In [36]:

```
# Example 01
class Person:
    def __init__(self, name, age):
        self.name = name
        self.age = age

person1= Person("Abdul Wasay", 18)
print(person1.name, person1.age)

person2 = Person("Ahmed", 19)
print(person2.name,person2.age)
```

```
Abdul Wasay 18
Ahmed 19
```

In [37]:

```
# Example 02
class Person:
    def __init__(self, name, age):
        self.name = name
        self.age = age

    def description(self):
        print("Hello my name is " + self.name)

p1 = Person("Ali", 36)
p1.description()
```

```
Hello my name is Ali
```

In [1]:

```
# Example 03
class Person:
    def __init__(self, name, age):
        self.name = name
        self.age = age

    def print_details(self):
        print(self.name, self.age)

class Employee(Person):
    def __init__(self, name, age, post):
        self.post = post
        Person.__init__(self, name, age)

    def details(self):
        print(f'\tEmployee Data\nName {self.name}\nAge {self.age}\nPost {self.post}')

ob1 = Employee('Haziq', 40, 'Senior')
ob1.print_details()
ob1.details()
```

```
Haziq 40
        Employee Data
Name Haziq
Age 40
Post Senior
```

In [39]:

```
# Task 02
class Plot:
    def __init__(self, location, rooms, parking, price):
        self.location = location
        self.rooms = rooms
        self.parking = parking
        self.price = price

class Townhouse(Plot):
    def __init__(self,location, rooms, parking, price):
        Plot.__init__(self, location, rooms, parking, price)

    def details_of_Townhouse(self):
        print("The location of townhouse is:", self.location)
        print("The number rooms of townhouse is:", self.rooms)
        print("The parking of townhouse is:", self.parking)
        print("The price of townhouse is:", self.price)

class Condominium(Plot):
    def __init__(self, location, rooms, parking, price):
        Plot.__init__(self, location, rooms, parking, price)

    def details_of_Condominium(self):
        print("The location of Condominium is:", self.location)
        print("The number rooms of Condominium is:", self.rooms)
        print("The parking of Condominium is:", self.parking)
        print("The price of Condominium is:", self.price)
```

In [50]:

```
house1 = Townhouse("Karachi","12 rooms","Parking available","10 lac")
house1.details_of_Townhouse()
```

```
The location of townhouse is: Karachi
The number rooms of townhouse is: 12 rooms
The parking of townhouse is: Parking available
The price of townhouse is: 10 lac
```

In [49]:

```
house2 = Condominium("Karachi","12 rooms","Parking available","10 lac")
house2.details_of_Condominium()
```

```
The location of Condominium is: Karachi
The number rooms of Condominium is: 12 rooms
The parking of Condominium is: Parking available
The price of Condominium is: 10 lac
```

In [42]:

```
# Task 03
class Vehicles:
    def __init__(self, model, color, price):
        self.model = model
        self.color = color
        self.price = price

class Audi(Vehicles):
    def __init__(self, model, color, price, types, reg_year):
        self.types = types
        self.reg_year = reg_year
        Vehicles.__init__(self, model, color, price)

    def details_of_Audi(self):
        print("The model of Audi is:", self.model)
        print("The color of Audi is:", self.color)
        print("The price of Audi is:", self.price)
        print("The type of Audi is:", self.types)
        print("This model of Audi is registered in:", self.reg_year)

class Mercedes(Vehicles):
    def __init__(self, model, color, price, types, reg_year):
        self.types = types
        self.reg_year = reg_year
        Vehicles.__init__(self, model, color, price)


    def details_of_Mercedes(self):
        print("The model of Mercedes is:", self.model)
        print("The color of Mercedes is:", self.color)
        print("The price of Mercedes is:", self.price)
        print("The type of Mercedes:", self.types)
        print("This model of Mercedes is registered in:", self.reg_year)

class BMW(Vehicles):
    def __init__(self, model, color, price, types, reg_year):
        self.types = types
        self.reg_year = reg_year
        Vehicles.__init__(self, model, color, price)

    def details_of_BMW(self):
        print("The model of BMW is:", self.model)
        print("The color of BMW is:", self.color)
        print("The price of BMW is:", self.price)
        print("The type of BMW:", self.types)
        print("This model of BMW is registered in:", self.reg_year)
```

In [48]:

```
vehicle1 = Audi("2020 A3 Sedan","Black","90 lac","Luxury","2020")
vehicle1.details_of_Audi()
```

```
The model of Audi is: 2020 A3 Sedan
The color of Audi is: Black
The price of Audi is: 90 lac
The type of Audi is: Luxury
This model of Audi is registered in: 2020
```

In [44]:

```
vehicle2 = Mercedes("Mercedes-AMG C 63","Yellow and Orange","45 lac","sports","2014")
vehicle2.details_of_Mercedes()
```

```
The model of Mercedes is: Mercedes-AMG C 63
The color of Mercedes is: Yellow and Orange
The price of Mercedes is: 45 lac
The type of Mercedes: sports
This model of Mercedes is registered in: 2014
```

In [45]:

```
vehicle3 = BMW("BMW X4","Red","50 lac","saloon","2017")
vehicle3.details_of_BMW()
```

```
The model of BMW is: BMW X4
The color of BMW is: Red
The price of BMW is: 50 lac
The type of BMW: saloon
This model of BMW is registered in: 2017
```

In [46]:

```
# Task 04
class Apple:
    def __init__(self, name, color, price, ram, warranty, camera):
        self.name =name
        self.color = color
        self.price = price
        self.ram = ram
        self.warranty = warranty
        self.camera = camera

class Iphone11pro(Apple):
    def __init__(self,name,color,price,ram,warranty,camera):
        Apple.__init__(self, name, color, price, ram, warranty, camera)

    def details_of_Iphone11pro(self):
        print("The name of device is:", self.name)
        print("The color of Iphone11pro is:", self.color)
        print("The price of Iphone11pro is:", self.price)
        print("The ram of Iphone11pro is:", self.ram)
        print("This warranty of Iphone11pro is:", self.warranty)
        print("The camera of Iphone11pro is:", self.camera)

class IphoneXSmax(Apple):
    def __init__(self,name,color,price,ram,warranty,camera):
        Apple.__init__(self, name, color, price, ram, warranty, camera)

    def details_of_IphoneXSmax(self):
        print("The name of device is:", self.name)
        print("The color of IphoneXSmax is:", self.color)
        print("The price of IphoneXSmax is:", self.price)
        print("The ram of IphoneXSmax is:", self.ram)
        print("This warranty of IphoneXSmax is:", self.warranty)
        print("The camera of IphoneXSmax is:", self.camera)

class Iphone8plus(Apple):
    def __init__(self,name,color,price,ram,warranty,camera):
        Apple.__init__(self, name, color, price, ram, warranty, camera)

    def details_of_Iphone8plus(self):
        print("The name of device is:", self.name)
        print("The color of Iphone8plus is:", self.color)
        print("The price of Iphone8plus is:", self.price)
        print("The ram of Iphone8plus is:", self.ram)
        print("This warranty of Iphone8plus is:", self.warranty)
        print("The camera of Iphone8plus is:", self.camera)
```

In [47]:

```
Device1 = Iphone11pro("Iphone 11 pro","Silver","1099$","256 GB ram","90 days warranty",
"12 MP")
Device1.details_of_Iphone11pro()
```

```
The name of device is: Iphone 11 pro
The color of Iphone11pro is: Silver
The price of Iphone11pro is: 1099$
The ram of Iphone11pro is: 256 GB ram
This warranty of Iphone11pro is: 90 days warranty
The camera of Iphone11pro is: 12 MP
```

In [34]:

```
Device2 = IphoneXSmax("Iphone XS max","Golden","799$","64 GB ram","3 months warranty",
"10 MP")
Device2.details_of_IphoneXSmax()
```

```
The name of device is: Iphone XS max
The color of IphoneXSmax is: Golden
The price of IphoneXSmax is: 799$
The ram of IphoneXSmax is: 64 GB ram
This warranty of IphoneXSmax is: 3 months warranty
The camera of IphoneXSmax is: 10 MP
```