**What is Inheritance in C++?**

**Inheritance** in C++ is a feature of **Object-Oriented Programming (OOP)** that allows a **class (child/derived class)** to acquire the properties and behaviors (data and functions) of another **class (parent/base class)**.

There are five types of inheritance: -

1. Single: - One derived class inherits from one base class

Example:

class Employee {

public:

void work () {cout << "Working..." << endl; }

};

class Manager: public Employee {

public:

void manage Team () {cout << "Managing team..." << endl; }

};

1. Multiple: - One derived class inherits from **multiple base classes**

**Example:**

class Artist {

public:

void draw () {cout << "Drawing art..." << endl; }

};

class Programmer {

public:

void code () {cout << "Writing code..." << endl; }

};

class Game Developer: public Artist, public Programmer {};

1. **Multilevel: - A class inherits from a class, which itself inherits from another class**

**Example:**

class Vehicle {

public:

void move () {cout << "Moving..." << endl; }

};

class Car: public Vehicle {};

class Electric Car: public Car {

public:

void charge () {cout << "Charging battery..." << endl; }

};

1. **Hierarchical: -** **Multiple derived classes inherit from a single base class**

**Example:**

class Device {

public:

void power on () { cout << "Powering on..." << endl; }

};

class Phone: public Device {};

class Laptop: public Device {};

1. Hybrid: - Combination of two or more types of inheritance

Example:

class Person {

public:

void speak () {cout << "Speaking..." << endl; }

};

class Teacher: public Person {};

class Researcher: public Person {};

class Professor: public Teacher, public Researcher {};