Name: Sciddhanto Sinha

Roll no: 2213111

Batch: A

Experiment No:4

4) (b) Create one button on every click of button different images should be applied.

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;

DOM

- 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
```

}

Properties of note type

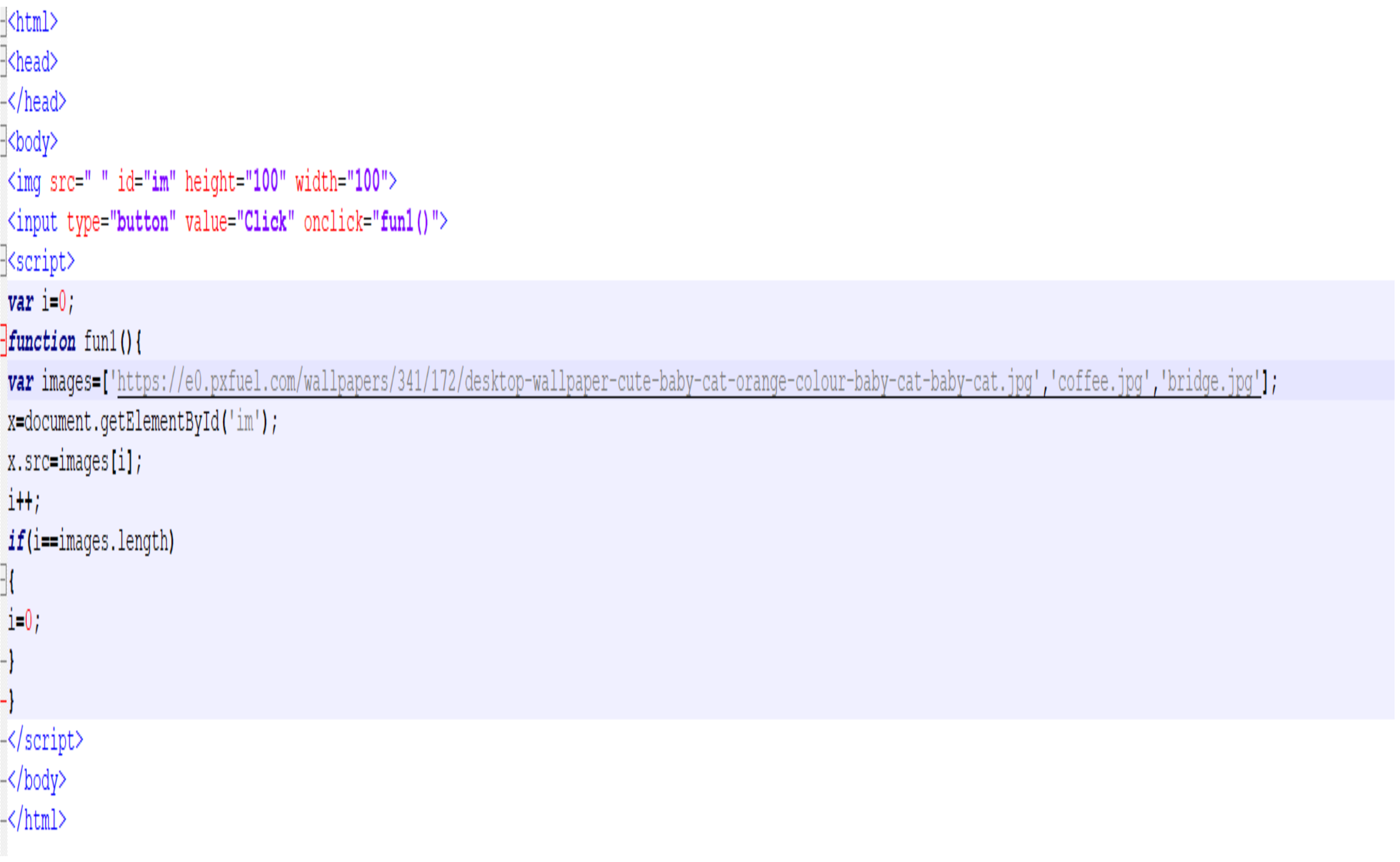
- Two properties, nodeName and nodeValue, give specifi c information about the node. The values of these properties are completely dependent on the node type.
- nodeName is always equal to the element’s tag name, and nodeValue is always null.

- 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.

Code:



```
<html>
<head>
</head>
<body>
<img src=" " id="im" height="100" width="100">
<input type="button" value="Click" onclick="fun1()">
<script>
var i=0;
function fun1(){
var images=['https://e0.pxfuel.com/wallpapers/341/172/desktop-wallpaper-cute-baby-cat-orange-colour-baby-cat-baby-cat.jpg','coffee.jpg','bridge.jpg'];
x=document.getElementById('im');
x.src=images[i];
i++;
if(i==images.length)
{
i=0;
}
}
</script>
</body>
</html>
```

Output(Screenshots):