PROBLEM 1

OOP Exercise : Vehicle Problem

Create a child class Bus that will inherit all of the variables and methods of the vehicle class

```
class Vehicle:
    def __init__(self,name,max_speed,mileage):
        self.name=name
        self.max_speed=max_speed
        self.mileage=mileage

    def vehicle_show(self):
        print("Vehicle is  in parent session")

class Bus(Vehicle):
    def bus_show(self):
        print("Bus Name      :",self.name)
        print("Maximum Speed :",self.max_speed)
        print("Mileage       :",self.mileage)
        print("\n")

class Truck(Vehicle):
    def truck_show(self):
        print("Truck Name :",self.name)
        print("Max Speex :",self.max_speed)
        print("Mileage :",self.mileage)
        print("\n")

sc1=Bus('Scania Ac Sleepper',109,3.8)
sc2=Truck('Asok Leyland',89,2.9)
sc1.bus_show()
sc2.truck_show()
sc1.vehicle_show()
```

```
Bus Name      : Scania Ac Sleepper
Maximum Speed : 109
Mileage       : 3.8


Truck Name : Asok Leyland
Max Speex : 89
Mileage : 2.9


Vehicle is  in parent session
```

PROBLEM 2

Temperature Problem

Create a Temperature class make two methods

1.convertFahrenheit - It will take Celsius and will print it into Fahrenheit.

2.convertCelsius - It will take Fahrenheit and will print it into Celsius.

```
class Temperature:
    te=0

    def __init__(self,te):
        self.te=te

    def convertFahrenheit(self):
        tem=float((1.8*self.te)+32)
        return tem

    def convertCelsius(self):
        tem=float((self.te-32)/1.8)
        return tem


in_temp=float(input("Enter the temperature in Celsius"))
temp=Temperature(in_temp)
print(in_temp,"Degree Celsius = ",temp.convertFahrenheit(),"Fahrenheit")

in_temp=float(input("Enter the temperature in Fahrenheit"))
temp=Temperature(in_temp)
print(in_temp,"Degree Fahrenheit = ",temp.convertCelsius(),"Celsius")
```

```
10.0 Degree Celsius =  50.0 Fahrenheit
100.0 Degree Fahrenheit =  37.77777777777778 Celsius
```

PROBLEM 3

Time Problem

Create a time class and initialize it with hours and minutes

1. Make a methode addTime which should be take two time object and add them.

2. Make a methode displayTime which should print time.

3. Make a methode DisplayMinute which should display the total minutes in the time.

```
class Time:
    def __init__(self,hr,min):
        self.hr=hr
        self.min=min

    def addTime(t1,t2):
        t3=Time(0,0)
        if (t1.min+t2.min)>60:
            t3.hr=int((t1.min+t2.min)/60)
            t3.min-=60
        t3.hr=t3.hr+t2.hr+t1.hr
        t3.min=t2.min+t1.min+t3.min
        return t3

    def displayTime(self):
        print ("Time is",self.hr,"Hours",self.min,"Minutes")

    def DisplayMinute(self):
        print ("Time in Minute is",(self.hr*60)+self.min,"Minutes")



in_t1h=int(input("Enter the first time in hours and minutes"))
in_t1m=int(input(""))
in_t2h=int(input("Enter the second time in hours and minutes"))
in_t2m=int(input(""))
print("First time  ",in_t1h,":",in_t1m)
print("Second time ",in_t2h,":",in_t2m)
var1=Time(in_t1h,in_t1m)
var2=Time(in_t2h,in_t2m)
tme=Time.addTime(var1,var2)
tme.displayTime()
tme.DisplayMinute()
```

```
First time   0 : 45
Second time  2 : 35
Time is 3 Hours 20 Minutes
Time in Minute is 200 Minutes
```