NAME: SHERALI

ROLL NO: P21-8024

ASSIGNMENT#2

QUESTION1:

```
cookies=int(input("Enter the number of cookies"))
print("The Total number of cookies are ",cookies)


boxes=cookies//24
extracookies=cookies%24
container=boxes//75
extraboxes=container%75


if boxes>0:
   print("Number of boxes are ",boxes)
if container>0:
   print("Number of container are ",container)
if extracookies>=0:
   print("Leftover cookies:",extracookies)
if extraboxes>=0:


   print("Extra boxes: ",extraboxes)
```

OUTPUT:

```
Enter the number of cookies89649
The Total number of cookies are  89649
Number of boxes are  3735
Number of container are  49
Leftover cookies: 9
Extra boxes:  49
```

QUESTION 2:

```
def factorial(n):
    i=1
    fact=1
    while i<=n:
        fact=fact*i
        i+=1
    return fact


def sum_series(x,n):
    sum=0
    for i in range(0,n+1):
        power=pow(x,i)
        factorial=fact(i)
        dividion=power/factorial
        sum+=dividion
    return sum
n=int(input("enter value of n "))
x=int(input("enter value of x "))
print(sum_series(n,x))
```

OUTPUT:

```
enter value of n 3
enter value of x 5
18.4
```

QUESTION 3:

```
# Making Function of finding perfect Number so that we can use it later to find perfect numbers between two Numbers.


def checking_number(n):
    sum = 0
    for i in range(1,n):
        if n%i==0:
            sum += i
    return sum == n


#Taking minimum and maximum value so that we can find a perfect number between them.


min_value = int(input('Enter minimum number '))
max_value = int(input('Enter maximum number '))


#Printing statment of first four perfect numbers


print("First Four Perfect Numbers")


# Using function that I had made perfect number and finding perfect number between them.


for i in range(min_value, max_value+1):
    if checking_number(i):
        print(i)
```

OUTPUT:

```
Enter minimum number 2
Enter maximum number 55555
First Four Perfect Numbers
6
28
496
8128
```

QUESTION 4:

```
x= int(input("Enter the number: "))


for i in range(0,x+1):
    print(" "*(x-i),end="")
    for j in range(0,i+1):
        print(i,end=" ")
    print()



for i in range((x-1),-1,-1):
    print(" "*(x-i),end="")
    for j in range(0,i+1):
        print(i,end=" ")
    print()
```

OUTPUT:

```
        0
       1 1
      2 2 2
     3 3 3 3
    4 4 4 4 4
   5 5 5 5 5 5
  6 6 6 6 6 6 6
 7 7 7 7 7 7 7 7
8 8 8 8 8 8 8 8 8
 7 7 7 7 7 7 7 7
  6 6 6 6 6 6 6
   5 5 5 5 5 5
    4 4 4 4 4
     3 3 3 3
      2 2 2
       1 1
        0
```

QUESTION 5:

```
m=[]
for i in range(3):
    a=[]
    for j in range(3):
        j=int(input("Enter number for first matrix["+str(i)+"]["+str(j)+"]"))
        a.append(j)
    m.append(a)


n=[]
for i in range(3):
    b=[]
    for j in range(3):
        j=int(input("Enter number for second matrix["+str(i)+"]["+str(j)+"]"))
        b.append(j)
    n.append(b)
```

```
print("First matrix is")
for i in range(3):
   for j in range(3):
      print(m[i][j],end=" ")
   print()

print("Second matrix is")
for i in range(3):
   for j in range(3):
      print(n[i][j],end=" ")
   print()

result=[[0,0,0],[0,0,0],[0,0,0]]
for i in range(3):
   for j in range(3):
      for k in range(3):
         result[i][j]=result[i][j]+m[i][k]*n[k][j]
print("Multiplication of two matrix is")
for i in range(3):
   for j in range(3):
      print(result[i][j],end=" ")
   print()
```

OUTPUT:

```
[58, 64]
[139, 154]
```