**Q.1 What is JavaScript. How to use it?**

**Ans**  JavaScript is a versatile programming language primarily used for creating dynamic and interactive elements on web pages. Originally designed to run in web browsers, it has now extended its reach to server-side development, desktop applications, and even mobile app development through frameworks like React Native.

**Q.2 How many type of Variable in JavaScript?**

**Ans** A JavaScript variable is simply a name of storage location. There are two types of variables in JavaScript : local variable and global variable. There are some rules while declaring a JavaScript variable (also known as identifiers). Name must start with a letter (a to z or A to Z), underscore ( \_ ), or dollar( $ ) sign.

**Q.3 Define a Data Types in js ?**

**Ans** (1)Primitive Data Types:

String: Represents text data enclosed within single ('') or double ("") quotes.

Number: Represents numeric data, including integers and floating-point numbers.

Boolean: Represents a logical value, either true or false.

Null: Represents the intentional absence of any value.

Undefined: Represents a variable that has been declared but has not been assigned a value.

Symbol: Introduced in ECMAScript 6 (ES6), represents a unique identifier.

(2)Composite Data Types:

Object: Represents a collection of key-value pairs, where keys are strings (or symbols) and values can be any data type, including other objects.

Array: Represents an ordered collection of values, where each value can be of any data type, and elements are accessed by their numerical index.

Function: Represents a reusable block of code that can be invoked with zero or more arguments.

**Q.4 Write a mul Function Which will Work Properly When invoked With Following Syntax.**

**Ans** The MUL function is a miniature of the multiplication function. In this function, we call the function that required an argument as a first number, and that function calls another function that required another argument and this step goes on.

**Q.5 What the deference between undefined and undeclare in JavaScript?**

**Ans**  1. Undefined: In JavaScript, "undefined" is a special value that represents the absence of a value. It is a primitive data type that indicates that a variable has been declared but has not been assigned a value, or a function has been declared but has not been defined. For example:

javascript

Copy code

Let x;

console.log(x

functionfoo() {

}

console.log(foo());

In the above example, the variable x is declared but not assigned a value, so its value is undefined. Similarly, the function foo is declared but has no return statement, so when it is called, it returns undefined.

2. Undeclared: "Undeclared" refers to a situation where a variable is used without being declared using the var, let, or const keyword. In such cases, JavaScript will throw a ReferenceError because it does not recognize the variable. For example:

javascript

Copy code

console.log(y);

In the above example, y is used without being declared, so JavaScript throws a ReferenceError because it cannot find any declaration for the variable y.

**Q.6 Using console.log() print out the following statement: The quote 'There is no exercise better for the heart than reaching down and lifting people up.' by John Holmes teaches us to help one another. Using console.log() print out the following quote by Mother Teresa:**

**Ans** console.log("The quote 'There is no exercise better for the heart than reaching down and lifting people up.' by John Holmes teaches us to help one another.");

console.log("The quote 'If you can't feed a hundred people, then feed just one.' by Mother Teresa teaches us to help those in need.");

**Q.10 What is Condition Statement?**

**Ans** Conditional statements in programming are used to control the flow of a program based on certain conditions. These statements allow the execution of different code blocks depending on whether a specified condition evaluates to true or false, providing a fundamental mechanism for decision-making in algorithms. In this article, we will learn about the basics of Conditional Statements along with their different types.

**Q.15 What is the result of the expression (5 > 3 && 2 < 4)?**

**Ans** The result of the expression (5 > 3 && 2 < 4) is true.

**Q.16 What is the result of the expression (true && 1 && "hello")?**

**Ans**  The result of the expression (true && 1 && "hello") is "hello".

**Q.17 What is the result of the expression true && false || false && true?**

**Ans** The result of the expression true && false || false && true is false.

**Q.18 What is a Loop and Switch Case in JavaScript define that ?**

**Ans**  A loop is a programming construct that allows you to execute a block of code repeatedly until a specified condition is met.

in JavaScript used to perform different actions based on different conditions. It's an alternative to using multiple if-else statements, especially when there are multiple possible conditions to check

Switch case evaluates an expression and compares it against multiple cases. If a case matches, the corresponding block of code is executed. The break statement is used to exit the switch block after a case is matched. If no case matches, the code inside the default block is executed (if it's provided).

**Q.19 What is the use of is Nan function?**

**Ans** The isNaN() function in JavaScript is used to determine whether a value is NaN (Not-a-Number) or not.

NaN is a special value in JavaScript that represents a value which is "not a number". It typically arises as a result of a mathematical operation that cannot produce a meaningful numeric result. For example, dividing zero by zero or attempting to convert a non-numeric string to a number can result in NaN.

**Q.20 What is the difference between && and || in JavaScript?**

**Ans**  Logical AND (&&):

The logical AND operator (&&) returns true if both operands are true, otherwise it returns false.

If the first operand evaluates to false, the second operand is not evaluated because the result will always be false regardless of its value.

Example: true && true evaluates to true, true && false evaluates to false.

Logical OR (||):

The logical OR operator (||) returns true if at least one of the operands is true, otherwise it returns false.

If the first operand evaluates to true, the second operand is not evaluated because the result will always be true regardless of its value.

Example: true || false evaluates to true, false || false evaluates to false.