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Batch: A

Experiment No:5

5(b) Write a Javascript code to append anchor tag that redirects to the new page

Objective: To learn about concept and implementation of JAVASCRIPT

Theory:

What is Javascript. Why it is called Client side Scripting language Client side: JavaScript is a client-side language, which means it gets executed at the client side (i.e, user side). On contrary, PHP is a server-side scripting language, as it gets executed at server. Whenever you browse the web, all the HTML,CSS & JS files are fetched from the server & then executed/interpreted at your side by your browser.Scripting language: Since it is interpreted rather than compiled & are úsed to execute tasks one-by-one. More professionally, A scripting or script language is a programming language that supports scripts: programs written for a special run-time environment that automate the execution of tasks that could alternatively be executed one-by-one by a human operator. Scripting languages are often interpreted

Explain Javascript functions used in above programs like with syntax and example:-

getElementByID()

The getElementById() method returns an element with a specified value. The getElementById() method returns null if the element does not exist.
document.getElementById("demo").style.color
= "red";

•innerHTML()

The innerHTML property sets or returns the HTML content (inner HTML) of an element.
let html
= document.getElementById("myList").innerHTML;

value()

The Object.values() method returns an array of a given object's own enumerable property values, in the same order as that provided by a for...in loop. (The only difference is that a for...in loop enumerates properties in the prototype chain as well.)
console.log(Object.values(object1))

•parseInt()

The parseInt() function parses a string argument and returns an integer of the specified radix (the base in mathematical numeral systems). function roughScale(x, base) { const parsed = parseInt(x, base); if (isNaN(parsed)) { return 0; } return parsed * 100;
}

- It is an application programming interface.

- Dom represents a document as a hierarchical tree of nodes allowing dev to add, remove, and modify individual part of the page.

- Document node represents every document as a root. In this example only child of document node is html which is called as document element.

- Every piece of markup can be represented by a node in the tree: HTML elements are represented by element nodes, attributes are represented by attribute nodes, the document type is represented by a document type node, and comments are represented by comment nodes.

- In total, there are 12 node types, all of which inherit from a base type.

- DOM Level 1 describes an interface called Node that is to be implemented by all node types in the DOM.

- Every node has a nodeType property that indicates the type of node that it is. Node types are represented by one of the following 12 numeric constants on the Node type:

a. Node.ELEMENT_NODE (1)

b. Node.ATTRIBUTE_NODE (2)

c. Node.TEXT_NODE (3)

d. Node.CDATA_SECTION_NODE (4)

e. Node.ENTITY_REFERENCE_NODE (5)

f. Node.ENTITY_NODE (6)

g. Node.PROCESSING_INSTRUCTION_NODE (7)

h. Node.COMMENT_NODE (8)

i. Node.DOCUMENT_NODE (9)

j. Node.DOCUMENT_TYPE_NODE (10)

k. Node.DOCUMENT_FRAGMENT_NODE (11)

l. Node.NOTATION_NODE (12)

```
if (someNode.nodeType == Node.ELEMENT_NODE)
{
    alert("Node is an element."); //won't work in IE < 9
}
```

This example compares the someNode.nodeType to the Node.ELEMENT_NODE constant. If they're equal, it means someNode is actually an element. Unfortunately, since Internet Explorer 8 and earlier doesn't expose the Node type constructor, this code will cause an error. For cross-browser compatibility, it's best to compare the nodeType property against a numeric value, as in the following:

```
if (someNode.nodeType == 1)
{
    alert("Node is an element."); //works in all browsers

}
```

```
if (someNode.nodeType == 1)
{
    alert("Node is an element."); //works in all browsers

}
```

Properties of note type

- Two properties, nodeName and nodeValue, give specifi c information about the node. The values of these properties are completely dependent on the node type.
- nodeName is always equal to the element's tag name, and nodeValue is always null.
- Each node has a childNodes property containing a NodeList. A NodeList is an array- like object used to store an ordered list of nodes that are accessible by position. Keep in mind that a NodeList is not an instance of Array even though its values can be accessed using bracket notation and the length property is present.
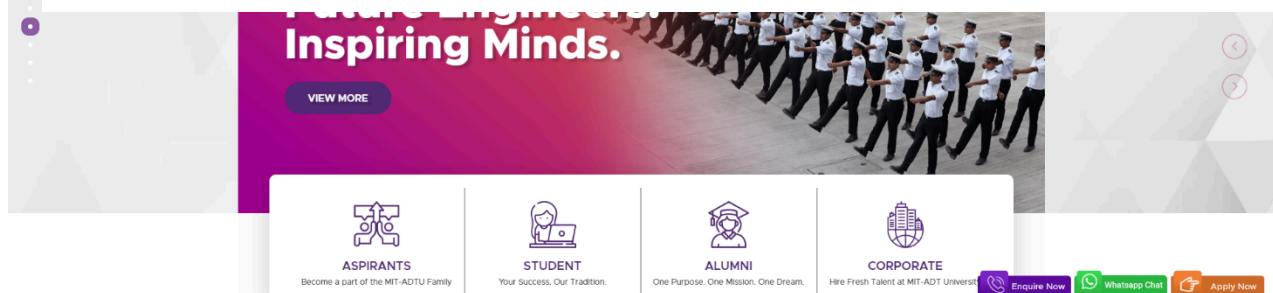- Node Relationship child parent

Conclusion:

Thus, we have successfully implemented the program

```html
<!DOCTYPE html>
<html>
<head>
<title>Append Anchor Tag- Demonstration</title>
</head>
<body>
<div id="container">
<h1>This Assignment Shows How Anchor Tag Works</h1>
<br>
<h2>CLick on Following Button</h2>
<button id="addAnchorBtn"> Click Me </button>
</div>
<script>
// Function to handle button click event
function addAnchorTag() {
var container = document.getElementById("container");
var anchor = document.createElement("a"); // Create the anchor element
anchor.href = "https://mituniversity.ac.in/"; // Set the URL to redirect to
anchor.textContent = "Click me!"; // Set the text content of the anchor
container.appendChild(anchor); // Append the anchor to the container
}
// Attach event listener to the button
var addAnchorBtn = document.getElementById("addAnchorBtn");
addAnchorBtn.addEventListener("click", addAnchorTag);
</script>
</body>
</html>
```

Code:

This Assignment Shows How Anchor Tag Works

CLick on Following Button

Click Me [Click me!](#)

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Output (Screenshots):