**Question**: What is OOP?

**Answer**: OOP stands for object oriented programming.

**Question**: List OOP concepts

**Answer**: OOP concepts are as follows.

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| **Class:** | It is a collection of data-members (variables) and member-functions (functions). The building block of C++ that leads to Object-Oriented programming is a Class. It is a user-defined data type, which holds its own data members and member functions. |
| **Objects:** | It is an instance of a class. |
| **Encapsulation:** | It is a wrapper class in which all data members and member functions are wrapped in a single class.  The meaning of **Encapsulation**, is to make sure that "sensitive" data is hidden from users. To achieve this, you must declare class members as private (cannot be accessed from outside the class). If you want others to access members of a class, you can provide method to access members of the class. |
| **Inheritance:** | Inheritance means to inherit attributes and methods from one class to another. We group the "inheritance concept" into two categories:   * **derived class** (child / sub) - the class that inherits from another class * **base class** (parent / super) - the class being inherited from   There are five type of inheritance as follows. |
| **Polymorphism:** | Polymorphism means "many forms", and it occurs when we have many classes that are related to each other by inheritance. Like we specified in the previous chapter; Inheritance lets us inherit attributes and methods from another class. Polymorphism uses those methods to perform different tasks. This allows us to perform a single action in different ways. |
| **Data Abstraction:** | Abstraction means displaying only essential information and hiding the details. Data abstraction refers to providing only essential information about the data to the outside world, hiding the background details or implementation. |