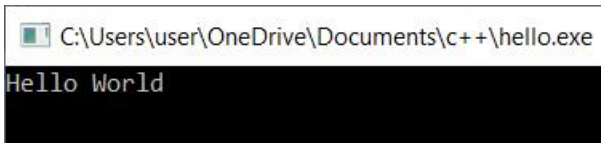
MODULE: 4.1 (C++ Basic)

1. WAP to print “Hello World” using C++

Code:

```
#include<iostream>
using namespace std;
int main(){
	cout<<"Hello World"<<endl;
	return 0;
}
```

Output:



2. What is OOP? List OOP concepts

OOPs refers to languages that use objects in programming, they use objects as a primary source to implement what is to happen in the code. Objects are seen by the viewer or user, performing tasks assigned by you. Object-oriented programming aims to implement real-world entities like inheritance, hiding, polymorphism etc. in programming. The main aim of OOP is to bind together the data and the functions that operate on them so that no other part of the code can access this data except that function.

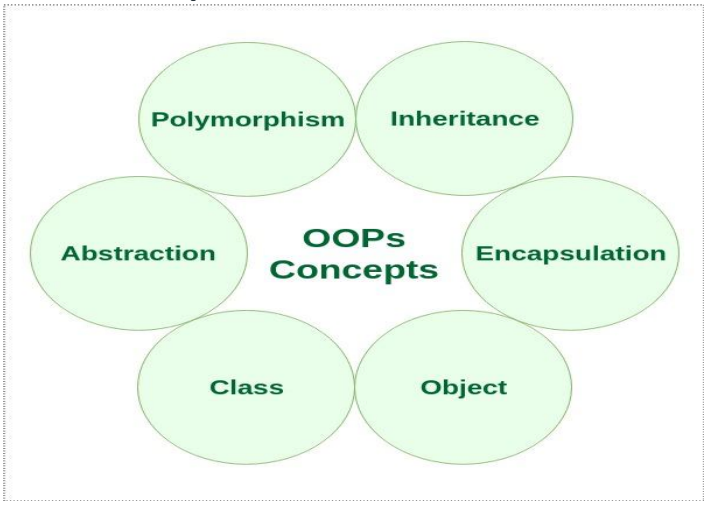
Access Modifier: Defines the **access type** of the method i.e. from where it can be accessed in your application. In Java, there are 4 types of access specifiers:
public: Accessible in all classes in your application.

protected: Accessible within the package in which it is defined and in its **subclass(es) (including subclasses declared outside the package)**.

private: Accessible only within the class in which it is defined.

default (declared/defined without using any modifier): Accessible within the same class and package within which its class is defined.

OOPs concept:



3. What is the difference between OOP and POP?

❖ Object-Oriented Programming (OOP):

- OOP treats data as a critical element in the program development and does not allow it to flow freely around the system.
- In OOP, the major emphasis is on data rather than procedure (function).
- It ties data more closely to the function that operate on it, and protects it from accidental modification from outside function.
- OOP allows decomposition of a problem into a number of entities called objects and then builds data and function around these objects.
- The data of an object can be accessed only by the function associated with that object. However, function of one object can access the function of other objects.
- C++, Java, Dot Net, Python etc are the example of Object oriented programming (OOP) language.

❖ Procedural Oriented Programming (POP):

- In the procedure oriented approach, large programs are divided into smaller programs known as functions.
- In POP, a program is written as a sequence of procedures or function.
- In POP, each procedure (function) contains a series of instructions for performing a specific task.
- During the program execution each procedure (function) can be called by the other procedures.
- To call a procedure (function), we have to write function name only.

- While we concentrate onto the development of functions, we give very little attention to the data that are being used by various functions.

- In POP, the major emphasis is on procedure (function) and not on the data.