Program-2

```
a=int(input("enter the number of lock produced:"))
b=int(input("enter the number of stock produced:"))
c=int(input("enter the number of barrel produced:"))
if(a<=0 or a>=70 or b<=0 or b>=80 or c<=0 or c>=90):
    print("Out of Range")
else:
    sum1=(a*45)+(b*30)+(c*25)
    if(sum1<=1000):
        print("sales:",sum1)
        print("commission:",sum1*0.1)
    elif(sum1<=1800 and sum1>1000):
        print("sales:",sum1)
        print("commission:",100+(sum1-1000)*0.15)
    else:
        print("sales:",sum1)
        print("commission:",220+(sum1-1800)*0.2)
```

Program-3:

```
def leapyear(year):
    if(year%400==0):
        return True
    elif(year%100==0):
        return False
    elif(year%4==0):
        return True
    else:
        return False
def check(date,month,year):
    if year not in range(1812,2022):
        return 0
    if month not in range(1,13):
        return 0
    if month in [1,3,5,7,8,10,12]:
        if date in range(1,32):
            return 1
        else:
            return 0
    elif month in [4,6,9,11]:
        if date in range(1,31):
            return 1
        else:
            return 0
    elif month==2:
        if(leapyear(year))and date in range(1,30):
            return 1
        elif date in range(1,29):
            return 1
```

```
        else:
            return 0
while(1):
    date=int(input("Enter Date:"))
    month=int(input("Enter Month:"))
    year=int(input("Enter Year:"))
    if(check(date,month,year)):
        if (month==12 and date==31):
            print("next date:",1,":",1,":",year+1)
            break
        elif month in [1,3,5,7,8,10,12]:
            print("next date:",date+1,":",month,":",year)
            break
        elif month in [1,3,5,7,8,10] and date==31:
            print("next date:",1,":",month+1,":",year)
            break
        elif month in [4,6,9,11] and date in range(1,30):
            print("next date:",date+1,":",month,":",year)
            break
        elif month in [4,6,9,11] and date==30:
            print("next date:",1,":",month+1,":",year)
            break
        elif month==2:
            if(leapyear(year) and date in range(1,29)):
                print("next date:",date+1,":",month,":",year)
                break
            elif(leapyear(year) and date==29):
                print("next date:",1,":",month+1,":",year)
            elif date in range(1,28):
                print("next date:",date+1,":",month,":",year)
            else:
                print("next date:",1,":",month+1,":",year)
    else:
        print("not a valid date")


Program-1:
a,b,c=map(int,input().split())
c1=((a>=1)) and ((a<=10))
c2=((b>=1)) and ((b<=10))
c3=((c>=1)) and ((c<=10))
if(not c1):
    print("a is not in range")
if(not c2):
    print("b is not in range")
if(not c3):
    print("c is not in range")
check=(not c1) or (not c2) or (not c3)
if((a<(b+c)) and (b<(a+c)) and (c<(a+b))):
```

```
    if((a==b) and (b==c)):
        print("Eqilateral triangle")
    elif((a!=b) and (b!=c) and (c!=a)):
        print("Scalene triangle")
    else:
        print("Isosceles triangle")
else:
    print("Triangle cannot be formed")
```

Program-5:

```
m=int(input("Enter M1 rows:"))
n=int(input("Enter M1 columns:"))
o=int(input("Enter M2 rows:"))
p=int(input("Enter M2 columns:"))
if(n==o):
    A=[]
    for i in range(m):
        m1=[]
        for j in range(n):
            k=int(input())
            m1.append(k)
        A.append(m1)
    B=[]
    for i in range(o):
        m1=[]
        for j in range(p):
            k=int(input())
            m1.append(k)
        B.append(m1)
    result = [[0, 0, 0, 0],[0, 0, 0, 0], [0, 0, 0, 0]]
    for i in range(len(A)):
        for j in range(len(B[0])):
            for k in range(len(B)):
                result[i][j] += A[i][k] * B[k][j]
    for r in result:
        for b in r:
            if(b!=0):
                print(b,end=" ")
            print()
else:
    print("Matrix Multipication is not possible")
```