(JAVASCRIPT BASIC & DOM) – 4

1.what is javascript?

JavaScript is a versatile programming language primarily used to create interactive effects within web browsers. It allows developers to add behavior, interactivity, and dynamic content to websites, making them more engaging for users.

2.What is the use of isNaN function?

**The isNaN function in JavaScript stands for “is Not a Number.” It checks whether a value is not a numeric value. It returns true if the argument is not a number, and false if the argument is a number or can be converted into one. This function is often used to validate whether a value is a valid number before performing calculations or operations involving numbers.**

**3.What is negative Infinity? Negative Infinity in JavaScript represents a value that is smaller than any other number, including negative numbers. It’s a special value used to denote the minimum possible numerical value in JavaScript. It’s often the result of mathematical operations that tend toward negative infinity or when a number exceeds the lower limit of representable values in JavaScript.**

**4.Which company developed JavaScript?**

**JavaScript was developed by Netscape Communications Corporation, particularly by Brendan Eich in 1995. Initially named “Mocha” and later “LiveScript,” it was finally named JavaScript as a part of Netscape Navigator 2.0.**

**5. What are undeclared and undefined variables?**

**Undeclared variables are ones that haven’t been formally defined or declared within a program. Undefined variables, on the other hand, might have been declared but haven’t been assigned a value yet, or they’re used in a context where a value should exist but doesn’t. Both can cause errors in programming languages.**

**6.Write the code for adding new elements dynamically?**

**New elements dynamically depends on the language or framework you’re using. Here’s an example using JavaScript to add a new element to the HTML DOM:// Create a new element**

**Var newElement = document.createElement(‘div’);**

**// Optionally, add content or attributes to the new element**

**newElement.textContent = ‘New Element’;**

**newElement.classList.add(‘someClass’);**

**// Find an existing element to append the new element to**

**Var parentElement = document.getElementById(‘parent’); // Change ‘parent’ to your element’s ID**

**// Append the new element to the parent element**

**parentElement.appendChild(newElement);**

**7.What is the difference between ViewState and SessionState?**

**ViewState is to manage state at the client’s end, making state management easy for end-user while SessionState manages state at the server’s end, making it easy to manage content from this end too.**

**8.What is === operator?**

**The === operator is a strict equality operator used in programming languages like JavaScript. It checks if two values are not only equal but also of the same data type.**

**9.How can the style/class of an element be changed?**

**You can change the style or class of an HTML element using JavaScript or by directly modifying the element’s attributes using its ID, class, or tag name and applying new styles or classes using the style attribute or by manipulating the classList. Additionally, you can use CSS to define styles and classes and then apply them to the HTML elements.**

**10.How to read and write a file using JavaScript?**

**JavaScript, you can read and write files using the File System module in Node.js or the FileReader and FileWriter APIs in browsers. Here’s a brief overview for Node.js**

**1)Const fs = require(‘fs’);**

**Fs.readFile(‘file.txt’, ‘utf8’, (err, data) => {**

**If (err) {**

**Console.error(err);**

**Return;**

**}**

**Console.log(data);**

**});**

**2)const fs = require(‘fs’);**

**Const content = ‘Hello, this is content to be written to the file.’;**

**Fs.writeFile(‘newFile.txt’, content, ‘utf8’, (err) => {**

**If (err) {**

**Console.error(err);**

**Return;**

**}**

**Console.log(‘File has been written.’);**

**});**

**For browser-based JavaScript, you can use the FileReader and FileWriter APIs to read and write files.**

**11.What are all the looping structures in JavaScript?**

**JavaScript offers several looping structures:**

**1. `for` loop: Executes a block of code a specified number of times.**

**2. `while` loop: Repeats a block of code as long as a specified condition is true.**

**3. `do…while` loop: Similar to a `while` loop, but it always executes its block of code at least once before checking the condition.**

**4. `for…in` loop: Iterates over the enumerable properties of an object.**

**5. `for…of` loop: Iterates over iterable objects like arrays, strings, maps, sets, etc., accessing their values directly.**

**12.How can you convert the string of any base to an integer in JavaScript?**

**The parseInt function in JavaScript to convert a string from any base (specified by the radix) to an integer. For instance, parseInt(“1010”, 2) will convert the binary string “1010” to its integer equivalent. Theparameter (radix) specifies the base of the number system used in the string.**

**13.What is the function of the delete operator?**

**The delete operator in JavaScript is used to remove a property from an object. It can’t delete variables or functions, only object properties. It allows you to free up memory by removing references to an object’s property.**

**14.What are all the types of Pop up boxes available in JavaScript?**

**JavaScript provides three main types of pop-up boxes:**

**1. Alert Box: Used to display a message to the user.**

**2. Confirm Box: Presents a message with OK and Cancel buttons, allowing users to confirm or cancel an action.**

**3. Prompt Box: Displays a message asking the user to input text, providing a text field along with OK and Cancel buttons.**

**15.What is the use of Void (0)?**

**Void(0) is often used in JavaScript to prevent a webpage from refreshing when a hyperlink is clicked. It essentially creates a null operation, ensuring the browser stays on the current page without navigating anywhere.**

**16.How can a page be forced to load another page in JavaScript?**

**You can redirect to another page in JavaScript using the `window.location` object. Set `window.location.href` to the URL of the page you want to load, like this:**

**```javascript**

**Window.location.href = ‘https://www.example.com’;**

**```**

**17.What are the disadvantages of using innerHTML in JavaScript?**

1. **Security risks: Directly setting `innerHTML` can expose your application to cross-site scripting (XSS) attacks if the content is not sanitized properly.**

1. **Performance implications: Manipulating `innerHTML` might be less performant than other DOM manipulation methods for complex changes, as it involves parsing and re-rendering the entire content within the element.**
2. **Potential loss of event listeners or data:Setting `innerHTML` can remove previously attached event listeners or data bound to elements, requiring extra care when updating content.**
3. **Semantic implications: Changing `innerHTML` often replaces the entire content, which might not be semantically ideal or efficient for certain updates compared to targeted changes using other DOM methods like `appendChild`, `createElement`, etc.**