



St. Francis Institute of Technology

(Engineering College)

An Autonomous Institute, Affiliated to University of Mumbai

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Department of Artificial Intelligence and Machine Learning

Academic Year: 2025-2026 Term: Even (Jan. 2026 – Jun. 2026) Class / Branch: SE –AIML

Semester: IV

Course: Web Programming Lab. (AI4VS_LR4)

Date of Assignment: / /2026 Date of Submission: / /2026

Pre-Lab Exercises for Experiment-5

DOM Basics & Preparation for To-Do List Application

Before performing Experiment-5, understand how JavaScript interacts with HTML elements using the DOM. These exercises help practice element selection, content update, and event handling, which are essential for building a To-Do List application.

Part A: DOM Fundamentals (Conceptual)

Exercise 1: Understanding DOM

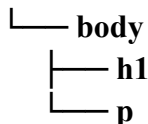
Task:

1. Define DOM.

Ans. DOM (Document Object Model) is a programming interface that represents an HTML document as a tree structure. It allows JavaScript to access and modify HTML elements dynamically.

2. Draw a simple DOM tree for an HTML page with <html>, <body>, <h1>, and <p>.

Ans. **html**



Exercise 2: DOM Selection Methods

Task: Write the purpose of:

1. getElementById()
Selects an element using its unique ID
2. querySelector()
Selects the first element that matches a CSS selector
3. querySelectorAll()
Selects all elements that match a CSS selector

Part B: Hands-On DOM Practice

Exercise 3: Accessing Elements

Task:

- Create a paragraph with an id.
- Use JavaScript to change its text using a button click.

CODE

HTML

```
<!DOCTYPE html>
<html>
<head>
  <title>Exercise 3</title>
</head>
<body>
  <p id="para">This is original
  text.</p>
  <button id="btn">Click Me</button>
<!-- Linking JavaScript file -->
  <script src="5.js"></script>
</body>
```

OUTPUT



This is original text.

Click Me

```
</html>
```

JS

```
document.getElementById("btn").addEvent
ntListener("click", function() {

document.getElementById("para").textC
ontent = "Text changed
successfully!";
});
```



Text changed successfully!

Click Me

Exercise 4: Creating Elements Dynamically

Task:

- Create a button.
- When clicked, add a new paragraph to the page.

CODE

HTML

```
<!DOCTYPE html>
<html>
<head>
  <title>Exercise 4</title>
</head>
<body>
  <button id="addBtn">Add
  Paragraph</button>
  <script src="5.js"></script>
</body>
```

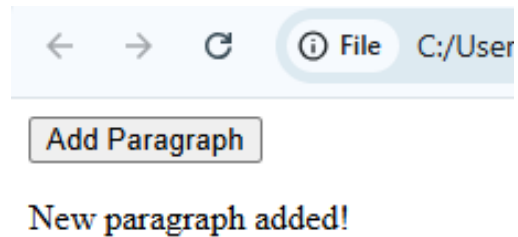
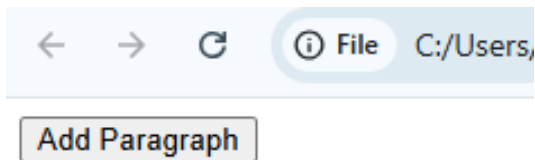
```
</html>
```

JS

```
document.getElementById("addBtn").add
EventListener("click", function() {
  let newPara =
document.createElement("p");
  newPara.textContent = "New
paragraph added!";

document.body.appendChild(newPara);
});
```

OUTPUT



Exercise 5: Removing Elements

Task:

- Create a paragraph.
- Add a button to remove the paragraph using JavaScript.

CODE

HTML

```
<!DOCTYPE html>

<html>

<head>
    <title>Exercise 5</title>
</head>
<body>
<p id="removePara">This paragraph
will be removed.</p>
<button id="removeBtn">Remove
Paragraph</button>
<script src="5.js"></script>
```

```
</body>
```

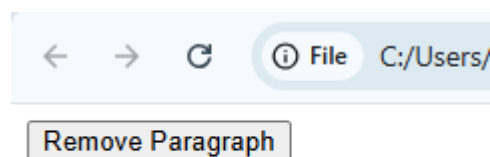
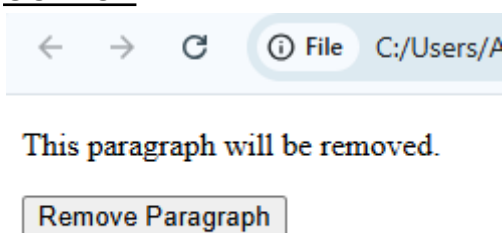
```
</html>
```

JS

```
document.getElementById("removeBtn") .
addEventListener("click", function()
{

document.getElementById("removePara")
.remove();
});
```

OUTPUT



Part C: Event Handling Practice

Exercise 6: Event Listener

Task:

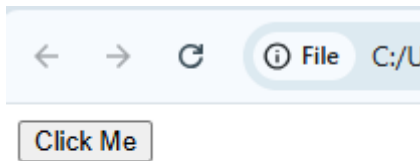
- Use addEventListener() to display a message when a button is clicked.

CODE

HTML

```
<!DOCTYPE html>
<html>
<head>
  <title>Exercise 6</title>
</head>
<body>
<button id="btn">Click Me</button>
<p id="message"></p>
```

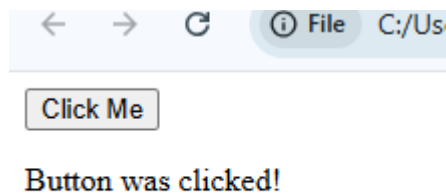
OUTPUT



```
<script src="5.js"></script>
</body>
</html>
```

JS

```
document.getElementById("btn").addEventListener("click", function() {
  document.getElementById("message").textContent = "Button was clicked!";
});
```



Exercise 7: Input Handling

Task:

- Create a text input.
- Display the entered text below the input when a button is clicked.

CODE

HTML

```
<!DOCTYPE html>
<html>
<head>
  <title>Exercise 7</title>
</head>
<body>
<input type="text" id="inputBox"
placeholder="Enter text here">
<button id="showBtn">Show
Text</button>
<p id="output"></p>
<script src="5.js"></script>
```

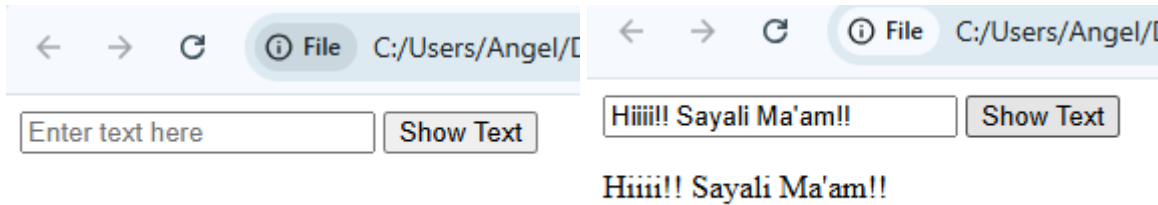
```
</body>
</html>
```

JS

```
document.getElementById("showBtn").addEventListener("click", function() {
  let text =
document.getElementById("inputBox").value;

document.getElementById("output").textContent = text;
});
```

OUTPUT



Part D: Logic Preparation for To-Do List Exercise 8: Simple Task Addition Logic

Task:

- Enter text in an input box.
- On button click, display it as a list item.

CODE

HTML

```
<!DOCTYPE html>
<html>
<head>
  <title>To-Do Task
  Addition</title>
</head>
<body>
<input type="text" id="taskInput"
placeholder="Enter task">
<button id="addTask">Add
Task</button>
<ul id="taskList"></ul>
<script src="5.js"></script>
</body>
</html>
```

JS

```
document.getElementById("addTask").ad
dEventListener("click", function() {

  let task =
document.getElementById("taskInput").
value;

  if (task !== "") {
    let listItem =
document.createElement("li");
    listItem.textContent = task;
document.getElementById("taskList").a
ppendChild(listItem);
document.getElementById("taskInput").
value = "";
  }
});
```

OUTPUT

