Python Basics Assignment – 1

1. In the below elements which of them are values or an expression? e.g.: - values can be integer or string and expressions will be mathematical operators.

\* - Astrix is a mathematical operator, hence it’s an expression.

'hello' - This is a string of alphabets; hence it will be deemed as a value.

-87.8 - This is a integer having negative value. Hence it is a value.

- - This is a negative sign that signifies a subtraction in python syntax, hence it is an expression.

/ - This is a slash sign that denotes division in python syntax, hence it is an expression.

* - This is a plus sign that denotes addition in python syntax hence it is an expression.

6 - This is an integer; hence it is a value.

2. What is the difference between string and variable?

Ans. A string is a datatype in programming languages which stores a set of value together which can be alphabets as well as integers etc, but a variable is a container that stores diff types of values or values with different data types like integer, Boolean or string.

3. Describe three different data types.

Ans. Three different types of data types are as follows:

1. String – It is a data type which has a set of different values stored inside it like an arrangement of characters and numbers or both inside single inverted comas or double inverted comas. For ex: “hello” or ‘hello’.
2. Integers – It is a data type which basically deals with numbers maybe it be positive or negative. It does have a limit to how many digits of numbers it stores. For ex: 2 or -22.
3. Boolean – It is a data type which can store only two values that is true or false.

4. What is an expression made up of? What do all expressions do?

Ans. Expressions in python are basically representations of certain values. They help us perform diff calculations etc. in the program. For ex: There are arithmetic expressions that signifies diff things like a plus sign signifies addition and so on.

5. This assignment statements, like spam = 10. What is the difference between an expression and a statement?

Ans. The difference between expressions and statements is mainly that the expressions evaluates a resultant value while statements are just executable code which is to be performed by compiler like displaying a value or assigning a value.

6. After running the following code, what does the variable bacon contain?

bacon = 22

bacon + 1

Ans. The variable bacon will contain the value 22.

7. What should the values of the following two terms be?

1. 'spam' + 'spamspam'
2. 'spam' \* 3

Ans. 1- ‘spamspamspam’

2- ‘spamspamspam’

8. Why is eggs a valid variable name while 100 is invalid?

Ans. eggs is a valid variable name while 100 is not because the python syntax allow for variable names to start from an integer value but it does allow alphabet as a first letter for variable name.

9. What three functions can be used to get the integer, floating-point number, or string version of a value?

And. The keyword int () can be used to convert a value into integer, similarly float () function can be used to fetch a floating point number of a value and lastly, Str() can be used to display a string of a value.

10. Why does this expression cause an error? How can you fix it?

'I have eaten ' + 99 + ' burritos.'

Ans. This expression does cause a type-error. It is so because different data types cannot be evaluated in a same expression. There are two strings – ‘I have eaten’ , ‘burritos’ and one integer – 99. In order to execute this expressions, we would need to convert all the values into same data types. We can do so by converting the integer into string by using the str () function.