MODULE 4.1 (C++ BASIC)

QUESTION 2: What is OOP? List OOP concepts.

ANSWER: OOP is object oriented programming, in order to remove some flaws of POP (procedure oriented programming) OOP came into existence.
OOP treats data as critical in the program development ,it bind the data to the function that operate on it and does not allow it to move freely in the system.
In OOP the program is divided into number of entities called object and then data and functions are built around these objects.

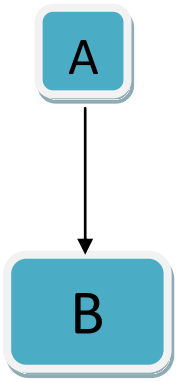
List of OOP CONCEPTS :

1) Class
2) Objects
3) Inheritance
4) Encapsulation / data binding
5) Polymorphism
6) Access specifire /modifier/data hiding

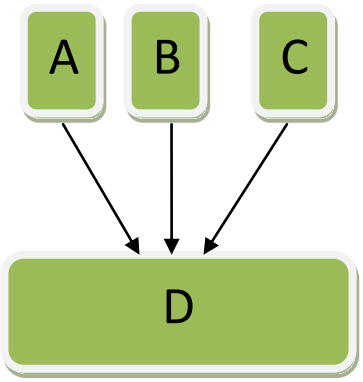
In detail:

1) Class : These contain data and function together in it These does not occupy any memory the memory occupied is of objects.
2) Objects : These are the instance of class .
3) Inheritance : This is one of the most importance feature of oop, the capability of class to derive the properties of another class is called inheritance. Like there is already a class and we want to make a new class by using some codes which previously made class had so we can access that codes by reusing it through inheritance.
   There are 5 types of inheritance:
   1. Single inheritance
   2. Multiple inheritance
   3. Multilevel inheritance
   4. Hierarchical inheritance
   5. Hybrid inheritance

Single inheritance

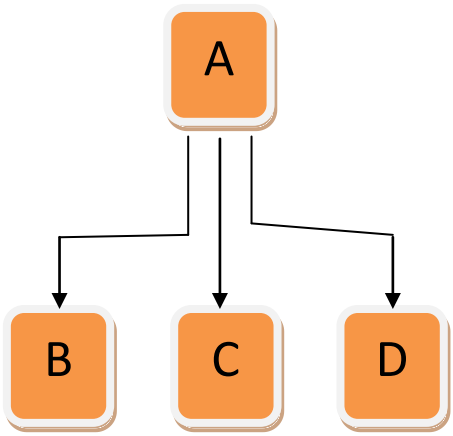


Multiple inheritance

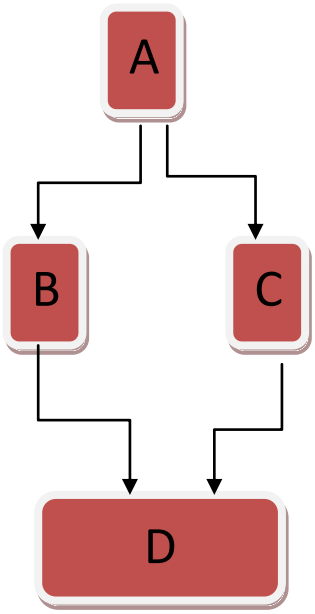


Multilevel inheritance

Hierarchical inheritance



Hybrid inheritance



4) Encapsulation /data binding

In a oop encapsulation is define as a wrapping up of a data in a single unit

Or we can say that binding together a data and function.

5) Polymorphism

   Poly means many and morphism means forms , it means many forms.

   C++ has two types 1. Method overloading 2. Method overriding.

6) Accessspecifire / modifire /data hiding

   There are 3 type of Accessspecifire:

   1.private = only particular class can access

   2.public = it can be access anywhere

   3.protected = used where inheritance class can access.

QUESTION 3: What is the difference between OOP and POP?
Answer :

Procedural oriented programming	Object oriented programming
POP focus on procedure .	OOP focus on data rather than procedure.
In POP large program are divided into smaller programs known as functions.	In OOP program is divided into objects.
Most of the function share global data.	Functions are not global.
Data move openly around the system from function to function.	Data is hidden and cannot be access freely.
It uses top down approach.	It follows bottom up approach .
Example – c programming, COBOL,PASCAL etc.	Examples – c++, java, dot net,phython etc.