**Programming Fundamentals**

**Tutorial 1**

**Note:** You are not allowed to copy paste code snippets. You need to have the basic understanding of following concepts at the end of the Tutorial

* Python print()
* Primitive data types and variables
* Value assignments
* Arithmetic operations
* Operator Precedence

1. Use Pycharm integrated development environment (IDE) to write and run following programs. If it is not installed, you can use Python IDLE.
2. print(“Hello World”) and see the output. Write several print commands with various strings and see the results
3. Variable creation and value assigning
   1. Create a variable called "country" and assign it the value "python".
   2. Create a variable called "code" and assign it an integer value (anything you like).
   3. Print both variables to the screen using the "print" command.
   4. Try the print statement -> print(“country code”+ 94)
   5. How to solve the above erroneous output?
4. What are the primitive data types in python? Explain further using example code snippets.
5. Add following statements and execute.

pounds = 3

pence = pounds \* 100

print( pence ) #line1

print(pounds \* 100) #line2

Explain the difference between line 1 and 2

1. Check the answer for following arithmetic operations.

print(2 + 4)

print(2.5 + 4.2)

print(6 - 4)

print(6.0 - 4.5)

print(6 \* 3)

print(6 / 3)

print(6 % 3)

print(6 // 3) # floor division: always truncates fractional remainders

print(-5)

print(3\*\*2) # three to the power of 2

1. **String assignments**.

a = "Hello out there."

print(a)

b = 'Hello again.'

print(b)

Join variable a and b using single print() call

1. What is the difference between / and //
2. a=10 and b=9. What needs to be done in order to swap values of A and B (b=10 and a=9)
3. Try to guess the order of operator execution and compare the result

(4+90)\*(48/8)

(78\*\*2-3)/2+8

4+5-8+5

(78/2(1-9))\*(45-5)/7

32-9\*4/5+6

5\*\*2\*2

1. Discuss reasons for using comments in python