

Encapsulation :

Means **hiding data** within a file, preventing it from outside factors. It helps you control your program and prevent it from becoming too complicated.

Encapsulation can be achieved by:

- Declaring the class properties as **private** by using **underscore (_)**.
- Providing public **getter** and **setter** methods to access and update the value of private property.

Polymorphism :

Means the ability of objects of different classes to be treated as objects of a common superclass. It allows you to write code that can work with **objects of different types**, as long as they share a common interface or superclass.

Abstraction :

Abstract classes are used to define common interfaces, **enforce method implementations in subclasses**, and provide a blueprint for creating related classes. **They cannot be instantiated directly** but are meant to be extended by subclasses to inherit their properties and methods.

Static :

Static is a keyword that can be used to define class members (variables and methods) **that belong to the class itself rather than to instances of the class.**

- **Static Variables :**

Static variables are declared using the “static” keyword within a class. They are shared among all instances of the class. Static variables are initialized only once and retain their values across multiple instances. They can be accessed using the class name itself, without creating an instance.

- **Static Methods:**

Static methods belong to the class itself, rather than the instances of the class. They can be called without creating an instance of the class. Static methods are useful for performing operations or computations that are not specific to any particular instance.