

Assignment 4(JS)

1. What is JavaScript? Write a JavaScript to print the largest & smallest among 10 elements of an array.
2. Write any 2 syntactic characteristics of JS. Explain different element access methods in JS.
3. What are the scopes of a variable in JavaScript?
4. Why JS is called a Dynamically typed language.
5. Why JS is called loosely typed language? Explain an example of type conversion takes place in JS.
6. Difference between Var, let, and Const.
7. Explain different types of primitive's data types of JS.
8. What is the difference between window & document in JavaScript?
9. How can you create an object in JavaScript?
10. What is the role of JavaScript in web technology? Explain with a suitable example.
11. Why JavaScript is known as Object-Based Programming rather than OOP?
12. WAP to reverse the string given by the user.
13. WAP to sort both ascending and descending order of array element
14. What is a dialog box? Explain different dialog boxes with suitable examples in JavaScript.
15. Write a program in JavaScript to display the multiplication table of a given number.
16. WAP JS for the following code such that when quantity and price is given total will be calculate.

Quantity	Price	Total
<input type="text"/>	<input type="text"/>	<input type="text"/>

17. Write a JS code Adding 10 each time whenever you click the Sum Button

OutPut

**Adding 10 each time whenever you click
Sum Button.....**

10

18. Write a JS code Click the button to convert the string to lowercase letters.

Word = Hello World!

19. Explain how does DOM event model work. How do you get elements from the document to JS? Write an example of all methods.
20. Is it possible to alter the position of an HTML element using JavaScript? Illustrate with an example script.

21. Why is JavaScript used for client-side scripting? Write the JavaScript code to alter the visibility of an HTML element.
22. Explain object creation and modification in JavaScript using the constructor with an example.
23. Write JavaScript form validation function for name, phone, and email address input boxes.
24. Explain slice(),toString(),splice(),replace(),match(),search(),indexOf(),test(),
25. What do you mean by events and event handling? How will you locate the mouse cursor being JS? Explain with code.
26. Is it possible to change the color of the text displayed in the HTML document using JS? Write a simple program for illustrating it.
27. Write a program in JavaScript to change the color of the text displayed in the HTML document to read.
28. . Write JavaScript programs for:
 - a. Moving Element & Element Visibility
 - b Changing Colors & Fonts
 - c. Dynamic Content & Stacking Elements
 - d. Dragging and Dropping Elements
 - e. Event Handling
29. WAP in JavaScript to find the factorial of the entered number.
30. JavaScript Program to Check if a Number is Float or Integer.
31. JavaScript Program to Split Array into Smaller Chunks.
32. JavaScript: Check whether the first character of a string is uppercase or not
33. JS program to find the prime number in the range 50 to 100
34. JavaScript: Search a date within a string.
35. JavaScript: Count the number of vowels in a given string.
36. JavaScript Program to Remove All Whitespaces from a Text.
37. What are the data types supported by JavaScript?
38. Write a JavaScript program to validate the form input field's name, email, and contact number and alert an empty error message if the field is empty.
39. Write a JavaScript program to validate the form input field's name, email, and contact number using pattern matching and an alert error message if the field does not match the pattern.
40. Differentiate between DOM 0 and DOM 2 event models in JS with an example.
41. Create a page a with button and textbox. The textbox should display a value '0' initially. Write a JavaScript function so that when you click the button the value of the textbox increases with 1 per click.
42. Write a program in JavaScript to alter the visibility of an image of an HTML document.
43. Write a program to convert a given string's first letter(alphabet) to uppercase in JS. Ask for a string from the user using a prompt and display the result in the document. Also, ensure the user has provided an alphabet as the first letter.

44. “JavaScript programs the behavior of a webpage”. Explain this statement with a suitable example. Employ the DOM event model in JavaScript to illustrate the dragging and dropping of elements with suitable examples.
45. Provide an example script for stacking elements.
46. Essential differences between objects and primitives in JavaScript.
47. Write a program in JavaScript to validate the username, and password not be a blank and valid email address.
48. Explain any 4 events associated with the mouse.
49. How regular expression(regx) helps in pattern matching.
50. Write a program in JavaScript to display a digital clock on a web page.
51. Write short notes on:
 - a. DOM hierarchy and DOM Tree
 - b. java vs JavaScript
 - c. Client-side scripting VS Server-side scripting
 - d. typeof operator
 - e. let vs var declaration
 - f. constructor ()
52. Write a JS program to create a Digital clock.
53. Write JS code for following
 - a. create an array of the country name Nepal, India, Pakistan, America, Australia, Canada
 - b. Display the length of an array.
 - c. Display the 5th country in your array.
 - d. Convert your array to a string
 - e. Add a new country to the array and display size.
 - f. Pop 1st element from your array
 - g. Pop the last element from your array.
 - h. Separate the array element by *
 - i. Suppose China is 1st country in your array now recover it.
 - j. Change the 3rd country from your array and make it Bhutan.
 - k. Add 3 new countries to the 3rd position from the start but do not remove any country.
 - l. Same as k but remove 2 countries and display those countries which are removed
 - m. Remove 3rd country from the original array.
 - n. Create a new array that takes the value of Pakistan, America, and Australia from the original array.
 - o. Find the reverse of the array
 - p. Now create a second array with number number= [3,0,9,-5,-4,1,6,20,21,19,18,4,2]
 - q. Sort the above array by ascending and descending.
 - r. Find the reverse of the array.
 - s. Find the max and min value from the given array.
 - t. Check whether Nepal exists in it or not

54. Write Short notes on
- fundamentals of ES6.
 - DOM tree
 - Asynchronous communication in JS (XML HttpRequest)

55. Explain Error handling in JS with an example.

56. Explain DOM traverse with an example.

57. Write JS code Using DOM to add new element and remove it.

58. Write a JavaScript program to calculate multiplication and division of two numbers (input from the user).

The screenshot shows a web form with two input fields. The first field is labeled '1st Number :' and contains the value '12'. The second field is labeled '2nd Number:' and contains the value '10'. Below the input fields are two buttons: 'Multiply' and 'Divide'. Below the buttons, the text 'The Result Is :' is displayed, followed by the value '120'.

59. Write a JavaScript program to remove a character at the specified position in a given string and return the modified string.

60. Write a JavaScript program to change the capitalization of all letters in a given string.

61. Write a JavaScript program to remove all characters from a given string that appear more than once.

62. Write a JavaScript function that accepts two numbers as parameters and throws a custom 'Error' if the second number is zero.

63. Write a JavaScript function that takes a number as a parameter and throws a custom 'Error' if the number is not an integer.

64. Write a JavaScript function that takes a number as a parameter and throws a custom 'Error' if the number is negative.

56 ans

HTML

```
<form>
```

```
1st Number : <input type="text" id="firstNumber" /><br>
```

```
2nd Number: <input type="text" id="secondNumber" /><br>
```

```
<input type="button" onClick="multiplyBy()" Value="Multiply" />
```

```
<input type="button" onClick="divideBy()" Value="Divide" />
```

```
</form>
```

```
<p>The Result is : <br>
```

```
<span id = "result"></span>
```

```
</p>
```

JS

```
function multiplyBy()
```

```
{
```

```
    num1 = document.getElementById("firstNumber").value;
```

```
    num2 = document.getElementById("secondNumber").value;
```

```
    document.getElementById("result").innerHTML = num1 * num2;
```

```
}
```

```
function divideBy()
```

```
{
```

```
    num1 = document.getElementById("firstNumber").value;
```

```
    num2 = document.getElementById("secondNumber").value;
```

```
    document.getElementById("result").innerHTML = num1 / num2;
```

65. Write a JavaScript program to test whether the first character of a string is uppercase or not.
66. Write a JavaScript function to count the number of vowels in a given string.
67. Write a JavaScript a function that makes an HTTP GET request and returns a Promise that resolves with the response data.
68. What is dialog box? Explain different dialog boxes with an example.
69. Write any 10 events of JS.
70. Explain user defined and built in functions in detailed.