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Assignment 5

Question:

A] Write a Javascript code to append static row to the table on click of button

B] Write a Javascript code to append anchor tag that redirects to the new page

C] Write a Javascript code to change the color of button with following events

1.Onmousenover
2.Onmouseout
3.Onclick

D] Write a Javascript code to change the background color of page onclick of array elements displayed as a list.

Theory:

A] To append a static row to a table on click of a button, you need to understand how to work with HTML tables and manipulate the DOM using JavaScript:

- HTML: Create an HTML table with the appropriate structure and include a button that triggers the action.
- JavaScript:
  - Attach an event listener to the button element to listen for click events.
  - Inside the event listener, create a new row element, add table cells to it, and populate them with the desired content.

- Append the new row to the table using DOM manipulation methods such as `appendChild`.

B] To append an anchor tag that redirects to a new page on click, you need to be familiar with HTML and JavaScript event handling:

- HTML: Include a button in your HTML markup.
- JavaScript:
    - Attach an event listener to the button element to listen for click events.
    - Inside the event listener, create a new anchor (`<a>`) element, set its `href` attribute to the URL of the new page, and add text or other content to it.
    - Append the anchor element to the DOM, typically within a specific container or element.

C] To change the color of a button with different events (onmouseover, onmouseout, and onclick), you need knowledge of HTML, CSS, and JavaScript event handling:

- HTML: Create a button element in your HTML markup.
- CSS: Define the initial styling for the button's color and appearance.
- JavaScript:
    - Attach event listeners for each of the specified events (onmouseover, onmouseout, onclick) to the button element.
    - Inside each event listener, modify the button's CSS styles to change its color or appearance according to the event.

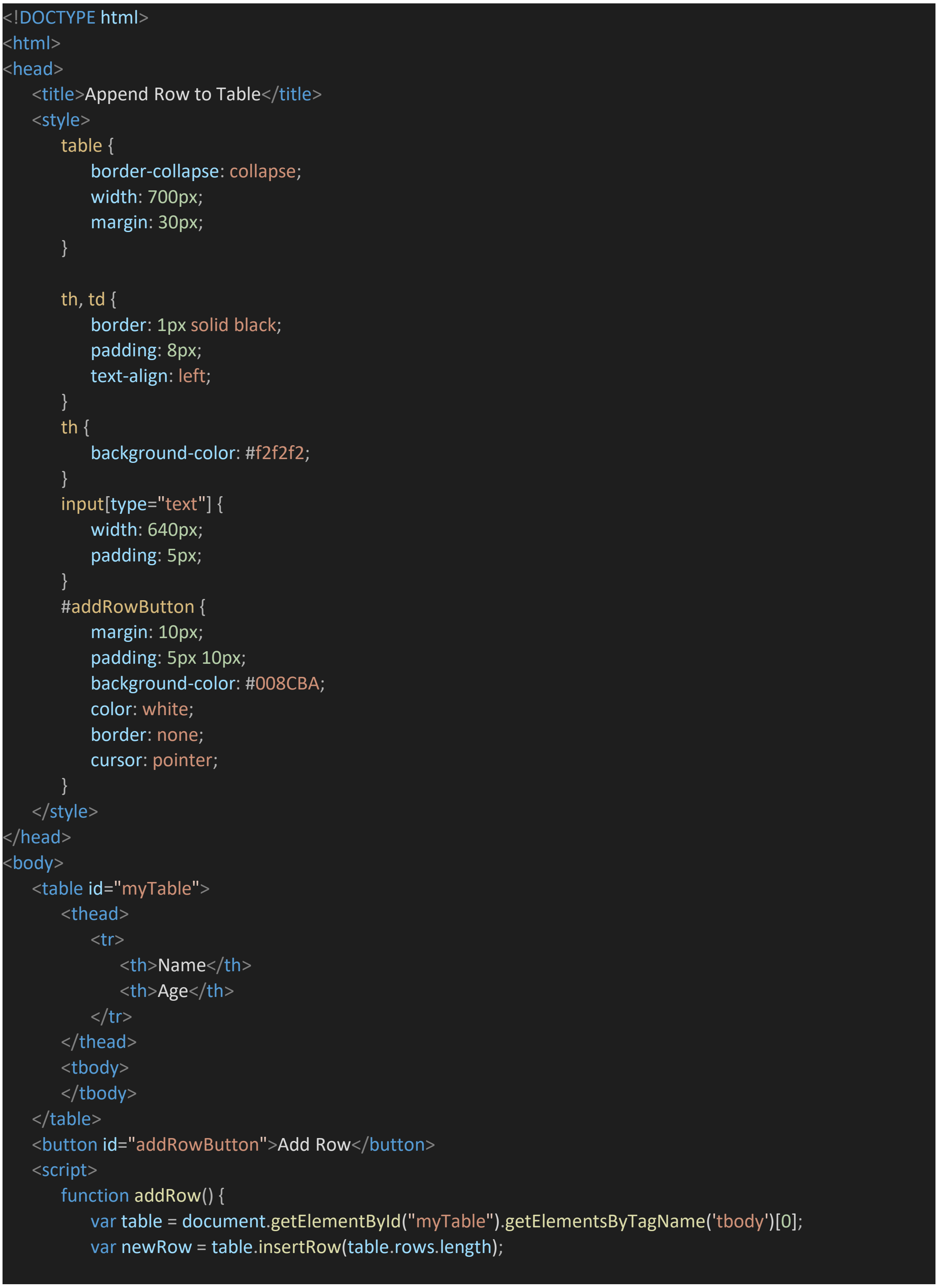
D] To change the background color of a page onclick of array elements displayed as a list, you need to understand HTML, CSS, and JavaScript:

- HTML: Create an HTML list (e.g., an unordered list `<ul>`) to display the array elements on the page.
- CSS: Define the initial background color for the page.
- JavaScript:
    - Attach event listeners to the list items or elements within the list to listen for click events.
    - Inside the event listener, change the background color of the entire page by modifying its CSS styles using JavaScript.

Implementing these tasks will require you to apply the theoretical knowledge mentioned above to write the actual code to achieve the desired functionality.

Code:

A)



```
<!DOCTYPE html>
<html>
<head>
    <title>Append Row to Table</title>
    <style>
        table {
            border-collapse: collapse;
            width: 700px;
            margin: 30px;
        }

        th, td {
            border: 1px solid black;
            padding: 8px;
            text-align: left;
        }
        th {
            background-color: #f2f2f2;
        }
        input[type="text"] {
            width: 640px;
            padding: 5px;
        }
        #addRowButton {
            margin: 10px;
            padding: 5px 10px;
            background-color: #008CBA;
            color: white;
            border: none;
            cursor: pointer;
        }
    </style>
</head>
<body>
    <table id="myTable">
        <thead>
            <tr>
                <th>Name</th>
                <th>Age</th>
            </tr>
        </thead>
        <tbody>
        </tbody>
    </table>
    <button id="addRowButton">Add Row</button>
    <script>
        function addRow() {
            var table = document.getElementById("myTable").getElementsByTagName('tbody')[0];
            var newRow = table.insertRow(table.rows.length);
            var nameInput = document.createElement("input");
            nameInput.type = "text";
            nameInput.placeholder = "Enter Name";
            var ageInput = document.createElement("input");
            ageInput.type = "text";
            ageInput.placeholder = "Enter Age";
            var cell1 = newRow.insertCell(0);
            var cell2 = newRow.insertCell(1);
            cell1.appendChild(nameInput);
            cell2.appendChild(ageInput);
        }
        document.getElementById("addRowButton").addEventListener("click", addRow);
    </script>
</body>
</html>
```

B)

```
<!DOCTYPE html>
<html>
<head>
    <title>Redirect to New Page</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            text-align: center;
            background-color: #f0f0f0;
            margin: 0;
            padding: 0;
        }

        button {
            padding: 10px 20px;
            font-size: 18px;
            background-color: #007BFF;
            color: #fff;
            border: none;
            cursor: pointer;
        }
        button:hover {
            background-color: #0056b3;
        }
        a {
            display: inline-block;
            margin-top: 20px;
            padding: 10px 20px;
            font-size: 16px;
            text-decoration: none;
            color: #007BFF;
            border: 2px solid #007BFF;
            border-radius: 5px;
            transition: background-color 0.3s, color 0.3s, border-color 0.3s;
        }
        a:hover {
            background-color: #0056b3;
            color: #fff;
            border-color: #0056b3;
        }
    </style>
```

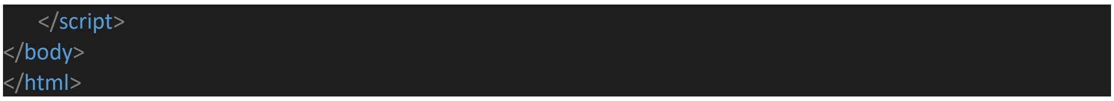
```
</head>
<body>
<button id="redirectButton">Redirect to New Page</button>
<script>
document.addEventListener('DOMContentLoaded', function () {
    function createAnchor() {
        var anchor = document.createElement('a');
        anchor.textContent = 'Click here to go to the new page';
        anchor.href = 'https://www.google.com';
        anchor.target = '_blank';
        document.body.appendChild(anchor);
    }
    var redirectButton = document.getElementById('redirectButton');
    redirectButton.addEventListener('click', createAnchor);
});
</script>
</body>
</html>
```

C)

```
<!DOCTYPE html>
<html>
<head>
  <title>Toggle Button Color</title>
  <style>
    #myButton {
      padding: 10px 20px;
      background-color: red;
      color: white;
      border: none;
      cursor: pointer;
      font-size: 16px;
      border-radius: 5px;
      transition: background-color 0.3s ease;
    }

    #myButton:hover,
    #myButton.active:hover {
      background-color: blue;
    }
    #myButton.active {
      background-color: green;
    }
  </style>
</head>
<body>
<button id="myButton">Click me!</button>
<script>
  var button = document.getElementById("myButton");
  var isButtonActive = false;
  button.addEventListener("click", function() {
    if (isButtonActive) {
      button.style.backgroundColor = "red";
      button.classList.remove("active");
    } else {
      button.style.backgroundColor = "green";
      button.classList.add("active");
    }
    isButtonActive = !isButtonActive;
  });
</script>
</body>
</html>
```

D)

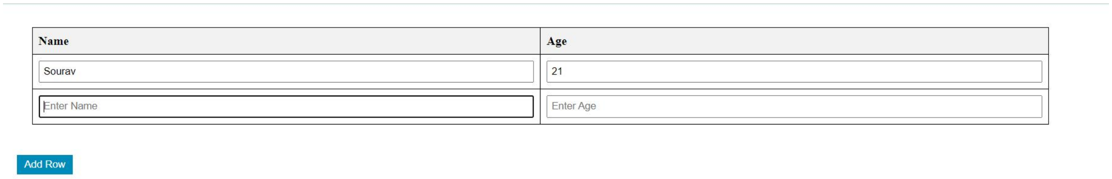
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Change Background Color</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            text-align: center;
            transition: background-color 0.5s;
        }

        ul {
            list-style-type: none;
            padding: 0;
        }
        li {
            margin: 10px;
            padding: 10px;
            background-color: #3498db;
            color: #fff;
            cursor: pointer;
            border-radius: 5px;
            transition: background-color 0.3s;
        }
        li:hover {
            background-color: #2980b9;
        }
    </style>
</head>
<body>
    <h1>Click on an Item to Change Background Color</h1>
    <ul id="itemList">
        <li>Item 1</li>
        <li>Item 2</li>
        <li>Item 3</li>
        <li>Item 4</li>
        <li>Item 5</li>
    </ul>
    <script>
        const colors = ["#FF5733", "#33FF57", "#5733FF", "#FF33AA", "#33AAFF"];
        function changeBackgroundColor() {
            const body = document.body;
            const randomColor = colors[Math.floor(Math.random() * colors.length)];
            body.style.backgroundColor = randomColor;
        }
        const listItems = document.querySelectorAll("li");
        listItems.forEach((item) => {
            item.addEventListener("click", changeBackgroundColor);
        });
```



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

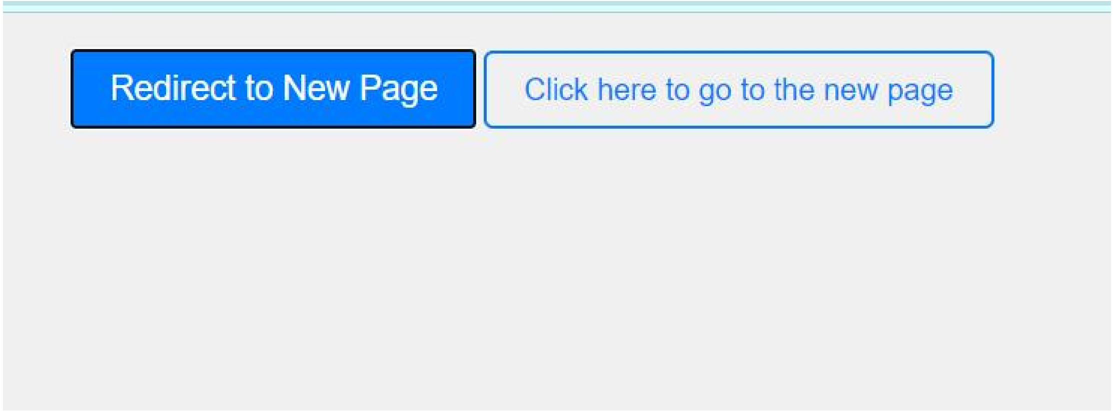
Output:

A)

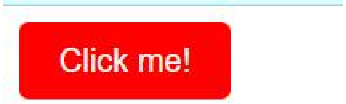


Name	Age
Sourav	21
Enter Name	Enter Age

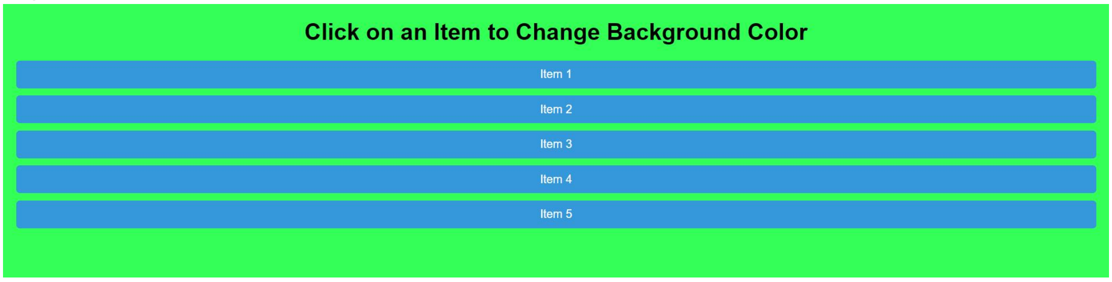
B)



C)



D)



Conclusion:

The successful implementation of these tasks demonstrates a well-rounded proficiency in web development and JavaScript programming. By appending static rows to a table upon button click, dynamically creating anchor tags for page redirection, and efficiently handling button color changes on various events, developers showcase their ability to work with the DOM, respond to user interactions, and apply CSS styling dynamically. Additionally, the task of changing the background color of the entire page based on array element clicks demonstrates the skill to manipulate global page properties. These implementations highlight essential skills for front-end development, such as event handling, DOM manipulation, and CSS styling, enabling developers to create interactive and engaging web applications.