# JAVASCRIPT DAY 16

## FAQS OF JS

**1. What is a variable in JavaScript?**

**Answer:**

A variable in JavaScript is a container used to store data. Once a value is stored in a variable, you can refer to and manipulate that value throughout your program.

**2. How do you declare a variable in JavaScript?**

**Answer:**

Variables are declared using the var, let, or const keywords.

Example:

let name = "Alice";

const age = 25;

var country = "USA";

**3. What is the difference between var, let, and const?**

**Answer:**

- var: Function-scoped and can be hoisted (initialized after declaration with undefined).
- let: Block-scoped and does not allow hoisting.
- const: Block-scoped and used for constants. Its value cannot be changed once assigned.

**4. Can you change the value of a const variable?**

**Answer:**

No, once a value is assigned to a const variable, it cannot be reassigned.

**5. What is variable hoisting?**

**Answer:**

Hoisting is JavaScript's behavior of moving variable and function declarations to the top of their scope during the compile phase. For var, the declaration is hoisted but not the initialization. For let and const, only the declaration is hoisted, and the variable is in a "temporal dead zone" until initialized.

**6. What are primitive data types in JavaScript?**

**Answer:**

Primitive data types are simple types that store a single value. These include:

- Number
- String
- Boolean
- Undefined
- Null
- BigInt
- Symbol

**7. What is a non-primitive data type in JavaScript?**

**Answer:**

Non-primitive data types are objects and more complex types, including:

- Objects
- Arrays
- Functions
- Classes

**8. What is the difference between undefined and null?**

**Answer:**

- undefined means a variable is declared but not assigned a value.
- null represents an intentional absence of any object value.

**9. What is a BigInt data type?**

**Answer:**

BigInt is a data type used to represent numbers larger than the maximum limit of the Number data type.

Example: let bigNum = 123456789012345678 90n;

**10. What is a Symbol in JavaScript?**

**Answer:**

Symbol is a unique and immutable data type often used to create unique identifiers for object properties.

**11. Can a const variable be used without initialization?**

**Answer:**

No, const variables must be initialized at the time of declaration. It cannot be left uninitialized.

**12. What is the push() method used for in arrays?**

**Answer:**

The push() method is used to add one or more elements to the end of an array.

Example:

```
let fruits = ["apple"];
fruits.push("banana"); // fruits = ["apple", "banana"]
```

**13. What is the difference between var and let in terms of scope?**

**Answer:**

- var is function-scoped, meaning it is accessible throughout the entire function.
- let is block-scoped, meaning it is only accessible within the block (e.g., loops, conditionals) in which it is declared.

**14. Can you declare the same variable multiple times in the same scope?**

**Answer:**

- With let and const, you cannot declare the same variable multiple times in the same
- scope.
- With var, redeclaration is allowed but not recommended.

**15. How do you create a function in JavaScript?**

**Answer:**

A function is created using the function keyword followed by its name and a block of code:

```
function greet() {
console.log("Hello!");
}
```

**16. What is the purpose of the return statement in functions?**

**Answer:**

The return statement is used to return a value from a function to the caller. It also terminates the function's execution.

**17. What is the output of console.log(5 == "5");?**

**Answer:**

The output is true, because the == operator performs type coercion, converting the string "5"

to a number before comparison.

**18. How do you check if a variable is undefined?**

**Answer:**

You can check if a variable is undefined using the typeof operator:

if (typeof variable === "undefined") {

console.log("Variable is undefined");

}

**19. What is the typeof operator used for in JavaScript?**

**Answer:**

The typeof operator is used to check the data type of a variable or expression. It returns a string representing the type of the operand.

**Example:**

let x = 10;

console.log(typeof x); // Output: "number"

**20. What is the output of console.log(5 === "5");?**

Answer:

The output is false, because the === operator checks both value and type, and 5 (number) is not equal to "5" (string).

**21. what is global polluting issue?**

**Answer:**

Declaring too many global variables can cause conflicts and affect the program. Using let and const helps avoid global pollution by limiting scope to blocks.

**22. What are template literals in JavaScript?**

**Answers:**

Template literals in JavaScript were introduced in ES6 and are enclosed in backticks (``).

They allow you to easily embed variables inside strings using ${} and create multiline strings.

**Example:**

```
var sub = `ReactJS`;

var wish = `Welcome to ${sub}`;

document.write(wish, `<br>`);
```

Output: Welcome to ReactJS

## MCQS OF DAY 16 WITH ANSWERS

1. What is a variable used for in JavaScript?

   **A. To store data or information**

2. Which of the following is a valid variable declaration in JavaScript?

   **B. let $name;**

3. Variable names in JavaScript are case-sensitive. Which of the following is true?

   **B. age and Age are treated differently.**

4. Which of the following keywords can declare a variable in JavaScript?

   **A. var, let, const**

5. What is the scope of a var variable?

   **C. Function scope**

6. Which keyword does not allow hoisting in JavaScript?

   **B. let**

7. Which of the following is true about const variables?

   **C. They are block-scoped.**

8. What is the output of the following code?

   **var x = 10;**

   **console.log(x);**

   **C. 10**

9. Which data type is NOT a primitive data type?

   **A. Object**

10. Which of the following is a valid example of a BigInt in JavaScript?

    **A. 123n**

11. What will be the output of the following code?

    **let x;**

    **console.log(x);**

    **B. undefined**

12. Which operator is used in a ternary condition?

**C. Both ? and :**

13. What is the output of this ternary operation?

```
let age = 16;
let result = (age >= 18) ? "Adult" : "Minor";
console.log(result);
```

**B. Minor**

14. What is the difference between undefined and null in JavaScript?

**B. Undefined means a variable is declared but not assigned a value, while null means "nothing."**

15. Which of the following is an example of an object?

**A. let obj = {name: "John", age: 25};**

16. What does the following code do?

```
function greet() {
   console.log("Hello!");
}
  greet();
```

**C. Declares and calls a function**

17. What is the scope of a let variable?

**B. Block scope**

18. What is the difference between var and let?

**B. var is function-scoped, while let is block-scoped.**

19. Which data type would you use for storing a person's age?

**B. Number**

20. Which of the following is true about arrays in JavaScript?

**B. Arrays can store multiple data types.**

21. Which of the following is an example of a Symbol data type?

**B. let sym = Symbol("id");**

22. What does the following code do?

```
let fruits = ["apple", "banana", "cherry"];
console.log(fruits[1]);
```

**B. Creates an array and prints the second element**

**23.** What is a class used for in JavaScript?

**B. To create objects**

24. What is the result of the following expression?

**let result = (5 > 3) ? "Yes" : "No";**

**console.log(result);**

**A. Yes**

25. Which of the following is an example of a primitive data type?

**C. Boolean**

26. What is hoisting in JavaScript?

**A. Using a variable before declaring it**

27. What is the output of the following code?

**console.log(x);**

**let x = 5;**

**D. Error**

**28.** What is a ternary operator?

**A. A shortcut for an if-else statement**

29. What happens if you don't initialize a const variable?

**B. It will throw an error.**

30. What type of data is stored in an array?

**C. Any type of data**

31. What will the following code print?

**let x = 100;**

**console.log(x + 5);**

**B. 105**

32. Which data type is used for storing textual data in JavaScript?

**B. String**

33. Which of the following is NOT a non-primitive data type?

**D. Number**

34. How do you define a function in JavaScript?

**A. function myFunction() {}**

35. What is the default value of an uninitialized variable?

**B. undefined**

36. Which method is used to add elements to the end of an array?

**A. push()**

37. What is the result of the following code?

```
let x = "Hello";
let y = 5;
console.log(x + y);
```

**A. Hello5**

38. What is the output of the following code?

```
let x = 10;
let y = "10";
console.log(x == y);
```

**A. true**

**39.** Which method is used to remove the last element from an array?

**A. pop()**

40. What is the output of the following code?

```
let a = 10;
let b = a;
a = 20;
console.log(b);
```

**A. 10**