***Abstract class*** in Dart

* A class containing an abstract method must be declared abstract whereas the class declared abstract may or may not have abstract methods i.e. it can have either abstract or concrete methods
* A class can be declared abstract by using **abstract** keyword only.
* A class declared as abstract can’t be initialized.
* An abstract class can be extended, but if you inherit an abstract class then you have to make sure that all the abstract methods in it are provided with implementation.

Generally, abstract classes are used to implement the abstract methods in the extended subclasses.

The **static** keyword is used for memory management of global data members. The static keyword can be applied to the fields and methods of a class. The static variables and methods are part of the class instead of a specific instance.

* The static keyword is used for a class-level variable and method that is the same for every instance of a class, this means if a data member is static, it can be accessed without creating an object.
* The static keyword allows data members to persist Values between different instances of a class.
* There is no need to create a class object to access a static variable or call a static method: simply put the class name before the static variable or method name to use them.

# **Encapsulation**

Encapsulation is a mechanism for hiding important and sensitive data from users. To use encapsulation, you make the field private and use the public getters and setters to access and set the value of that field. In Dart, encapsulation is done at the library level, not at the class level. To provide default getters and setters, you can get and set values directly using field names. We can say encapsulation is building code into a single unit where you can determine the scope of each piece of data.

# **Polymorphism**

Poly means ****many**** and morphism means ****forms.****Polymorphism is generally used to achieve the inheritance mechanism. This is one of the key parts of object-oriented programming concepts that help reduce the time and effort of writing repetitive code and provide the flexibility to override. We say polymorphism means the ability of a variable, function, or object to take on multiple forms.