In [1]:
```python
#Vehicle Rental System
class Vehicle:
    def __init__(self, registration_number, brand, rental_price_per_day):
        self.registration_number=registration_number
        self.brand=brand
        self.rental_price_per_day=rental_price_per_day

    def calculate_rental_price(self,days):
        return self.rental_price_per_day*days

class Car(Vehicle):
    def __init__(self,registration_number, brand, rental_price_per_day,inssuranc
        super().__init__(registration_number, brand, rental_price_per_day)
        self.inssurance_fee=inssurance_fee
    def calculate_rental_price(self,days):
        base_cost=super().calculate_rental_price(days)
        return base_cost+self.inssurance_fee

class Truck(Vehicle):
    def __init__(self,registration_number, brand, rental_price_per_day,heavy_loa
        super().__init__(registration_number, brand, rental_price_per_day)
        self.heavy_loads=heavy_loads
    def calculate_rental_price(self,days):
        base_cost=super().calculate_rental_price(days)
        return base_cost+self.heavy_loads

class Bike(Vehicle):
    def __init__(self,registration_number, brand, rental_price_per_day):
        super().__init__(registration_number, brand, rental_price_per_day)
    def calculate_rental_price(self,days):
        return super().calculate_rental_price(days)

car1=Car(10001,'bmw',60000,200)
bike1=Bike(10002,'suzuki',30000)
truck1=Truck(10003,'tata',20000,500)

print("Car Rental Cost for 3 days:", car1.calculate_rental_price(3))
print("Bike Rental Cost for 3 days:", bike1.calculate_rental_price(3))
print("Truck Rental Cost for 3 days:", truck1.calculate_rental_price(3))
```

```
Car Rental Cost for 3 days: 180200
Bike Rental Cost for 3 days: 90000
Truck Rental Cost for 3 days: 60500
```

In [3]:
```python
#Online Education Platform
class User():
    def __init__(self,user_id,name,email):
        self.user_id=user_id
        self.name=name
        self.email=email

    def login(self):
        print(f"{self.name} logged in")

class Student(User):
    def __init__(self,user_id,name,email):
        super().__init__(user_id,name,email)
        self.enrolled_course=[]
```

```
    def course_enrolled(self,course_name):
        self.enrolled_course.append(course_name)

    def login(self):
        print(f'{self.name} logged in as student')

class Teacher(User):
    def __init__(self,user_id,name,email):
        super().__init__(user_id,name,email)
        self.courses_created=[]

    def create_course(self,course_name):
        self.courses_created.append(course_name)

    def login(self):
        print(f'{self.name} logged in as teacher')


s1=Student(101,"uzma","uzma@gmail.com")
s1.login()
s1.course_enrolled("python_programming")
t1=Teacher(102,"aima","aima@gmail.com")
t1.login()
t1.create_course("python_programming")
```

```
uzma logged in as student
aima logged in as teacher
```

In [ ]: