Assignment 1

Index.html code Screenshot:

```html
<!doctype html>
<html lang="en">
  <head>
    <title>Title</title>
    <!-- Required meta tags -->
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">

    <style>
      /* Styles for the coordinates display */
      #coordinates {
        position: fixed;
        bottom: 10px;
        right: 10px;
        background-color: lightgray;
        padding: 5px;
        border: 1px solid black;
      }
      /* Styles for centering the table */
      #tableContainer {
        display: flex;
        justify-content: center;
        align-items: center;
        margin-top: 20px;
      }
      /* Styles for the table */
      table {
        border-collapse: collapse;
        width: 50%;
      }
      th, td {
        border: 1px solid black;
        padding: 8px;
        text-align: center;
      }
    </style>
  </head>
  <body>
    <h1 style="text-align: center;">Assignment 1</h1>
```
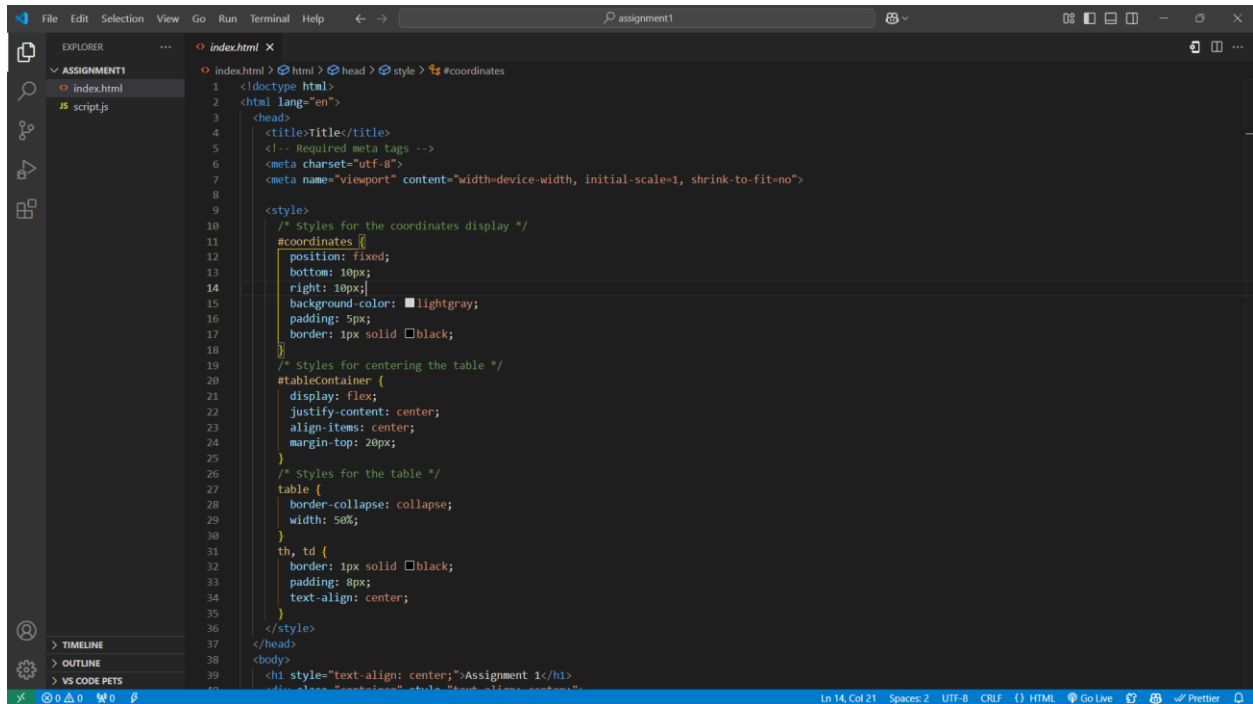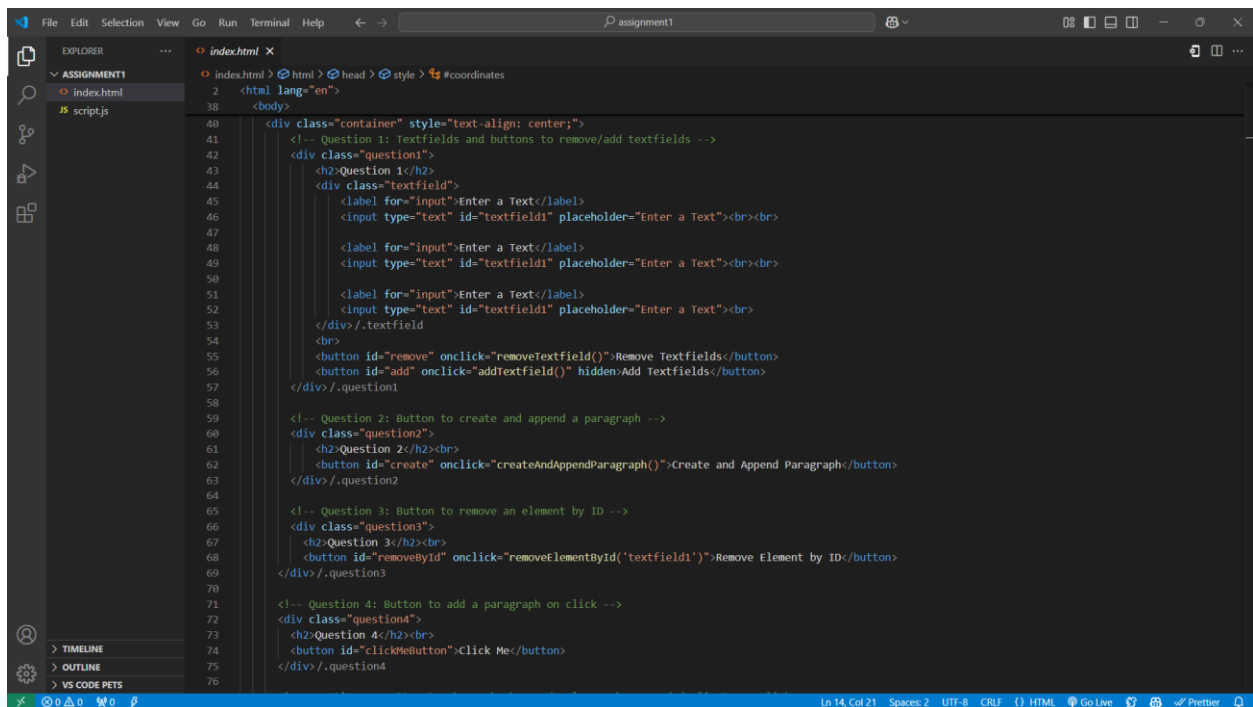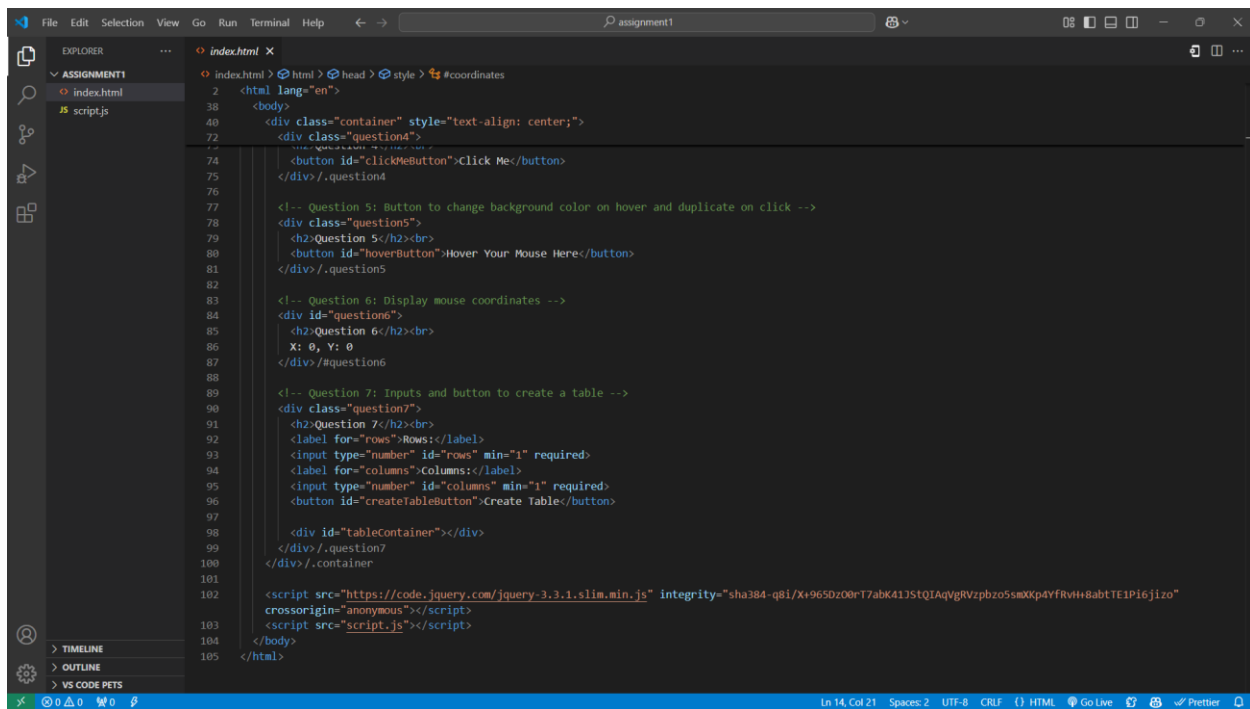
```html
<html lang="en">
  <body>
    <div class="container" style="text-align: center;">
      <!-- Question 1: Textfields and buttons to remove/add textfields -->
      <div class="question1">
        <h2>Question 1</h2>
        <div class="textfield">
          <label for="input">Enter a Text</label>
          <input type="text" id="textfield1" placeholder="Enter a Text"><br><br>

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          <input type="text" id="textfield1" placeholder="Enter a Text"><br><br>

          <label for="input">Enter a Text</label>
          <input type="text" id="textfield1" placeholder="Enter a Text"><br>
        </div>/.textfield
        <br>
        <button id="remove" onclick="removeTextfield()">Remove Textfields</button>
        <button id="add" onclick="addTextfield()" hidden>Add Textfields</button>
      </div>/.question1

      <!-- Question 2: Button to create and append a paragraph -->
      <div class="question2">
        <h2>Question 2</h2><br>
        <button id="create" onclick="createAndAppendParagraph()">Create and Append Paragraph</button>
      </div>/.question2

      <!-- Question 3: Button to remove an element by ID -->
      <div class="question3">
        <h2>Question 3</h2><br>
        <button id="removeById" onclick="removeElementById('textfield1')">Remove Element by ID</button>
      </div>/.question3

      <!-- Question 4: Button to add a paragraph on click -->
      <div class="question4">
        <h2>Question 4</h2><br>
        <button id="clickMeButton">Click Me</button>
      </div>/.question4
```
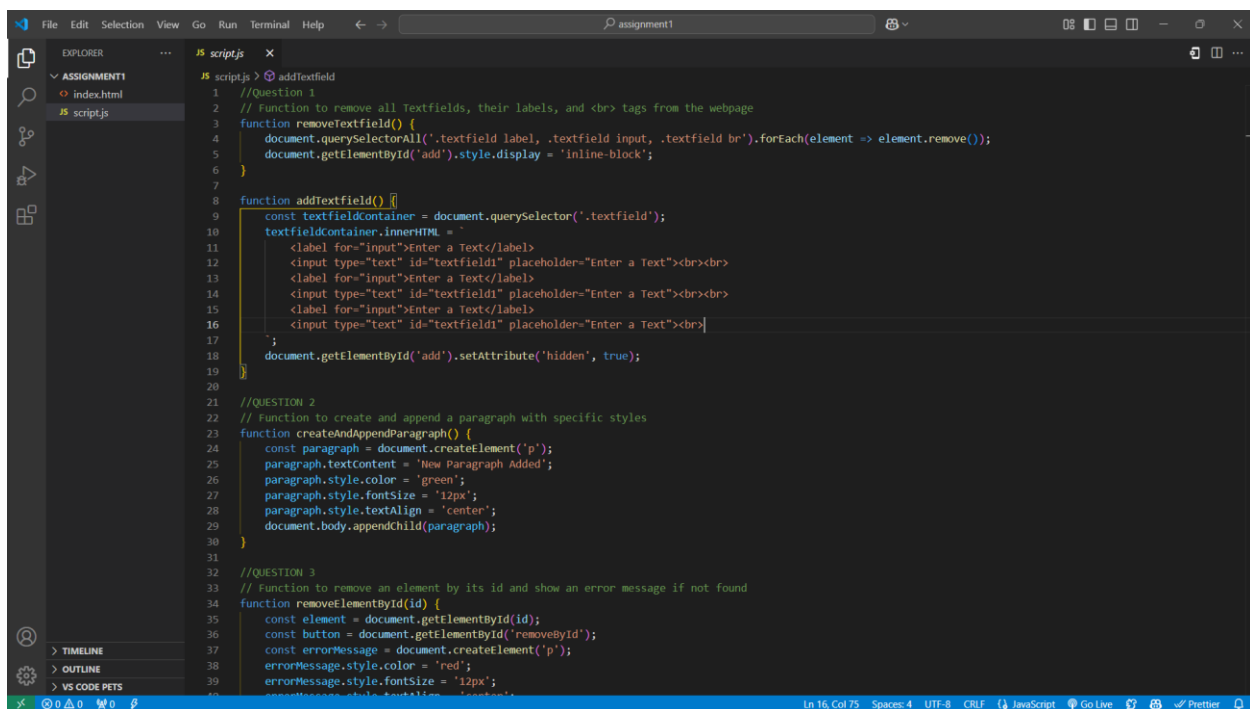
```html
2   <html lang="en">
38    <body>
40      <div class="container" style="text-align: center;">
72        <div class="question4">
74          <button id="clickMeButton">Click Me</button>
75        </div>/.question4
76
77        <!-- Question 5: Button to change background color on hover and duplicate on click -->
78        <div class="question5">
79          <h2>Question 5</h2><br>
80          <button id="hoverButton">Hover Your Mouse Here</button>
81        </div>/.question5
82
83        <!-- Question 6: Display mouse coordinates -->
84        <div id="question6">
85          <h2>Question 6</h2><br>
86          X: 0, Y: 0
87        </div>/#question6
88
89        <!-- Question 7: Inputs and button to create a table -->
90        <div class="question7">
91          <h2>Question 7</h2><br>
92          <label for="rows">Rows:</label>
93          <input type="number" id="rows" min="1" required>
94          <label for="columns">Columns:</label>
95          <input type="number" id="columns" min="1" required>
96          <button id="createTableButton">Create Table</button>
97
98          <div id="tableContainer"></div>
99        </div>/.question7
100       </div>/.container
101
102       <script src="https://code.jquery.com/jquery-3.3.1.slim.min.js" integrity="sha384-q8i/X+965DzO0rT7abK41JStQIAqVgRVzpbzo5smXKp4YfRvH+8abtTE1Pi6jizo"
          crossorigin="anonymous"></script>
103       <script src="script.js"></script>
104     </body>
105   </html>
```

Script.js code Screenshot:


```javascript
1   //Question 1
2   // Function to remove all Textfields, their labels, and <br> tags from the webpage
3   function removeTextfield() {
4       document.querySelectorAll('.textfield label, .textfield input, .textfield br').forEach(element => element.remove());
5       document.getElementById('add').style.display = 'inline-block';
6   }
7
8   function addTextfield() {
9       const textfieldContainer = document.querySelector('.textfield');
10      textfieldContainer.innerHTML = `
11          <label for="input">Enter a Text</label>
12          <input type="text" id="textfield1" placeholder="Enter a Text"><br><br>
13          <label for="input">Enter a Text</label>
14          <input type="text" id="textfield1" placeholder="Enter a Text"><br><br>
15          <label for="input">Enter a Text</label>
16          <input type="text" id="textfield1" placeholder="Enter a Text"><br>
17      `;
18      document.getElementById('add').setAttribute('hidden', true);
19  }
20
21  //QUESTION 2
22  // Function to create and append a paragraph with specific styles
23  function createAndAppendParagraph() {
24      const paragraph = document.createElement('p');
25      paragraph.textContent = 'New Paragraph Added';
26      paragraph.style.color = 'green';
27      paragraph.style.fontSize = '12px';
28      paragraph.style.textAlign = 'center';
29      document.body.appendChild(paragraph);
30  }
31
32  //QUESTION 3
33  // Function to remove an element by its id and show an error message if not found
34  function removeElementById(id) {
35      const element = document.getElementById(id);
36      const button = document.getElementById('removeById');
37      const errorMessage = document.createElement('p');
38      errorMessage.style.color = 'red';
39      errorMessage.style.fontSize = '12px';
```

File   Edit   Selection   View   Go   Run   Terminal   Help   assignment1

EXPLORER   JS script.js ×
∨ ASSIGNMENT1   JS script.js > ✪ addTextfield
  ◇ index.html
  JS script.js

```js
32    //QUESTION 3
33    // Function to remove an element by its id and show an error message if not found
34    function removeElementById(id) {
35        const element = document.getElementById(id);
36        const button = document.getElementById('removeById');
37        const errorMessage = document.createElement('p');
38        errorMessage.style.color = 'red';
39        errorMessage.style.fontSize = '12px';
40        errorMessage.style.textAlign = 'center';
41
42        if (element) {
43            element.remove();
44
45        } else {
46            errorMessage.textContent = `Element with id "${id}" not found.`;
47            button.parentNode.insertBefore(errorMessage, button);
48        }
49    }
50
51    // Example usage
52    removeElementById('textfield1'); // This will remove the element with id 'textfield1' if it exists
53
54
55    //QUESTION 4
56    // Add click event to the "Click Me" button to add a paragraph
57    document.getElementById('clickMeButton').addEventListener('click', createAndAppendParagraph);
58
59
60    //QUESTION 5
61    // Function to handle hover and click events for the "Hover Your Mouse Here" button
62    function handleHoverButtonEvents(button) {
63        button.addEventListener('mouseover', function() {
64            button.style.backgroundColor = 'red';
65        });
66
67        button.addEventListener('mouseout', function() {
68            button.style.backgroundColor = '';
69        });
70
```

File   Edit   Selection   View   Go   Run   Terminal   Help   assignment1

EXPLORER   JS script.js ×
∨ ASSIGNMENT1   JS script.js > ✪ addTextfield
  ◇ index.html
  JS script.js

```js
62    function handleHoverButtonEvents(button) {
71        button.addEventListener('click', function() {
72            const newButton = button.cloneNode(true);
73            handleHoverButtonEvents(newButton);
74            button.parentNode.appendChild(newButton);
75        });
76    }
77
78
79    //QUESTION 5
80    // Add hover and click events to the initial "Hover Your Mouse Here" button
81    const hoverButton = document.getElementById('hoverButton');
82    handleHoverButtonEvents(hoverButton);
83
84
85    //QUESTION 6
86    // Function to update the coordinates of the mouse pointer
87    function updateCoordinates(event) {
88        const coordinatesDiv = document.getElementById('question6');
89        coordinatesDiv.textContent = `X: ${event.clientX}, Y: ${event.clientY}`;
90    }
91
92    // Add mousemove event listener to update the coordinates
93    document.addEventListener('mousemove', updateCoordinates);
94
95
96    //QUESTION 7
97    // Function to create a table with r rows and c columns filled with random numbers
98    function createTable() {
99        const rows = document.getElementById('rows').value;
100       const columns = document.getElementById('columns').value;
101
102       if (rows <= 0 || columns <= 0) {
103           alert('Please enter valid positive integers for rows and columns.');
104           return;
105       }
106
107       const tableContainer = document.getElementById('tableContainer');
108       tableContainer.innerHTML = ''; // Clear any existing table
```

```javascript
98   function createTable() {
100      const columns = document.getElementById('columns').value;
101
102      if (rows <= 0 || columns <= 0) {
103          alert('Please enter valid positive integers for rows and columns.');
104          return;
105      }
106
107      const tableContainer = document.getElementById('tableContainer');
108      tableContainer.innerHTML = ''; // Clear any existing table
109
110      const table = document.createElement('table');
111      const thead = document.createElement('thead');
112      const tbody = document.createElement('tbody');
113
114      // Create table header
115      const headerRow = document.createElement('tr');
116      for (let c = 0; c < columns; c++) {
117          const th = document.createElement('th');
118          th.textContent = `Header ${c + 1}`;
119          headerRow.appendChild(th);
120      }
121      thead.appendChild(headerRow);
122
123      // Create table body
124      for (let r = 0; r < rows; r++) {
125          const row = document.createElement('tr');
126          for (let c = 0; c < columns; c++) {
127              const td = document.createElement('td');
128              td.textContent = Math.floor(Math.random() * 100) + 1; // Random number between 1 and 100
129              row.appendChild(td);
130          }
131          tbody.appendChild(row);
132      }
133
134      table.appendChild(thead);
135      table.appendChild(tbody);
136      tableContainer.appendChild(table);
137  }
```

```javascript
98   function createTable() {
104          return;
105      }
106
107      const tableContainer = document.getElementById('tableContainer');
108      tableContainer.innerHTML = ''; // Clear any existing table
109
110      const table = document.createElement('table');
111      const thead = document.createElement('thead');
112      const tbody = document.createElement('tbody');
113
114      // Create table header
115      const headerRow = document.createElement('tr');
116      for (let c = 0; c < columns; c++) {
117          const th = document.createElement('th');
118          th.textContent = `Header ${c + 1}`;
119          headerRow.appendChild(th);
120      }
121      thead.appendChild(headerRow);
122
123      // Create table body
124      for (let r = 0; r < rows; r++) {
125          const row = document.createElement('tr');
126          for (let c = 0; c < columns; c++) {
127              const td = document.createElement('td');
128              td.textContent = Math.floor(Math.random() * 100) + 1; // Random number between 1 and 100
129              row.appendChild(td);
130          }
131          tbody.appendChild(row);
132      }
133
134      table.appendChild(thead);
135      table.appendChild(tbody);
136      tableContainer.appendChild(table);
137  }
138
139  // Add click event listener to the "Create Table" button
140  document.getElementById('createTableButton').addEventListener('click', createTable);
```

Webpage Outputs:

Assignment 1

Question 1

Enter a Text [Enter a Text]
Enter a Text [Enter a Text]
Enter a Text [Enter a Text]
[Remove Textfields] [Add Textfields]

Question 2

[Create and Append Paragraph]

Question 3

[Remove Element by ID]

Question 4

[Click Me]

Question 5
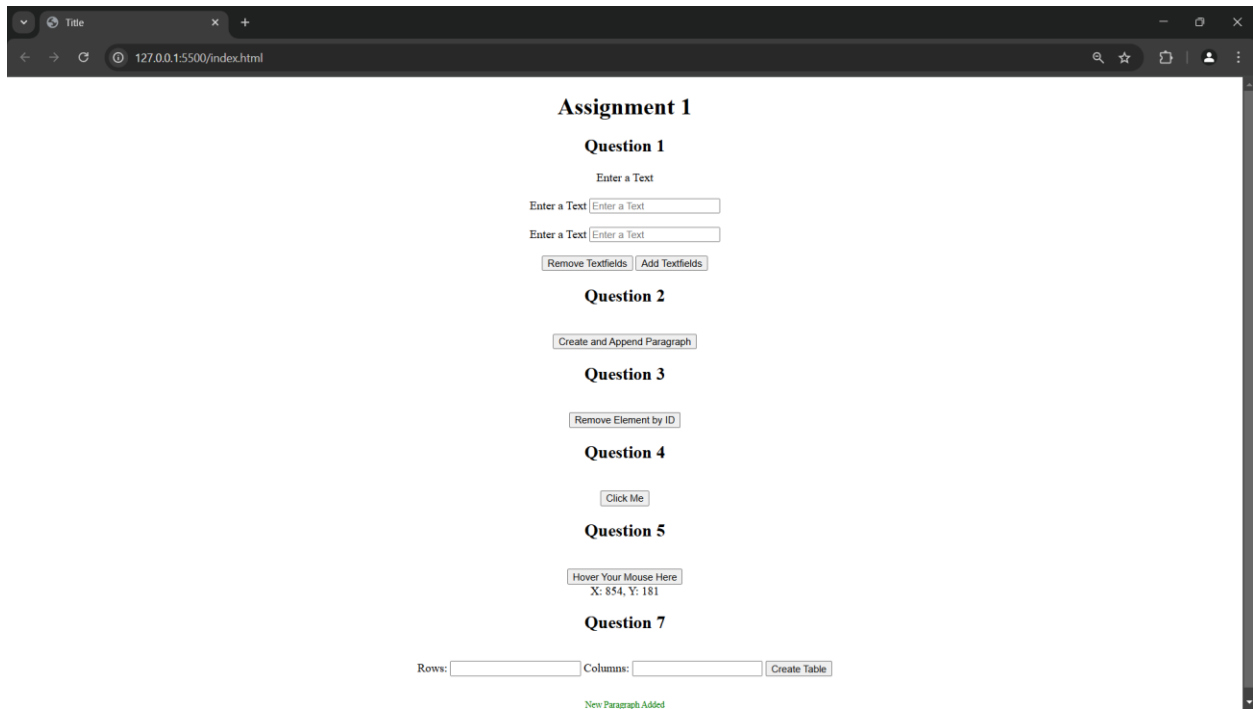
[Hover Your Mouse Here]
X: 910, Y: 15

Question 7

Rows: [____] Columns: [____] [Create Table]

Question1: Removed Textfield

Assignment 1

Question 1

[Remove Textfields] [Add Textfields]

Question 2

[Create and Append Paragraph]

Question 3

[Remove Element by ID]

Question 4

[Click Me]

Question 5

[Hover Your Mouse Here]
X: 923, Y: 225

Question 7

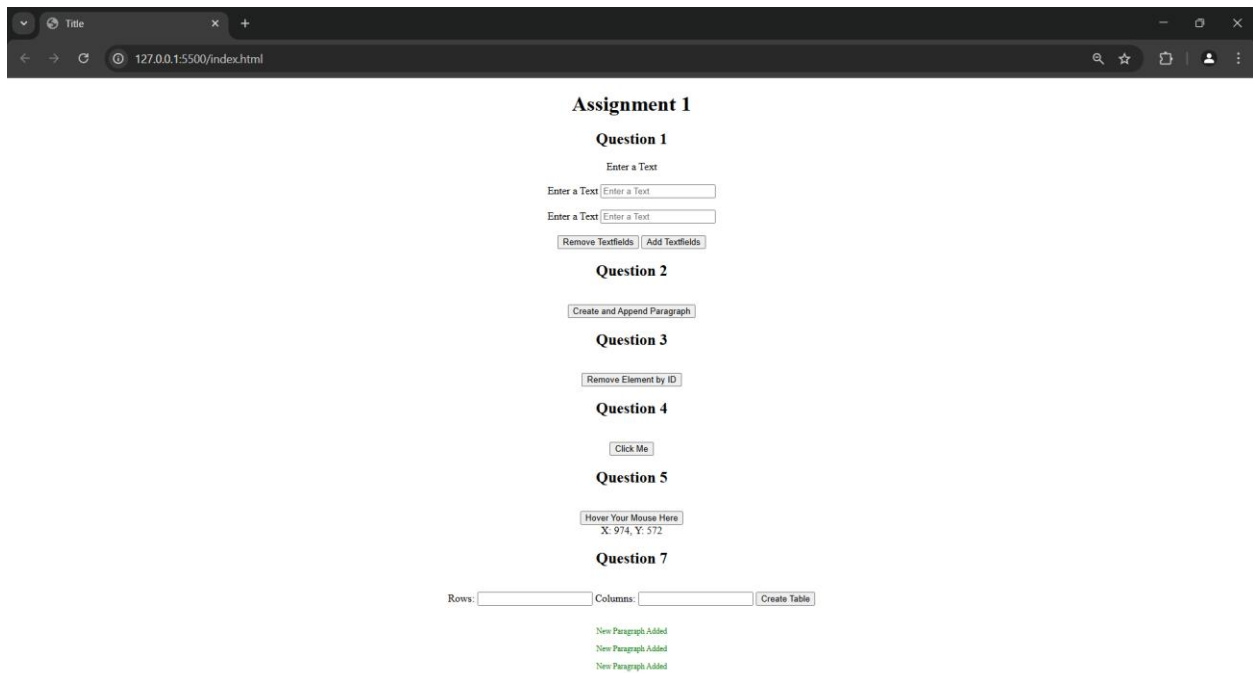Rows: [____] Columns: [____] [Create Table]

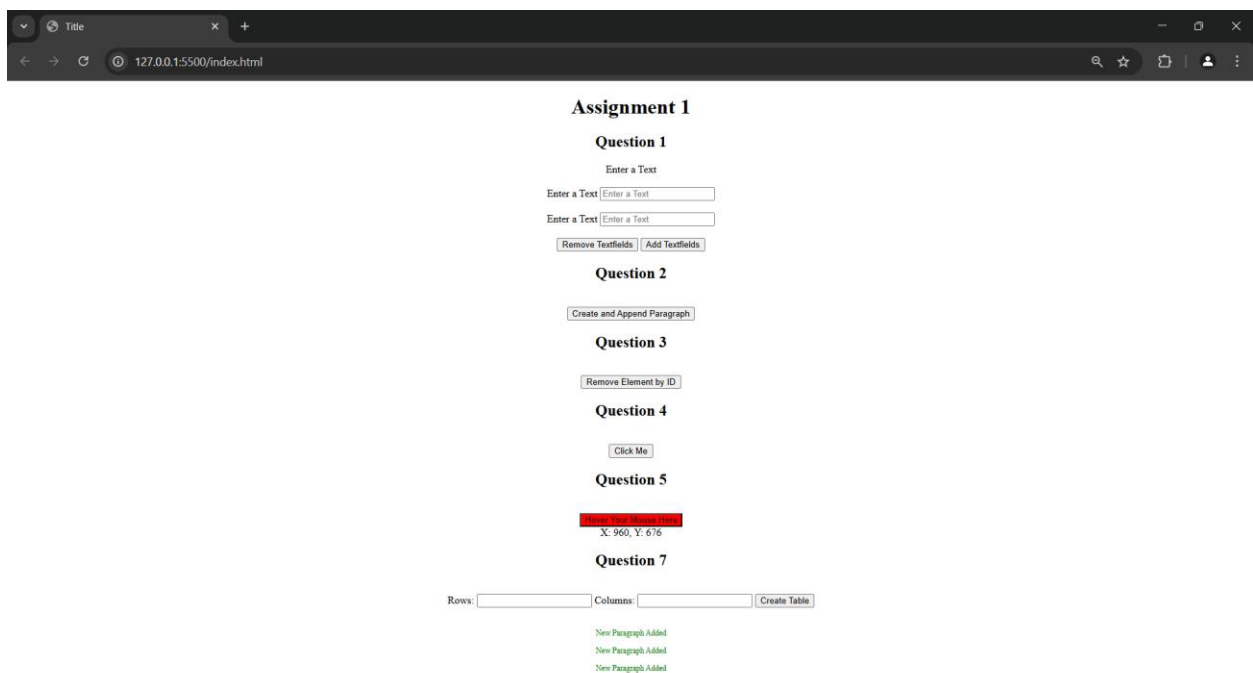## Question2: Function to create and append paragraph
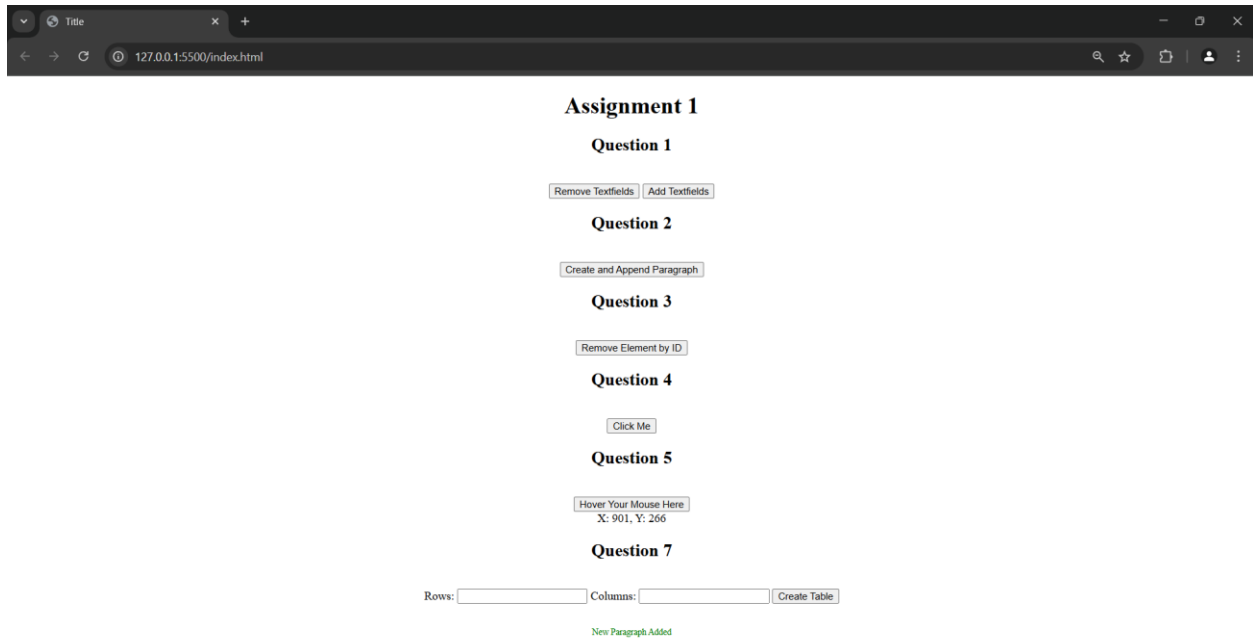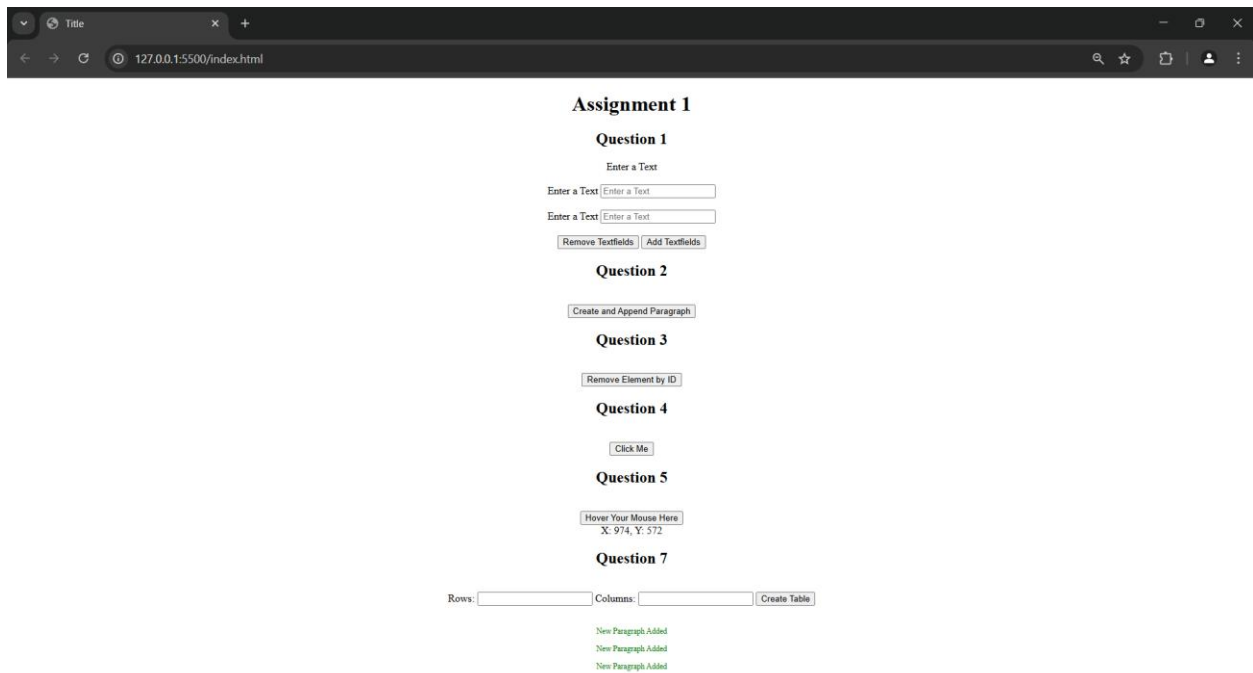

Question 3: Remove element by ID

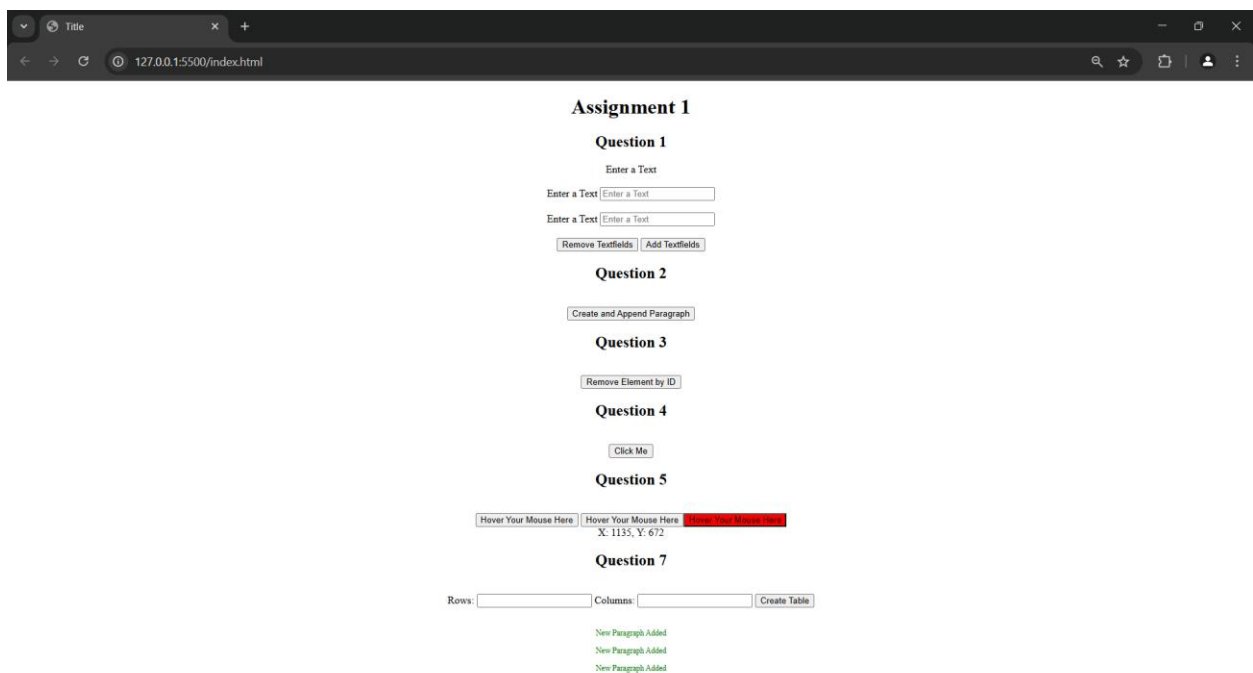## Question 4: Click Event to add paragraph

Question 5: When mouse hovers on the button

Question 5: When mouse leaves the button area

Question 5: When the button is clicked

Question 6: Display mouse coordinates at all times

Question 7: Creating a table by providing rows and columns filling with random numbers from 1-100