

## **ASSIGNMENT 6**

Name: Prathiksha Harish Baleri

USN: 4CB22CB044

Domain: data science

---

#Inheritance

class addition:      #Base Class / Parent Class

    a=int(input("enter the first number"))

    b=int(input("enter second number"))

    c=0

    def add(me):

        print(me.a)

        print(me.b)

        me.c=me.a+me.b

        print(me.c)

class subtract(addition):

    #Derived class

    x=int(input("enter the first number"))

    y=int(input("enter second number"))

    z=0

    def subt(me):

        print(me.x)

        print(me.y)

        me.z=me.x-me.y

        print(me.z)

enter the first number 12

enter second number13

enter the first number23

enter second number45

12

13

25

23

45

-22

```
obj=subtract()
```

```
obj.add()
```

```
obj.subt()
```

---

```
class cmr:
```

```
    cname="cmr college"
```

```
    def f1(me):
```

```
        print(me.cname)
```

```
class course(cmr):
```

```
    c1="bba"
```

```
    c2="mba"
```

```
    c3="be"
```

```
    c4="mtech"
```

```
    def f2(me):
```

```
        print(me.c1)
```

```
        print(me.c2)
```

```
        print(me.c3)
```

```
        print(me.c4)
```

```
obj=course()
```

```
obj.f1()
```

```
obj.f2()
```

---

```
class father:
```

```
    def f1(me):
```

```
        print("this is parent class")
```

```
class son(father):
```

```
    def s1(me):
```

```
cmr college
```

```
bba
```

```
mba
```

```
be
```

```
mtech
```

```
this is parent class
```

```
this is derived class
```

```
        print("this is derived class")
obj1=son()
obj1.f1()
obj1.s1()
```

---

```
class father:
```

```
    def f1(me):
```

```
        print("this is parent class")
        print("works in wipro")
        print("father's age=50")
        print("stays in jayanagar")
```

```
class son(father):
```

```
    def s1(me):
```

```
        print("this is derived class")
        print("studies in cmr college")
        print("son's age=23")
```

```
obj1=son()
```

```
obj1.f1()
```

```
obj1.s1()
```

---

DJ14

```
class gf:
```

```
    def f1(me):
```

```
        print("this is grand father class")
```

```
class father(gf):
```

<pre>this is parent class works in wipro father's age=50 stays in jayanagar this is derived class studies in cmr college son's age=23</pre>
---

```
def f2(me):  
    print("this is father class")
```

```
this is grand father class  
this is father class  
this is son class
```

```
class son(father):  
    def f3(me):  
        print("this is son class")
```

```
obj=son()  
obj.f1()  
obj.f2()  
obj.f3()
```

---

```
class first:  
    def f1(me):  
        print("this is first class")
```

```
this is third class  
this is second class  
this is first class
```

```
class second(first):  
    def f2(me):  
        print("this is second class")
```

```
class third(second):  
    def f3(me):  
        print("this is third class")
```

```
obj=third()  
obj.f3()
```

obj.f2()

obj.f1()

---

class first:

def f1(me):

print("this is first class")

this is third class

this is first class

class second(first):

def f2(me):

print("this is second class")

class third(second):

def f3(me):

print("this is third class")

obj=third()

obj.f3()

obj.f1()

---

class addition:

a=99

b=77

c=a+b

def add(me):

print(me.a)

print(me.b)

print(me.c)

```
class subtract(addition):
```

```
    x=66
```

```
    y=44
```

```
    z=x-y
```

```
    def subtr(me):
```

```
        print(me.x)
```

```
        print(me.y)
```

```
        print(me.z)
```

```
class multiply(subtract):
```

```
    p=99
```

```
    q=55
```

```
    r=p*q
```

```
    def mult(me):
```

```
        print(me.p)
```

```
        print(me.q)
```

```
        print(me.r)
```

```
obj=multiply()
```

```
obj.add()
```

```
obj.subtr()
```

```
obj.mult()
```

99

77

176

66

44

22

99

55

5445

---

```
class addition:
```

```
    a=int(input("enter first number"))
```

```
    b=int(input("enter second number"))
```

```
c=a+b
```

```
def add(me):
```

```
    print(me.a)
```

```
    print(me.b)
```

```
    print(me.c)
```

```
class subtract(addition):
```

```
    x=int(input("enter first number"))
```

```
    y=int(input("enter second number"))
```

```
    z=x-y
```

```
    def subt(me):
```

```
        print(me.x)
```

```
        print(me.y)
```

```
        print(me.z)
```

```
class multiply(subtract):
```

```
    p=int(input("enter first number"))
```

```
    q=int(input("enter second number"))
```

```
    r=p*q
```

```
    def mult(me):
```

```
        print(me.p)
```

```
        print(me.q)
```

```
        print(me.r)
```

```
obj=multiply()
```

```
obj.add()
```

```
obj.subt()
```

```
enter first number2
```

```
enter second number3
```

```
enter first number2
```

```
enter second number3
```

```
enter first number2
```

```
enter second number3
```

```
2
```

```
3
```

```
5
```

```
2
```

```
3
```

```
-1
```

```
2
```

```
3
```

```
6
```

obj.mult()

---

class addition:

a=0

b=0

c=0

def add(me):

me.a=int(input("enter first number"))

me.b=int(input("enter second number"))

me.c=me.a+me.b

print(me.a)

print(me.b)

print(me.c)

class subtract(addition):

x=0

y=0

z=0

def subt(me):

me.x=int(input("enter first number"))

me.y=int(input("enter second number"))

me.z=me.x-me.y

print(me.x)

print(me.y)

print(me.z)

enter first number2

enter second number3

2

3

5

enter first number2

enter second number3

2

3

-1

enter first number4

enter second number5

4

5

20

```
class multiply(subtract):  
    p=0  
    q=0  
    r=0  
    def mult(me):  
        me.p=int(input("enter first number"))  
        me.q=int(input("enter second number"))  
        me.r=me.p*me.q  
        print(me.p)  
        print(me.q)  
        print(me.r)  
obj=multiply()  
obj.add()  
obj.subt()  
obj.mult()
```

---

#multi - level inheritance ----> USING CONSTRUCTOR

```
class addition:  
    a=0  
    b=0  
    z=0  
    def __init__(me):  
        me.a=int(input("enter first number for addition"))  
        me.b=int(input("enter second number for addition"))  
        me.z=me.a+me.b
```

```
print(me.z)
```

```
class subtraction(addition):
```

```
    x=0
```

```
    y=0
```

```
    z1=0
```

```
    def __init__(me):
```

```
        super().__init__()    #calls the immediate constructor of base class
```

```
        me.x=int(input("enter first number for subtraction"))
```

```
        me.y=int(input("enter second number for subtraction"))
```

```
        me.z1=me.x-me.y
```

```
        print(me.z1)
```

```
class multiply(subtraction):
```

```
    x1=0
```

```
    y1=0
```

```
    z2=0
```

```
    def __init__(me):
```

```
        super().__init__()
```

```
        #calls the immediate constructor of base class
```

```
        me.x1=int(input("enter first number for multiply"))
```

```
        me.y1=int(input("enter second number for multiply"))
```

```
        me.z2=me.x1*me.y1
```

```
        print(me.z2)
```

```
obj1=multiply()
```

enter first number for addition5

enter second number for addition6

11

enter first number for subtraction7

enter second number for subtraction7

0

enter first number for multiply8

enter second number for multiply9

72