**Python Basics Assignment-01**

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.

\* **expression**

'hello' **value**

-87.8 **value**

- **expression**

/ **expression**

+ **expression**

6 **value**

2. What is the difference between string and variable?

Answer: **Variables store the values or data while the strings are data which can be stored in the variables. In other way, we can say that variable stores the information while the string is a type of information.**

3. Describe three different data types.

Answer: **There are many data types in python like integer, string, float, Boolean, list, tuple, set, etc.**

**(i) Integer (int): contains both positive and negative integers**

**(ii) String (str): The strings are the group of characters represented by either single or double quotes.**

**(iii) Float (float): contains both positive and negative decimal numbers up to 15 decimal places**

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

Answer: **The expression in Python is a combination of operators and operands. The expression produces some other value. There are many expressions, e.g.**

1. **Arithmetic expression: x+y, x-y, x\*y, x/y, x//y, x%y, x\*\*y**
2. **Relational expression: x>y, x<y, x>=y, x<=y**
3. **Logical expression: x *and* u, x *or* y, *not* x**

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

Answer: **An expression produces some other value while the statement doesn’t return anything.**

**e.g. Expression: x = 2 + 3; returns the value 5**

**Statement: y = “sum of two and three”: returns nothing**

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

bacon = 22

bacon + 1

Answer: **bacon contain integer 22.**

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

'spam' + 'spamspam' = **‘spamspamspam’**

'spam' \* 3 = **‘spamspamspam’**

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

Answer: **variable name should not start with a number, so 100 is not a valid variable name.**

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

Answer:

1. **integer: *int()***
2. **floating-point number: *float()***
3. **string: *str()***

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

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

Answer: **In the above statement the first and third terms are string while the second term is integer. So, to fix this issue we have to treat integer 99 as string ‘99’. For example:**

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

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