

Introduction to Inheritance

- Inheritance is acquiring features in a class from an existing class
- Inheritance is like **parent - child relation** , a child class can have all of its parent features plus his own features
- The main advantage of Inheritance is **reusability** of code
- Every class in python directly or indirectly is inheriting from **object class**
- Suppose you want to access features of rectangle in cuboid as they are almost same then you can do the following

```
class Rectangle: # rectangle class
    def __init__(self,l,b): # initializing instance method
        self.length = l
        self.breath = b
    def area(self): # method on finding area of rectangle
        return self.length * self.breath
    def perimeter(self): # method on finding perimeter of rectangle
        return 2 *(self.length + self.breath)

class Cuboid(Rectangle): # creating class Cuboid inheriting features from Rectangle class
    def __init__(Cuboid, self):
        self.height = h

    def volume(self): # method on finding volume of a cuboid
        return self.length*self.breath*self.height
```

Rectangle



length

breath

Cuboid



height

length

breath