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Ist4035end sem question 1

Index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>USIU-Africa GPA Calculator</title>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <div class="container">
    <h1>USIU-Africa GPA Calculator</h1>
    <form id="gpaForm">
      <div id="courseRows">
        <!-- Course rows will be dynamically added here -->
      </div>
      <div class="buttons">
        <button type="button" id="addCourse">Add Another Course</button>
        <button type="button" id="calculateGPA">Calculate GPA</button>
      </div>
    </form>
    <div id="result" class="result-container">
      <h2>Your GPA: <span id="gpaValue">-</span></h2>
    </div>
  </div>
  <script src="script.js"></script>
</body>
</html>
```

Styles.css

```
* {
  margin: 0;
  padding: 0;
  box-sizing: border-box;
}

body {
  font-family: Arial, sans-serif;
```

```
    line-height: 1.6;
    background-color: #f4f4f4;
    padding: 20px;
}

.container {
    max-width: 800px;
    margin: 0 auto;
    background-color: white;
    padding: 20px;
    border-radius: 8px;
    box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
}

h1 {
    text-align: center;
    color: #333;
    margin-bottom: 20px;
}

.course-row {
    display: flex;
    gap: 10px;
    margin-bottom: 15px;
    align-items: center;
}

.course-row input,
.course-row select {
    padding: 8px;
    border: 1px solid #ddd;
    border-radius: 4px;
    flex: 1;
}

.course-row input[type="text"] {
    flex: 2;
}

.buttons {
    display: flex;
    gap: 10px;
    margin: 20px 0;
}
```

```

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

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

.result-container {
  text-align: center;
  margin-top: 20px;
  padding: 20px;
  background-color: #f9f9f9;
  border-radius: 4px;
}

#gpaValue {
  font-size: 1.5em;
  font-weight: bold;
  color: #4CAF50;
}

@media (max-width: 600px) {
  .course-row {
    flex-direction: column;
  }

  .course-row input,
  .course-row select {
    width: 100%;
  }

  .buttons {
    flex-direction: column;
  }
}

```

Script.js

```

// Grade to GPA point conversion
const gradePoints = {
  'A': 4,
  'B': 3,
  'C': 2,
  'D': 1,
  'F': 0
};

// Function to create a new course row
function createCourseRow() {
  const row = document.createElement('div');
  row.className = 'course-row';

  const courseNameInput = document.createElement('input');
  courseNameInput.type = 'text';
  courseNameInput.placeholder = 'Course Name';
  courseNameInput.required = true;

  const gradeSelect = document.createElement('select');
  gradeSelect.required = true;

  // Add grade options
  const grades = ['A', 'B', 'C', 'D', 'F'];
  grades.forEach(grade => {
    const option = document.createElement('option');
    option.value = grade;
    option.textContent = grade;
    gradeSelect.appendChild(option);
  });

  row.appendChild(courseNameInput);
  row.appendChild(gradeSelect);

  return row;
}

// Initialize the form with 3 course rows
function initializeForm() {
  const courseRowsContainer = document.getElementById('courseRows');
  for (let i = 0; i < 3; i++) {
    courseRowsContainer.appendChild(createCourseRow());
  }
}

```

```

// Calculate GPA
function calculateGPA() {
  const courseRows = document.querySelectorAll('.course-row');
  let totalPoints = 0;
  let validEntries = 0;

  courseRows.forEach(row => {
    const courseName = row.querySelector('input[type="text"]').value.trim();
    const grade = row.querySelector('select').value;

    if (courseName && grade) {
      totalPoints += gradePoints[grade];
      validEntries++;
    }
  });

  if (validEntries === 0) {
    alert('Please enter at least one course with a grade');
    return;
  }

  const gpa = totalPoints / validEntries;
  document.getElementById('gpaValue').textContent = gpa.toFixed(2);
}

// Add event listeners
document.addEventListener('DOMContentLoaded', () => {
  initializeForm();

  // Add course button
  document.getElementById('addCourse').addEventListener('click', () => {
    const courseRowsContainer = document.getElementById('courseRows');
    courseRowsContainer.appendChild(createCourseRow());
  });

  // Calculate GPA button
  document.getElementById('calculateGPA').addEventListener('click',
calculateGPA);
});

```

Output

USIU-Africa GPA Calculator

SYSTEM TESTING	A
SYSTEM DESIGN	B
ADVANCED WEB	A

[Add Another Course](#) [Calculate GPA](#)

Your GPA: **3.67**

USIU-Africa GPA Calculator

Course Name	A
Course Name	A
Course Name	A

[Add Another Course](#) [Calculate GPA](#)

Your GPA: -

Content

USIU-Africa GPA Calculator

127.0.0.1:5500/index.html

Personal

USIU-Africa GPA Calculator

Course Name	A
Course Name	A
Course Name	A
Course Name	A
Course Name	A

Add Another Course

Calculate GPA

Your GPA: -