Write a program that prints something in pythom

1. Write a program with function f(x)=3x+2 and print for x=2 and take input of x from user.

```
def f(x):
  return (3*x+2)
x=int(input("Enter a number:"))
f(x)
```

```
    Enter a number:3
    11
```

Write a program with function f(x)=x^2 and take inpurt of x from user

```
def f(x):
  return x*x
x= int(input("Enter the value of x. "))
f(x)
```

```
    Enter the value of x. 3
    9
```

```
def f(x):

  return (4*x+4)
x= int(input("enter a number"))
f(x)
```

```
    enter a number88
    356
```

Write a program with function h(x) and take x as an array [0,1,2,3,4,5]

```
import matplotlib.pyplot as plt

def h(x):
  y=[ ]
  for values in x:
    y.append(3*values+2)
  return y

array1=[0,1,2,3,4,5]
print(h(array1))
```
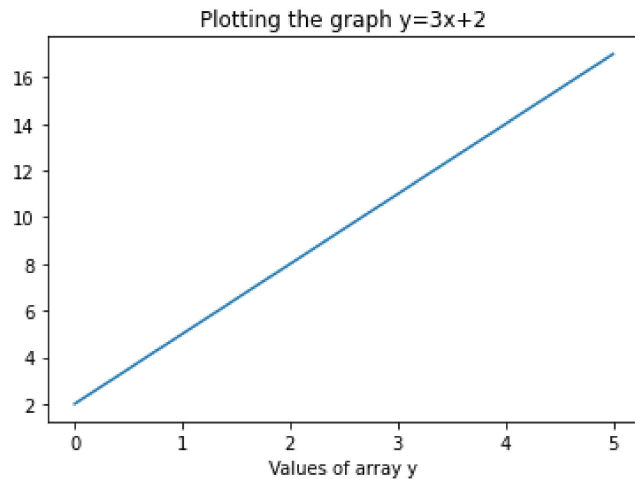
```
    [2, 5, 8, 11, 14, 17]
```

```
plt.title("Plotting the graph y=3x+2")#title of graph
plt.plot(array1,h(array1))#plotting the function where x axis is array and y axis is  h(array)
plt.xlabel("Values of array x")#title of x-axis
plt.ylabel("Values of array y")#title of y-axis
```

```
Text(0.5, 0, 'Values of array y')
```


Write a program with function h(x)=x^2 amd take x as ana array [-3,-2,-1,0,1,2,3]

```
import matplotlib.pyplot as plt


dsffdef i(x):
    y=[ ]
    for values in x:
      y.append(values**2)
    return y

array2=[-3,-2, -1, 0, 1,2,3]
print(i(array2))
```

```
    [9, 4, 1, 0, 1, 4, 9]
```

```
plt.title("Plotting the graph x=x^2")#title of the grapgh
plt.plot(array2,i(array2))#plotting the function where x axis is array and y axis is  h(array)
plt.xlabel("Values of array x")#title of x-axis
plt.ylabel("Values of array y")#title of y-axis
```

```
      Text(0, 0.5, 'Values of array y')
                     Plotting the graph x=x^2
```

Define function sum(x) where x is input from the user and sum squareall the previous number before x.

```python
def sum(x):
  add=0
  for num in range (1 , x+1):
    add= add + num
  return add
x=int(input("Enter a number: "))
print(sum(x))
```

```
    Enter a number: 5
    15
```

```python
def sum(x):
  total=0
  for i in range (1, x+1):
    total=total+i
  return total
x=int(input("Enter your number"))
print (sum(x))
```

```
    Enter your number10
    55
```

```python
def sumsquare(x):
  total=0
  for i in range (1, x+1):
    total=total+i**2
  return total
x=int(input("Enter your number"))
print (sumsquare(x))
```

```
    Enter your number10
    385
```

```python
def sumsquare(x):
  if x==0:
    return 1

  fact=1
  for i in range (1, x+1):
    factl=fact * i
    return fact
x= int(input("Enter your number."))
print (sumsquare(x))
```