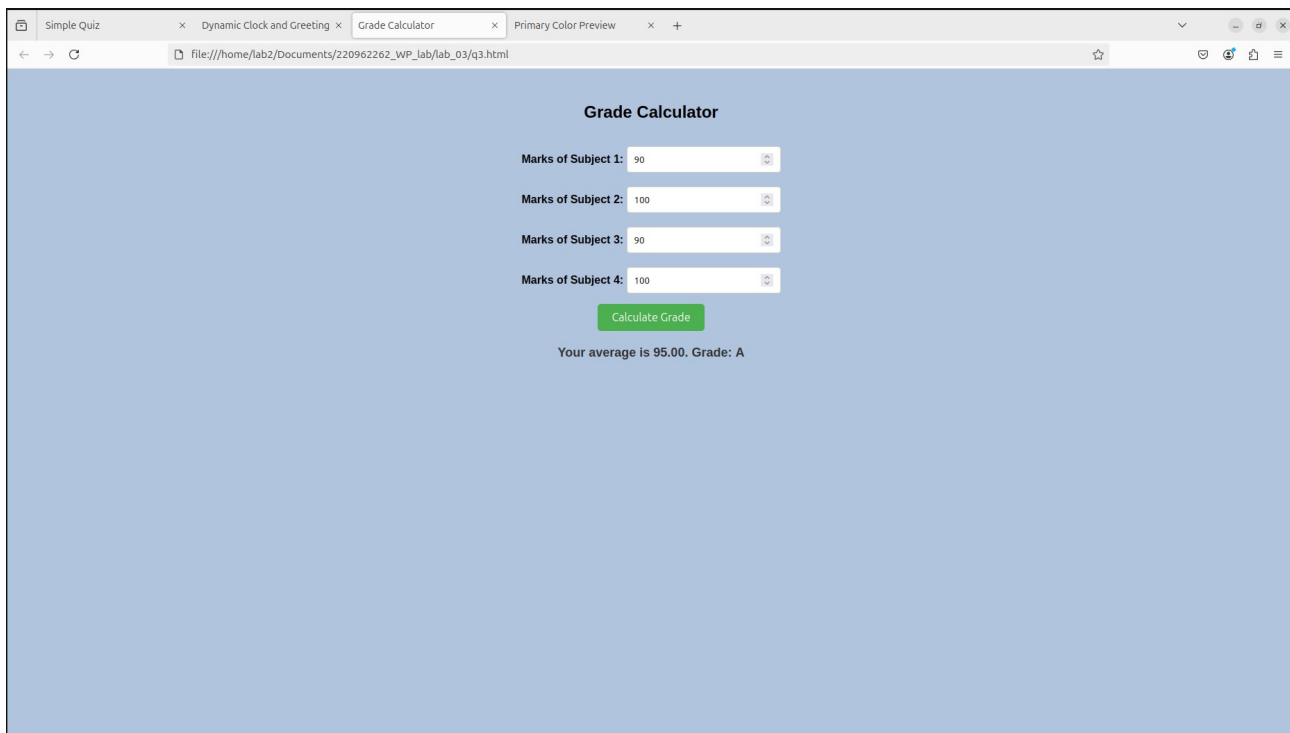
Output:

Question 4

Code:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Primary Color Preview</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            padding: 20px;
            background-color: #f4f4f9;
            display: flex;
            flex-direction: column;
            align-items: center;
            justify-content: center;
            height: 40vh;
        }

        h2 {
            text-align: center;
            margin-bottom: 20px;
        }

        .color-box {
            width: 100px;
```

```css
        height: 100px;
        margin-top: 20px;
        border: 1px solid #ddd;
        display: block;
        margin-left: auto;
        margin-right: auto;
    }

    .container {
        text-align: center;
    }

    label {
        margin: 10px;
        font-size: 18px;
    }

    input[type="radio"] {
        margin: 0 5px;
    }

    .radio-buttons {
        margin-top: 20px;
    }
</style>
</head>
<body>

    <h2>Primary Color Preview</h2>

    <div class="container">
      <div class="radio-buttons">
        <label>
            <input type="radio" name="color" value="red"
onclick="previewColor('red')" id="red"> Red
        </label>
        <label>
            <input type="radio" name="color" value="green"
onclick="previewColor('green')" id="green"> Green
        </label>
        <label>
```

```
            <input type="radio" name="color" value="blue"
onclick="previewColor('blue')" id="blue"> Blue
        </label>
    </div>

    <div id="colorBox" class="color-box"></div>
  </div>

  <script>
    function previewColor(color) {
        const colorBox = document.getElementById('colorBox');
        colorBox.style.backgroundColor = color;
    }

    window.onload = function() {
        previewColor('red');
        document.getElementById('red').checked = true;
    };
  </script>

</body>
</html>
```

Output: