BCSE203E- Web Programming

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Problem 1

Implement the classic children's game Rock-paper-scissors. Each player in the game chooses one of rock, paper or scissors, without knowing the other player's choice. The winner is decided by a set of rules:

• Rock beats scissors

• Scissors beat paper

• Paper beats rock

If all the players choose the same thing, there is no winner for that round. Design a webpage for the game. One of the players is the computer which chooses rock /paper /scissors at random and other players can be users or computer. When the user opts to see the result, display the winner and the score for each player.

CODE:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Rock-Paper-Scissors</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            text-align: center;
            background-color: #c4c0c0;
            max-width: 500px;
            margin: 0 auto;
        }
        .score {
            margin-top: 20px;
        }
        .result {
            margin-top: 20px;
```

```html
        }
    </style>
</head>
<body>
    <h1>Rock-Paper-Scissors</h1>
    <p>Choose your hand:</p>
    <button onclick="playGame('rock')">Rock</button>
    <button onclick="playGame('paper')">Paper</button>
    <button onclick="playGame('scissors')">Scissors</button>
    <div class="score">
        <p>Your score: <span id="userScore">0</span></p>
        <p>Computer score: <span id="computerScore">0</span></p>
    </div>
    <div class="result">
        <p id="winner"></p>
    </div>
    <button onclick="resetGame()">Reset</button>
    <script>
        function getComputerChoice() {
            const choices = ['rock', 'paper', 'scissors'];
            const randomIndex = Math.floor(Math.random() * choices.length);
            return choices[randomIndex];
        }

        function determineWinner(userChoice, computerChoice) {
            if (userChoice === computerChoice) {
                return 'It\'s a tie!';
            }
            if (
                (userChoice === 'rock' && computerChoice === 'scissors') ||
                (userChoice === 'paper' && computerChoice === 'rock') ||
                (userChoice === 'scissors' && computerChoice === 'paper')
            ) {
                return 'You win!';
            } else {
                return 'You lose.';
            }
        }

        function updateScore(winner) {
            const userScoreElement = document.getElementById('userScore');
            const computerScoreElement =
document.getElementById('computerScore');
            if (winner === 'You win!') {
                userScoreElement.textContent =
parseInt(userScoreElement.textContent) + 1;
            } else if (winner === 'You lose.') {
```
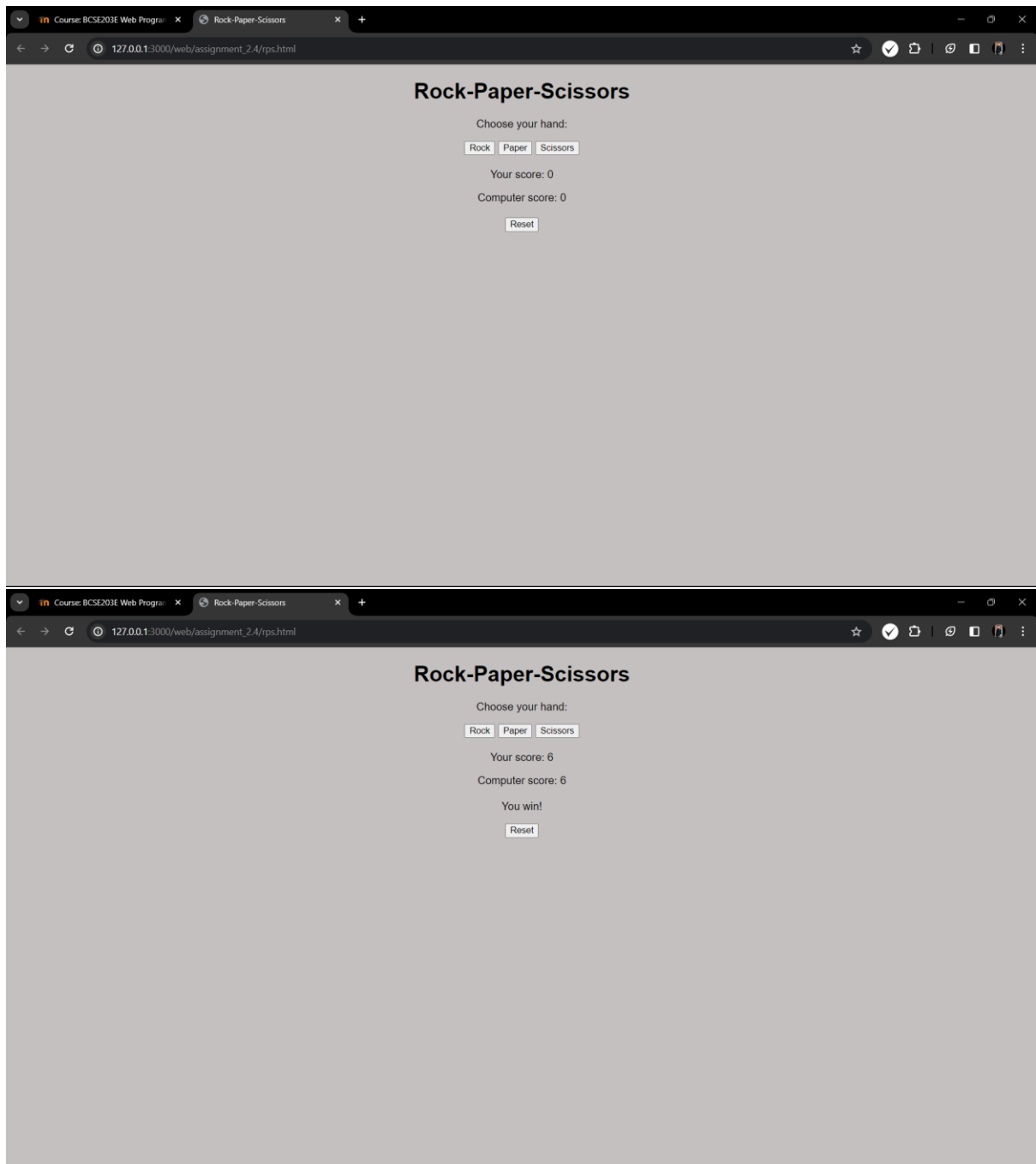
```
                computerScoreElement.textContent =
parseInt(computerScoreElement.textContent) + 1;
            }
        }

        function playGame(userChoice) {
            const computerChoice = getComputerChoice();
            const winner = determineWinner(userChoice, computerChoice);
            document.getElementById('winner').textContent = winner;
            updateScore(winner);
        }

        function resetGame() {
            document.getElementById('userScore').textContent = '0';
            document.getElementById('computerScore').textContent = '0';
            document.getElementById('winner').textContent = '';
        }
    </script>
</body>
</html>
```

OUTPUT:

Problem 2

Design a webpage for International Yoga Day and include the following using Javascript. ▪ Adding a Content Slider to Your Site.

▪ Hiding and unhiding.

▪ Random password generation.

▪ Dynamic display of form data. (Use the existing event registration form) ▪ Bill generation

Type	Discount
Employees	25% for employees under govt sector
Student	50% for students

CODE:

```html
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>International Yoga Day</title>
<style>
  body {
    font-family: Arial, sans-serif;
    text-align: center;
            background-color: #c4c0c0;
            max-width: 500px;
            margin: 0 auto;
}
  .container {
    max-width: 800px;
    margin: auto;
    padding: 20px;
}
  .hidden {
    display: none;
}
  .slider {
    width: 100%;
    overflow: hidden;
}
  .slides {
    display: flex;
}
  .slide {
    min-width: 100%;
    transition: all 0.5s;
}
  button {
    padding: 10px 20px;
    margin: 10px;
    cursor: pointer;
}
</style>
</head>
<body>
<div class="container">
  <h1>International Yoga Day</h1>

  <div id="slider" class="slider">
    <div class="slides">
      <div class="slide"><img src="yoga1.jpeg" alt="Yoga Pose 1"></div>
```

```html
      <div class="slide"><img src="yoga2.jpeg" alt="Yoga Pose 2"></div>
      <div class="slide"><img src="yoga3.jpeg" alt="Yoga Pose 3"></div>
    </div>
  </div>
  <button onclick="prevSlide()">Previous</button>
  <button onclick="nextSlide()">Next</button>

  <h2 onclick="toggleVisibility('discountSection')">Click to Show/Hide
Discounts</h2>
  <div id="discountSection" class="hidden">
    <p>25% discount for government employees</p>
    <p>50% discount for students</p>
  </div>

  <button onclick="generatePassword()">Generate Random Password</button>
  <p id="password"></p>

  <form id="registrationForm">
    <input type="text" id="name" placeholder="Name">
    <input type="email" id="email" placeholder="Email">
    <button type="button" onclick="displayFormData()">Submit</button>
  </form>
  <div id="formDataDisplay" class="hidden"></div>

  <h3>Bill Generation</h3>
  <p>Enter the original bill amount:</p>
  <input type="number" id="billAmount" placeholder="Bill Amount">
  <p>Select the customer type:</p>
  <select id="customerType">
    <option value="none">Select Type</option>
    <option value="employee">Government Employee</option>
    <option value="student">Student</option>
  </select>
  <button onclick="generateBill()">Generate Bill</button>
  <div id="bill"></div>
</div>

<script>
  let slideIndex = 0;
  function showSlide(index) {
    const slides = document.querySelectorAll('.slide');
    if (index >= slides.length) slideIndex = 0;
    if (index < 0) slideIndex = slides.length - 1;
    for (let slide of slides) {
      slide.style.display = 'none';
    }
    slides[slideIndex].style.display = 'block';
  }
```

```javascript
  function nextSlide() {
    showSlide(++slideIndex);
  }
  function prevSlide() {
    showSlide(--slideIndex);
  }
  showSlide(slideIndex);

  function toggleVisibility(elementId) {
    const element = document.getElementById(elementId);
    element.classList.toggle('hidden');
  }

  function generatePassword() {
    const chars =
'0123456789abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ';
    let passwordLength = 8;
    let password = '';
    for (let i = 0; i < passwordLength; i++) {
      let randomNumber = Math.floor(Math.random() * chars.length);
      password += chars.substring(randomNumber, randomNumber +1);
    }
    document.getElementById('password').textContent = password;
  }

  function displayFormData() {
    const name = document.getElementById('name').value;
    const email = document.getElementById('email').value;
    const formDataDisplay = document.getElementById('formDataDisplay');
    formDataDisplay.innerHTML = `Name: ${name}<br>Email: ${email}`;
    formDataDisplay.classList.remove('hidden');
  }

  function generateBill() {
    const billAmount =
parseFloat(document.getElementById('billAmount').value);
    const customerType = document.getElementById('customerType').value;
    let finalAmount = billAmount;

    if (customerType === 'employee') {
      finalAmount *= 0.75;
    } else if (customerType === 'student') {
      finalAmount *= 0.5;
    }

    document.getElementById('bill').innerHTML = `Original Amount:
${billAmount.toFixed(2)}<br>Final Amount after Discount:
${finalAmount.toFixed(2)}`;
```

```
    }
</script>
</body>
</html>
```

OUTPUT:

| Previous | Next |

Click to Show/Hide Discounts

25% discount for government employees

50% discount for students

| Generate Random Password |

xOkwKolM

| Name | Email | Submit |

Bill Generation

Enter the original bill amount:

158

Select the customer type:

| Student ▾ | Generate Bill |

Original Amount: 158.00
Final Amount after Discount: 79.00

International Yoga Day

| Previous | Next |

Click to Show/Hide Discounts

| Generate Random Password |

qyz7acxc

| Name | Email | Submit |

Bill Generation

Enter the original bill amount:

349

Select the customer type:

| Government Employee ▾ | Generate Bill |

Original Amount: 349.00
Final Amount after Discount: 261.75