**MODULE: 4.1 (C++ Basic)**

• WAP to print “Hello World” using C++

[**https://github.com/Viveky1208/opp-concept/blob/master/hello%20world.cpp**](https://github.com/Viveky1208/opp-concept/blob/master/hello%20world.cpp)

• What is OOP? List OOP concepts

Object-oriented programming is a programming paradigm based on the concept of "objects", which can contain data and code. The data is in the form of fields, and the code is in the form of procedures. A common feature of objects is that procedures are attached to them and can access and modify the object's data fields.

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• What is the difference between OOP and POP?

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| --- | --- | --- | --- |
| **Sr. No.** | **Key** | **OOP** | **POP** |
| **1** | **Definition** | OOP stands for Object-Oriented Programming. | POP stands for Procedural Oriented Programming. |
| **2** | **Approach** | OOP follows a bottom-up approach. | POP follows a top-down approach. |
| **3** | **Division** | A program is divided into objects and their interactions. | A program is divided into functions and they interact. |
| **4** | **Inheritance supported** | Inheritance is supported. | Inheritance is not supported. |
| **5** | **Access control** | Access control is supported via access modifiers. | No access modifiers are supported. |
| **6** | **Data Hiding** | Encapsulation is used to hide data. | No data hiding present. Data is globally accessible. |
| **7** | **Example** | C++, Java | C, Pascal |

**MODULE: 4.2 (Programing with C++)**

• WAP to create simple calculator using class

[**https://github.com/Viveky1208/opp-concept/blob/master/simple%20calculator.cpp**](https://github.com/Viveky1208/opp-concept/blob/master/simple%20calculator.cpp)

• Write a program to find the multiplication values and the cubic values using inline function

<https://github.com/Viveky1208/opp-concept/blob/master/multiplication%20values%20and%20the%20cubic%20values%20using%20inline%20function.cpp>

• Write a Program of Two 1D Matrix Addition using Operator Overloading

<https://github.com/Viveky1208/opp-concept/blob/master/operator%20overloading.cpp>

• Write a program to concatenate the two strings using Operator Overloading

<https://github.com/Viveky1208/opp-concept/blob/master/concanate%20Operator%20Overloading.cpp>

• Write a program to calculate the area of circle, rectangle and triangle using Function Overloading Rectangle: Area \* breadth

Triangle: ½ \*Area\* breadth

Circle: Pi \* Area \*Area

<https://github.com/Viveky1208/opp-concept/blob/master/area%20of%20circle%2C%20rectangle%20and%20triangle.cpp>

• Write a program to swap the two numbers using friend function without using third variable

<https://github.com/Viveky1208/opp-concept/blob/master/swap%20funtion.cpp>

• Write a program to find the max number from given two numbers using friend function

<https://github.com/Viveky1208/opp-concept/blob/master/max%20number.cpp>