

# 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!