

* Write a C++ code to find & print the max & min values in an array of integers using pointers. TCS Sep-27th 2024

* templates in C++ are same as Generics in Java. They help us to create user-defined types which can accept any kind of data
Syntax: `template <typename T>`

Introduction to Object Oriented Programming

Benefits of OOP over POP :->

- * Code reusability -> Inheritance
- * Code reliability
- * Better readability -> classes
- * Data Security -> Encapsulation & Abstraction
- * Scalability -> Upscale & downscale.
- * Efficiency -> Save a lot of time.

C++
Java
Python
JS

Real World Entity :-> [Employee]

Class Employee {

String Name;

int Age;

String Company;

}

e1 (Sahana, 29, 30,000);

employeeDetails(); (Behaviours)

class -> It is a template / prototype / blueprint to create objects.

object -> It is an instance / reference / key of a class. It can be used to access all the data inside the class.

Note: Class has no memory. Object has heap memory.

In an OOP language, a function is generally called a method, because it describes the behaviour of the object. *****

Object Creation Syntax:->

Java:-> `ClassName obj = new ClassName();`

C++ Syntax 1 -> `classname obj = classname();`

Syntax 2 -> `classname obj;`

Note: We don't use 'new' keyword for object creation in C++. 'new' keyword is only meant for Dynamic Memory Allocation in C++.

* A class in C++ is private by default.

When we create an object, `ClassName obj = ClassName();`

Constructor: It is a special method of the class used to initialize objects.

This is the default Constructor

* The syntax is class name followed by parentheses. ().

* The constructor if not created, the compiler creates a default constructor.

* Two types -> default or no-argument constructor & parameterized constructor.

* When we create our constructor, the default constructor gets deleted.

* There can be n number of constructors in a class. This is called -> Constructor Overloading

* A constructor should be always public. -> Poly morphism

Access Specifiers

Access Modifiers Package = folder

	Modifier Name	Inside Class	Outside Class	Inside Package	Outside Package
C++	public	Yes	Yes	Yes	Yes
	private	Yes	No	No	No
	protected	Yes	Yes	Yes	Yes (Inheritance)
Java	default (pr)	Yes	Yes	Yes	No