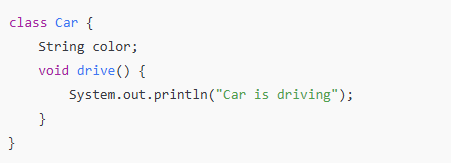
Java OOPs – Object oriented programming system: are the pillar or the foundation of the language.

They help in designing programs using real world entities like objects and class.

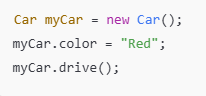
1. Class

Class is collection of an objects; it defines the properties and behaviours.



1. Object

Object is an instance of a class, represent the real-world entity.

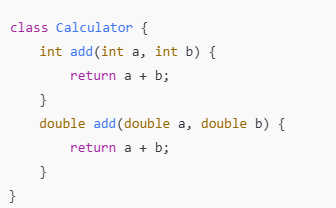


1. Inheritance

Inheritance allows to inherit the properties and method from one class to other class, It’s support code reusability.

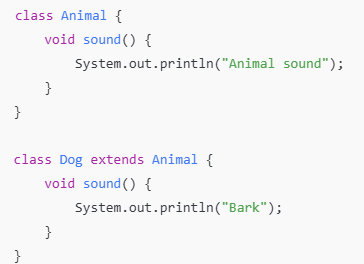
1. Polymorphism

Compile time polymorphism/Overloading



Runtime polymorphism/Overriding

1. Encapsulation



Abstraction

**Abstract Class**

* If class is having abstract method, then that class called as abstract class and class can have both the methods.
* We can use all the modifier except the private in the abstract class

**Interface**

* All methods are abstract method in the parent class, using **implements** keyword we can access the method available in the interface class.
* In inheritance it mandatory to use the public access specifier

**Interface**

1. Interface is used to

1. Its use to achieve the 100 % abstraction

2. Class should define the method available in the Interface.

**What is Abstraction?**

Abstraction is process of hiding implements details from the user, only the functionality is provided to the user. In other words, the user will have the information on what object dose instead of how it dose.

**Abstract Classes and Methods**

If class have implemented method and non-implemented method that class called as abstract class. Method without implemented called as Abstract class.

|  |  |
| --- | --- |
| **Interfaces** | **Abstraction** |
| All Methods are abstracts | If class have implemented method and non-implemented method that class called as abstract class.  Method without implemented called as Abstract class. |
| access specifier must be a public, variable defined must be public, static and final | private access is not allowed in the abstraction  Except private variable we can have any access specifier |
| To implement an interface, we use implements Keywords | extends keyword is used to implement |

**Uses of Inheritance in Java**

1. Inherit the properties of parent class

Java does not allow the multiple inheritance it is allow using the interfaces