# Assignment 1

#### 1.Write a Python program to print 'Hello Python' ?

#### Answer:

print('Hello Python')

Hello Python

#### 2.Write a Python program to do arithmetic operations addition and division ?

#### Answer:

import operator  
  
ops = { "+": operator.add, "-": operator.sub, "\*":operator.mul, "/":operator.truediv }   
  
print('Select a Arithmetic Operation: \  
 \n1.Addition(+)\  
 \n2.Division(-)\  
 \n2.Multiplication(\*)\  
 \n4.Division(/)\  
 \n3.Stop(0)\n')  
   
  
**while** True:  
 operator = input('Enter a arithmetic operation -> ')  
 **if** operator == '0':  
 print("Program Stopped successfully")  
 **break**  
 **elif** operator **not** **in** ['+','-','\*','/']:  
 print("Please enter a valid operator")  
 **else**:  
 num\_1 = int(input('\nEnter 1st Number: '))  
 num\_2 = int(input('Enter 2nd Number: '))  
 print('{}{}{}={}\n'.format(num\_1, operator, num\_2, ops[operator](num\_1,num\_2)))

Select a Arithmetic Operation:   
1.Addition(+)   
2.Division(-)   
2.Multiplication(\*)   
4.Division(/)   
3.Stop(0)  
  
Enter a arithmetic operation -> +  
  
Enter 1st Number: 10  
Enter 2nd Number: 20  
10+20=30  
  
Enter a arithmetic operation -> -  
  
Enter 1st Number: 10  
Enter 2nd Number: 20  
10-20=-10  
  
Enter a arithmetic operation -> \*  
  
Enter 1st Number: 20  
Enter 2nd Number: 10  
20\*10=200  
  
Enter a arithmetic operation -> /  
  
Enter 1st Number: 200  
Enter 2nd Number: 2  
200/2=100.0  
  
Enter a arithmetic operation -> 0  
Program Stopped successfully

3.Write a Python program to find the area of a triangle ?

height = int(input('Enter height of triangle: '))  
base = int(input('Enter base of triangle: '))  
  
**def** areaOfTriangle(height, base):  
 print('\nArea of triangle ->', 0.5\*height\*base)  
  
areaOfTriangle(height,base)

Enter height of triangle: 100  
Enter base of triangle: 50  
  
Area of triangle -> 2500.0

#### 4.Write a Python program to swap two variables ?

#### Answer:

num\_1 = int(input("Enter First Number: "))  
num\_2 = int(input("Enter Second Number: "))  
  
def swapNumbers(a,b):  
 temp = a  
 a = b  
 b = temp  
 return a,b  
  
print('Before swapping -> ',num\_1, num\_2)  
num\_1, num\_2 = swapNumbers(num\_1, num\_2)  
print('After swapping -> ',num\_1,num\_2)

Enter First Number: 100  
Enter Second Number: 200  
Before swapping -> 100 200  
After swapping -> 200 100

#### 5.Write a Python program to generate a random number ?

***Answer:***

from random import randint  
  
def generateRandomNumber(start=0, end=100000):  
 print('Random number -> ',randint(start,end))  
  
# Generating random numbers without arguments   
generateRandomNumber()  
  
# Generating random numbers with arguments   
generateRandomNumber(0,100)

Random number -> 75610  
Random number -> 34