**JAVASCRIPT BASIC & DOM**

Q1: What is JavaScript?

Answer:-

JavaScript is a high-level, interpreted programming language primarily used for web development. It was originally created to add interactivity and dynamic features to web pages. JavaScript allows developers to manipulate web page elements, handle user interactions, perform calculations, validate forms, create animations, and much more.

Q2: What is the use of isNaN function?

Answer:-

The isNaN function is a built-in JavaScript function that stands for "is Not a Number." Its purpose is to determine whether a given value is not a valid numeric value.

The isNaN function takes one parameter and performs the following checks:

1. If the parameter is already of type number and represents a valid numeric value (including special numeric values like ‘Infinity’ and ‘- Infinity’), the function returns false to indicate that it is indeed a number.
2. If the parameter is not of type number or cannot be converted to a valid number, the function returns true to indicate that it is not a number.

Q3: What is negative Infinity?

Answer:-

Negative Infinity, denoted as -Infinity, is a special value in JavaScript that represents a value that is infinitely small or negative infinity. It is used to represent a numeric value that is outside the range of normal numbers.

Q4: Which company developed JavaScript?

Answer:-

JavaScript was invented by Brendan Eich in 1995. It was developed for Netscape 2, and became the ECMA-262 standard in 1997.

Q5: What are undeclared and undefined variables?

Answer:-

**Undeclared Variables:** An undeclared variable is a variable that has not been declared or defined in the current scope. When you try to use an undeclared variable, you will typically encounter a reference error, indicating that the variable is not defined.

**Undefined Variables:** An undefined variable is a variable that has been declared but has not been assigned a value. When you declare a variable without assigning a value to it, its default value is undefined.

Q6: Write the code for adding new elements dynamically?

Answer:-

<body>

<button id="addButton">Add Element</button>

<ul id="list"></ul>

</body>

JavaScript:

const addButton = document.getElementById('addButton');

const list = document.getElementById('list');

let counter = 1;

function addElement() {

const listItem = document.createElement('li');

listItem.id = 'item' + counter;

listItem.textContent = 'Item ' + counter;

list.appendChild(listItem);

counter++;

}

addButton.addEventListener('click', addElement);

Q7: What is the difference between ViewState and SessionState?

Answer:-

| ViewState | SessionState |
| --- | --- |
| Maintained at page level only. | Maintained at session level. |
| View state can only be visible from a single page and not multiple pages. | Session state value availability is across all pages available in a user session. |
| It will retain values in the event of a postback operation occurring. | In session state, user data remains in the server. Data is available to user until the browser is closed or there is session expiration. |
| Information is stored on the client’s end only. | Information is stored on the server. |
| used to allow the persistence of page-instance-specific data. | used for the persistence of user-specific data on the server’s end. |
| ViewState values are lost/cleared when new page is loaded. | SessionState can be cleared by programmer or user or in case of timeouts. |

Q8: What is === operator?

Answer:

The === operator in JavaScript is called the strict equality operator. It is used to compare two values for equality, including both their values and data types.

When using the strict equality operator (===), the comparison evaluates to true if both operands have the same value and data type. If either the values or the data types are different, the comparison evaluates to false.

Q9: How can the style/class of an element be changed?

Answer:-

We can change, add or remove any CSS property from an HTML element on the occurrence of any event with the help of JavaScript. There are two common approaches that allow us to achieve this task.

1. style.property
2. Changing the class itself

Approach 1: Changing CSS with the help of the style property:

Syntax: document.getElementById("id").style.property = new\_style

Approach 2: Changing the class itself – We can use two properties that can be used to manipulate the classes.

The classList Property: The classList is a read-only property that returns the CSS class names of an element as a DOMTokenList object.

Syntax: document.getElementById("id").classList

Q10: How to read and write a file using JavaScript?

Answer:-

Files can be read and written by using java script functions – fopen(),fread() and fwrite().  
  
The function fopen() takes two parameters – 1. Path and 2. Mode (0 for reading and 3 for writing). The fopen() function returns -1, if the file is successfully opened.  
  
Example: file=fopen(getScriptPath(),0);

The function fread() is used for reading the file content.  
  
Example: str = fread(file,flength(file) ;

The function fwrite() is used to write the contents to the file.  
  
Example: file = fopen("c:\MyFile.txt", 3);// opens the file for writing  
fwrite(file, str);// str is the content that is to be written into the file.

Q11: What are all the looping structures in JavaScript?

Answer:-

1. **for loop:** The for loop repeats a block of code for a specified number of times. It consists of three parts: initialization, condition, and increment/decrement.
2. **while loop:** The while loop repeats a block of code as long as a specified condition is true. It checks the condition before executing the code block.
3. **do-while loop:** The do-while loop is similar to the while loop, but it checks the condition after executing the code block. This guarantees that the code block is executed at least once.
4. **for...in loop:** The for...in loop iterates over the enumerable properties of an object. It's commonly used to loop through the keys of an object.
5. **for...of loop:** The for...of loop iterates over the iterable objects such as arrays, strings, maps, sets, etc. It provides an easy way to loop through the elements or values of the iterable.

Q12: How can you convert the string of any base to an integer in JavaScript?

Answer:-

We can convert a string to javascript by the following methods:

* [Using the parseInt() method](https://www.geeksforgeeks.org/javascript-parseint-function/)
* [Using the Number() method](https://www.geeksforgeeks.org/javascript-number-complete-reference/)
* [Using the Unary operator](https://www.geeksforgeeks.org/javascript-arithmetic-unary-plus-operator/)

Q13: What is the function of the delete operator?

Answer:-

The delete operator removes a given property from an object. On successful deletion, it will return true , else false will be returned.

Q14: What are all the types of Pop up boxes available in JavaScript?

Answer:-

There are three types of popup boxes commonly used for displaying messages or obtaining user input:

* **Alert box:** The alert() function displays a simple message box with an OK button. It is used to show information or notify the user about something. The user cannot input any data into the alert box.

Here's the syntax:

**alert(message);**

* **Confirm box:** The confirm() function displays a message box with two buttons: OK and Cancel. It is used to prompt the user to confirm or cancel an action. The function returns true if the user clicks OK and returns false if the user clicks Cancel.

Here's the syntax:

**confirm(message);**

* **Prompt box:** The prompt() function displays a message box with a text input field and two buttons: OK and Cancel. It is used to prompt the user for input or to get a value from the user. The function returns the value entered by the user as a string, or null if the user clicks Cancel.

Here's the syntax:

**prompt(message, defaultValue);**

Q15: What is the use of Void (0)?

Answer:-

The use of void(0) in JavaScript is primarily to prevent the browser from navigating to a new page when a hyperlink or button is clicked. It is commonly used as a placeholder value in the href attribute of an anchor (<a>) tag or in the onclick event handler of a button.

In JavaScript, when you click on a hyperlink (<a> tag) with an href attribute, the browser typically follows the URL specified in the href, causing a navigation to a new page. However, if the href value is set to javascript:void(0), clicking the hyperlink will not trigger any navigation.

Q16: How can a page be forced to load another page in JavaScript?

Answer:-

You can force a page to load another page by changing the value of the window.location object. The window.location object provides information about the current URL and allows you to modify it to navigate to a different page.

To load another page, you can assign a new URL to the window.location.href property.

Q17: What are the disadvantages of using innerHTML in JavaScript?

Answer:-

**The use of innerHTML very slow:** The process of using innerHTML is much slower as its contents as slowly built, also already parsed contents and elements are also re-parsed which takes time.

**Preserves event handlers attached to any DOM elements:** The event handlers do not get attached to the new elements created by setting innerHTML automatically. To do so one has to keep track of the event handlers and attach it to new elements manually. This may cause a memory leak on some browsers.

**Content is replaced everywhere:** Either you add, append, delete or modify contents on a webpage using innerHTML, all contents is replaced, also all the DOM nodes inside that element are reparsed and recreated.

**Appending to innerHTML is not supported:** Usually, += is used for appending in JavaScript. But on appending to an Html tag using innerHTML, the whole tag is re-parsed.