

# Technical Interview Questions & Answers

## 1. What is OOP?

OOP (Object Oriented Programming) is a programming paradigm based on objects and classes.

It includes concepts like Encapsulation, Inheritance, Polymorphism, and Abstraction.

## 2. What is the difference between C++ and Java?

C++ supports pointers and multiple inheritance.

Java is platform-independent and does not support pointers directly.

## 3. What is a Constructor?

A constructor is a special method used to initialize objects.

It has the same name as the class and no return type.

## 4. What is Polymorphism?

Polymorphism means one name, many forms.

It is achieved using method overloading and method overriding.

## 5. What is Inheritance?

Inheritance allows one class to acquire properties and methods of another class.

## 6. What is Encapsulation?

Encapsulation is wrapping data and methods into a single unit (class) and restricting direct access using private variables.

## 7. What is the difference between ArrayList and LinkedList?

ArrayList uses a dynamic array and provides fast random access.

LinkedList uses a doubly linked list and provides faster insertion/deletion.

## 8. What is a HashMap?

HashMap stores data in key-value pairs and does not allow duplicate keys.

**9. What is SQL?**

SQL (Structured Query Language) is used to manage and manipulate relational databases.

**10. What is HTML, CSS, and JavaScript?**

HTML is used for structure, CSS for styling, and JavaScript for interactivity.

**11. What is REST API?**

REST API is a web service that follows REST architecture principles for communication between client and server.

**12. What is Git?**

Git is a version control system used to track code changes.

**13. What is the difference between var, let, and const in JavaScript?**

var has function scope.

let and const have block scope.

const cannot be reassigned.

**14. What is Exception Handling?**

Exception handling is a mechanism to handle runtime errors using try, catch, and finally blocks.

**15. What is a Database?**

A database is an organized collection of structured information or data.

**Best of Luck for Your Interview!**