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INFORMATION TECHNOLOGY FOR CLASS 12

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Data Encapsulation:

- ❖ Data encapsulation means wrapping of data and functions into a single unit.
- ❖ The data is not accessible to the outside world and only functions which are wrapped in the class can access it. Thus insulation of data from direct access it. Thus insulation of data from direct access from program is called data hiding.

Inheritance:

- ❖ Inheritance is the process by which object of one class can acquire the properties of the objects of other classes.
- ❖ Inheritance means one class of object inherits the data and behavior (methods) from another class.
- ❖ The old class is referred as a base class and new class is called as derived class. The new class has combined features of both the classes.

Polymorphism: Polymorphism is the ability to take more than one form.

Data Abstraction:

- ❖ Data abstraction refers to act of representing essential features without including background details or explanations.
- ❖ Classes use the concept of abstraction. They encapsulate all essential properties of objects that they are to be created. Since, the class used the concept of data abstraction they are known as Abstract Data Type (ADT).

Class:

- ❖ In all programming languages, we create variable of built in data types like `int a;`. This statement declares a variable 'a' of data type 'int' which means that 'a' can hold any integer data.
- ❖ Similarly we can create a variable of user defined data type, Java provides the concept of classes. A class is a blueprint / template from which individual objects are created.
- ❖ A class consists of data and methods. A class is a collection of objects of similar type of objects. Classes are user defined data type. Once, class has been defined, we can create any number of object belonging to that class

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