Assignment 1 – Python Basics

**1. In the below elements which of them are values or an expression? eg:- values can be**

**integer or string and expressions will be mathematical operators.**

**\***

**&#39;hello&#39;**

**-87.8**

**-**

**/**

**+**

**6**

Ans :

value :

-87.8

6

expresssion :

\*

&#39;hello&#39;

-

/

+

**2. What is the difference between string and variable?**

Ans :

* string is the datatype which should be always write inside quotes. string can contain alphabet,number or any special character also but it should be mentioned inside quotes only.
* Variable is an entity that stores the data for processing.
* variable can take any datatype value.

**3. Describe three different data types.**

Ans :

* String - string is the datatype which stores data. string should be always mentioned inside quotes. It can contain words, numeric, alphanumeric or special character also but inside QUOTES only.
* Integer - interger can contain any positive or negative integer. It should not contain decimal values
* Boolean - It means variable can take only True or False as value.
* Float - Float is a decimal value.
* Complex - eg (2+3j). Here, this number is combination of real and imaginary number. j is imaginary number whose value is square root of -1.

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

Ans :

Expression is made when it contains operation signs like +, -, \*, /, \*\*, //, %

Expressions perform calculations based on operation assigned to it.

**5. This assignment statements, like spam = 10. What is the difference between an**

**expression and a statement?**

Ans :

* Statement means we are stating something like defining a variable.

eg. a = "This is an assignment"

* Expression contains operational task like calculations which needs to be performed.

eg. a=20+899

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

**bacon = 22**

**bacon + 1**

Ans :

22

Here, ans is 22 and not 23 because operation bacon is not defined properly. It will be 23 only if it is defined in below format : bacon +=1

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

**'spam' + 'spamspam'**

**'spam' \* 3**

Ans :

'spam' + 'spamspam' = 'spamspamspam'

'spam' \* 3 = 'spamspamspam'

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

Ans :

According to rules defined for variable name, it should not be only numeric.

Variable can be alphabet, word or alphanumeric.

Variable cannot contain any special character except underscore( \_ ).

**9. What three functions can be used to get the integer, floating-point number, or string**

**version of a value?**

Ans :

interger - int()

floating-point number - float()

string - str()

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

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

Ans :

As per rules of concatenation, we cannot concatenate integer with string.

To fix this we can convert integer 99 into string by putting it into quotes as'99'.