Assignment – 6

Program -1

```
# Question 1
a, b, a1, b1, a2, b2 = tuple(map(int, input().split()))
max_1 = max(a1,b1)
min_1 = min(a1,b1)
max_2 = max(a2,b2)
min_2 = min(a2,b2)
max_0 = max(a,b)
min_0 = min(a,b)

if (max_0 == max_1 and min_0 == min_1):
  print("1")
elif (max_0 == max_2 and min_0 == min_2):
  print("2")
else:
  print("0")
```

Output

```
PS G:\JNTUH  data science\VSC> g:; cd 'g:\JNTUH  data science\VSC'; & 'C:\Users\nikita\AppData\Local\Programs\Python\Python39\python.exe' 'c:\Users\nikita\.vscode\extensions\ms-python.python-2022.16.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher' '65398' '--' 'g:\JNTUH  data science\VSC\Assignment-6.py'
1 2 1 3 2 4
0
PS G:\JNTUH  data science\VSC> g:; cd 'g:\JNTUH  data science\VSC'; & 'C:\Users\nikita\AppData\Local\Programs\Python\Python39\python.exe' 'c:\Users\nikita\.vscode\extensions\ms-python.python-2022.16.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher' '49169' '--' 'g:\JNTUH  data science\VSC\Assignment-6.py'
2 3 1 2 2 3
2
PS G:\JNTUH  data science\VSC> g:; cd 'g:\JNTUH  data science\VSC'; & 'C:\Users\nikita\AppData\Local\Programs\Python\Python39\python.exe' 'c:\Users\nikita\.vscode\extensions\ms-python.python-2022.16.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher' '49453' '--' 'g:\JNTUH  data science\VSC\Assignment-6.py'
1 2 2 1 3 4
1
```

Program -2

```python
 # Question 2
p1, p2, p3, p4 = map(int, input().split())
if ((p1 != p2) and (p3 != p4)):
    print(2)
elif ((p1 != p2) or (p3 != p4)):
    print(1)
else:
    print(0)
```

Output

```
4 5 5 5
1
PS G:\JNTUH  data science\VSC> g:; cd 'g:\JNTUH  data science\VSC'; & 'C:\Users\nikita\AppData\Local\Programs\Python\Python39\python.exe' 'c:\Users\nikita\.vscode\extensions\ms-python.python-2022.16.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher' '49712' '--' 'g:\JNTUH  data science\VSC\Assignment-6.py'
2 2 2 2
0
PS G:\JNTUH  data science\VSC> g:; cd 'g:\JNTUH  data science\VSC'; & 'C:\Users\nikita\AppData\Local\Programs\Python\Python39\python.exe' 'c:\Users\nikita\.vscode\extensions\ms-python.python-2022.16.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher' '49723' '--' 'g:\JNTUH  data science\VSC\Assignment-6.py'
1 3 2 4
2
```

Program -3

```
import datetime

d1 = datetime.datetime(2022,10,20)
d2 = datetime.datetime(2002,3,14)
if d1 > d2:
    print(d1,">",d2)
elif d2 == d1:
    print(d2,"=",d1)
else:
    print(d2,">",d1)
```

Output

```
on-2022.16.1\pythonFiles\lib\python\debugpy\adapter/
2022-10-20 00:00:00 > 2002-03-14 00:00:00
```

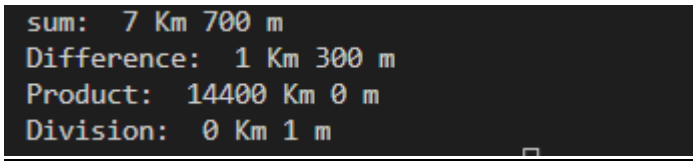
Program -4

```
k1 = 4
m1 = 500
k2 = 3
m2 = 200
d1 = 4*1000 + 500
d2 = 3*1000 + 200


distL = []
# sum
sum = int(d1 + d2)
distL.append(sum)
# subtract
diff = int(d1 - d2)
distL.append(diff)
# multiply
multi = int(d1*d2)
distL.append(multi)
# division
div = d1/d2
distL.append(div)

for l in distL:
    l_km = int(l / 1000)
    l_m = int(l % 1000)
    if l == sum:
        print("sum: ", l_km,"Km", l_m,"m")
    elif l == diff:
        print("Difference: ", l_km,"Km",l_m, "m")
    elif l == multi:
        print("Product: ", l_km,"Km",l_m,"m")
    elif l == div:
        print("Division: ", l_km,"Km",l_m,"m")
```

Output


sum: 7 Km 700 m
Difference: 1 Km 300 m
Product: 14400 Km 0 m
Division: 0 Km 1 m

Program -5

```
 # Question 5
class Box:
    def __init__(self,l,b,d):
        self.l = l
        self.b = b
        self.d = d
    def surf_area(self):
        return (2*((self.l*self.b) + (self.b*self.d) +
(self.l*self.d)) )
    def volume(self):
        return (self.b*self.l*self.d)
    def display(self):
        print("Box Features-")
        print("Length:",self.l)
        print("Breadth:",self.b)
        print("Depth:",self.d)

class WeightBox(Box):
    def __init__(self,l,b,d,w):
        Box.__init__(self,l,b,d)
        self.w = w
    def display(self):
        Box.display(self)
        print("Weight",self.w,"gms")

class ColorWeightBox(WeightBox):
    def __init__(self,l,b,d,w,c):
        WeightBox.__init__(self,l,b,d,w)
        self.c = c
    def display(self):
        print("Box Features-")
        print("Length:",self.l)
        print("Breadth:",self.b)
```

```
        print("Depth:",self.d)
        print("Weight:",self.w,"gms")
        print("Color:",self.c)

obj = ColorWeightBox(20,10,10,400,"Black")
obj.display()
sa = obj.surf_area()
print("Total Surface Area:",sa,"sq.cm")
v = obj.volume()
print("Volume:",v,"cu. cm")
```

Output

```
Box Features-
Length: 20
Breadth: 10
Depth: 10
Weight: 400 gms
Color: Black
Total Surface Area: 1000 sq.cm
Volume: 2000 cu. cm
```