Data Abstraction

- ❖ Abstraction means **Data hiding** ,in other word we can say that in this type of programming essential data is shown to the user or outside class and unessential data is hidden.
- ❖ In Python if we want to perform data hiding then it can be done by using **double underscore(__)** prefix with variables or functions then they can not be accessed outside that function.

Normal Example

```
    #defining base class
    class Test1:
        x=10
        y=20
        def myFun1(self):
            print("This is function1")
    class Test2(Test1):
        def myFun2(self):
            print("This is function2")
            #Calling base class function and variable
            print(self.x)
            self.myFun1()
    #creating object
    obj=Test2()
    obj.myFun2()
"""
**Output**
This is function2
10
This is function1
"""
```

Example With Data Hiding

```
    #defining base class
    class Test1:
        #Adding double underscore
        __x=10
        y=20
        def myFun1(self):
            print("This is function1")
    class Test2(Test1):
        def myFun2(self):
            print("This is function2")
            #Calling base class function and variable
            print(self.x)
            self.myFun1()
    #creating object
    obj=Test2()
    obj.myFun2()
"""
**Output**
This is function2
Traceback (most recent call last):
AttributeError: 'Test2' object has no attribute 'x'
"""
```