Object Oriented Programming

in

Object Oriented programming

- It is the way(methodology) of writing program like real world objects.

- In this everything will be in the form of objects.

- Every object contains 3 characteristics ,
  1. State/Properties
  2. Behaviour
  3. Identity

How can we identify a person?

How can we identify a CAR?

State (properties of obj)

- Hands
- Legs
- Color
- Height
- Weight

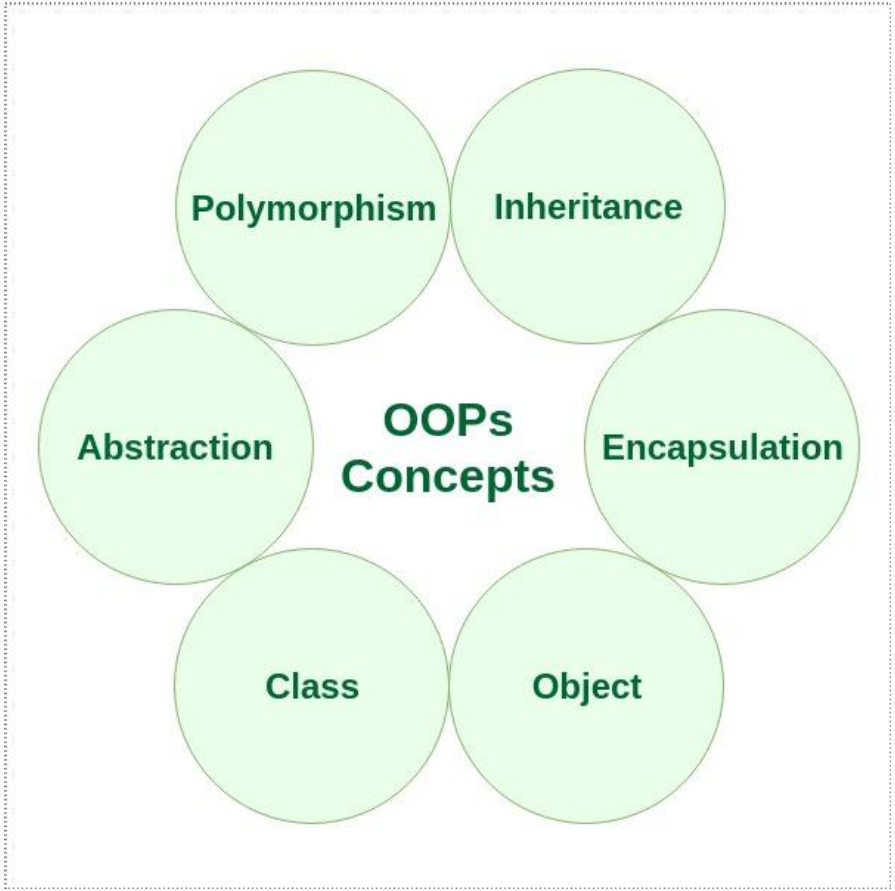
Behaviour(Action of obj)

- Walking
- Singing
- Playing
- Riding
- Dancing

Identity(identification number)

- Every person has unique with others
- Likewise here also object has different identity

OOP

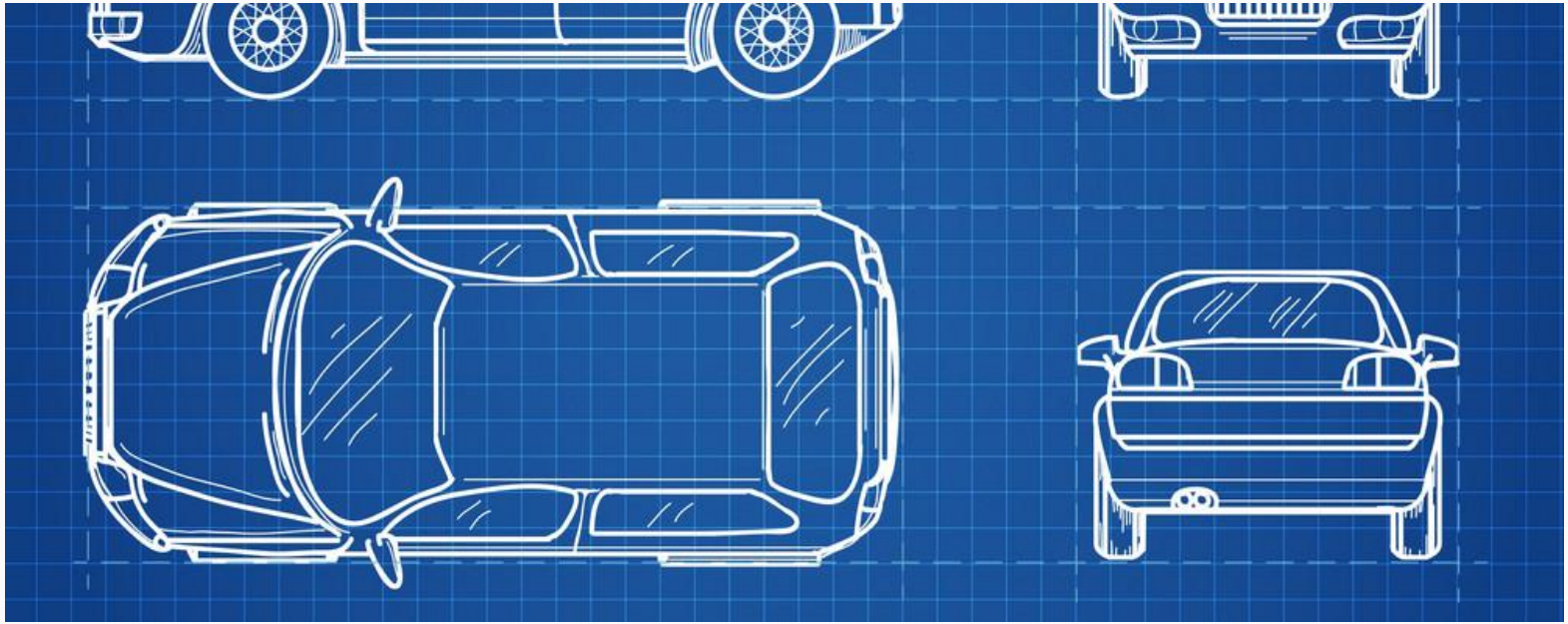

Polymorphism
Inheritance
Abstraction
OOPs Concepts
Encapsulation
Class
Object

Technical words in OOP

- Class
- Object
- Constructor
- Method
- inheritance

class

- A class is a blueprint or prototype from which objects are created



```
class className:
        # implementation
```

- class

  Class is keyword here

- className

  We have to give

object

- An object is physical entity in memory

```
class className:
        # implementation
```

```
Obj = className(arg)
```

We can use className()

To create object

How can we construct a CAR?

Constructor

- A constructor is responsible for preparing the object for action, and in particular establishing initial values for all its data

```
class Car:
        def __init__(self,color):
                self.color= color


 obj1 = Car('Red')
 Obj2 = Car('Green')
```

Behaviour of Car

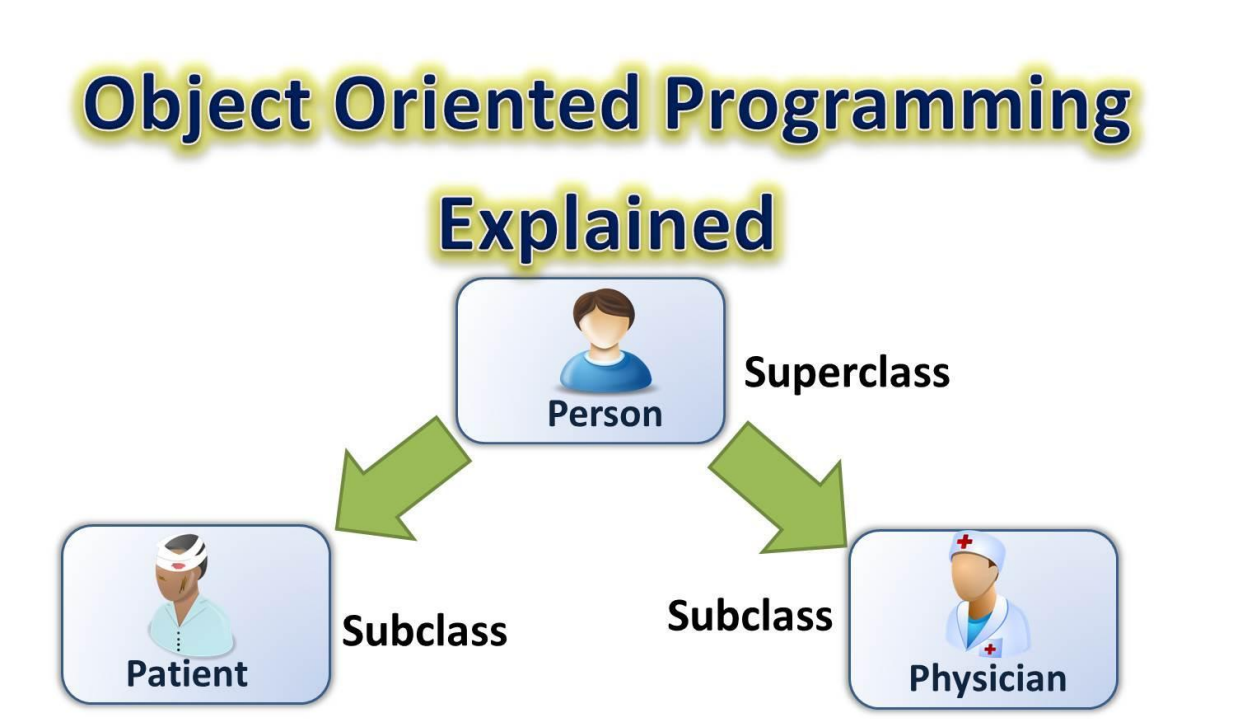
```
class Car:
        def __init__(self,color):
                self.color= color

        def  start(self):
                # implement

        def  stop(self):
                # implement


 obj1 = Car('Red')
 Obj2 = Car('Green')
```

Inheritance



Let’s try it out