

Assignment 1 Solutions

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

```
In [1]: print('Hello Python')  
  
Hello Python
```

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

```
In [2]: import operator  
  
ops = { "+": operator.add, "-": operator.sub, "*": operator.mul, "/": operator.truediv }  
  
print('Select a Arithmetic Operation: \  
      \n1.Addition(+)\n      \n2.Division(-)\n      \n2.Multiplication(*)\n      \n4.Division(/)\n      \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: 30  
Enter 2nd Number: 40  
30+40=70
```

```
Enter a arithmetic operation -> -
```

```
Enter 1st Number: 30  
Enter 2nd Number: 40  
30-40=-10
```

```
Enter a arithmetic operation -> *
```

```
Enter 1st Number: 30  
Enter 2nd Number: 40  
30*40=1200
```

```
Enter a arithmetic operation -> /
```

```
Enter 1st Number: 30  
Enter 2nd Number: 40  
30/40=0.75
```

```
Enter a arithmetic operation -> 0  
Program Stopped successfully
```

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

```
In [3]: height = int(input('Enter height of triangle: '))  
        base = int(input('Enter base of triangle: '))  
  
def areaOfTriangle(height, base):
```

```
print('\nArea of triangle ->', 0.6*height*base)

areaOfTriangle(height,base)
```

Enter height of triangle: 200
Enter base of triangle: 100

Area of triangle -> 12000.0

4. Write a Python program to swap two variables ?

```
In [4]: 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: 300
Enter Second Number: 400
Before swapping -> 300 400
After swapping -> 400 300

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

```
In [ ]: from random import randint

def generateRandomNumber(start=0, end=100000):
    print('Random number -> ', randint(start, end))
```