

Full Stack Application Development with Cloud Computing

Module 2 – Front-End Development Tools, Technologies and Frameworks

Lab - 7

Unit 3 - JavaScript and DOM Manipulation

Topic: Handling DOM using JavaScript

Ex. 1: Design an HTML document that contains three sections, each demonstrating a different aspect of DOM manipulation and event handling using JavaScript.

1. "DOM Manipulation" section, there is a button and a paragraph. Button's event listener is there and it changes the text content of the paragraph when clicked.
2. "Creating Elements" section, there should be a button and an unordered list. The event listener attached to the addButton creates a new list item and appends it to the itemList when clicked.
3. Display the button effect by clicking the button.

```
<!DOCTYPE html>
<html>
<head>
  <title>Handling DOM using JavaScript</title>
</head>
<body>
  <div>
    <h2>DOM Manipulation</h2>
    <button id="changeTextButton">Change Text</button>
    <p id="outputText">Initial Text</p>
  </div>
```

```
<div>
  <h2>Creating Elements</h2>
  <button id="addButton">Add Item</button>
  <ul id="itemList"></ul>
</div>
```

```
<div>
  <h2>Event Handling</h2>
  <button id="eventButton">Click Me</button>
  <p id="eventOutput"></p>
</div>
```

```
<script>
  // DOM Manipulation
  var changeTextButton =
document.getElementById("changeTextButton");
  var outputText = document.getElementById("outputText");

  changeTextButton.addEventListener("click", function() {
    outputText.textContent = "Text Changed!";
  });

  // Creating Elements
  var addButton = document.getElementById("addButton");
  var itemList = document.getElementById("itemList");

  addButton.addEventListener("click", function() {
    var li = document.createElement("li");
    li.textContent = "New Item";
    itemList.appendChild(li);
  });

  // Event Handling
```

```
var eventButton = document.getElementById("eventButton");
var eventOutput = document.getElementById("eventOutput");
```

```
eventButton.addEventListener("click", function() {
    eventOutput.textContent = "Button Clicked!";
});
```

```
</script>
```

```
</body>
```

```
</html>
```

Output:

DOM Manipulation

Change Text

Initial Text

Creating Elements

Add Item

Event Handling

Click Me

DOM Manipulation

Change Text

Text Changed!

Creating Elements

Add Item

- New Item

Event Handling

Click Me

Button Clicked!

Practice Question:

Ex. 2: JavaScript to dynamically create a new list item () element and add it to an existing unordered list () when a button is clicked. Provide a step-by-step explanation and include a code snippet to demonstrate the process.