**PYTHON BASIC ASSIGNMENT\_1 - SUBMITTED BY SAMUEL DEVDAS**

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.

Ans.

\* -expression

'hello' -values

-87.8 -values

- -expression

/ -expression

* -expression

6 -values

2. What is the difference between string and variable?

Ans.String is any value which can be stored in a memory location ,assigning it to a variable(memory location container). Example: “x” or ‘x’ where x can be any value or character within single or double quotes.

Variable is the container declared with a particular name which can be assigned any value using the ‘=’ operator. Example: v= ‘x’, where v is the variable assigned a string value ‘x’.

3. Describe three different data types.

Ans.a. Integer: Int or integer is a data type which can be used to store whole number values like 0,1,-1,2,3,-4 etc.

b. Floating-point numbers: Float data type can be used to store decimal number values like 0.5, 0.00, 9.99 etc.

c. Boolean: Boolean or bool can be used to denote the logical state of a variable ie. True or False.

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

Ans. Expressions are representations of any declared value which can consist of literals, operands or operators. Example: x=1\*2, where ‘1\*2’ is an expressions which consists of ‘1’ and ‘2’as operand values and ‘\*’ as ‘multiplication’ operator.

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

Ans. ‘Spam= 10’ statement is declaring a variable ‘spam’ and storing a value of ‘10’ (integer) using an ‘=’ operator. The result of this statement is that is carries out an action of declaring and storing a variable in the memory which can be used to carry out an operation later.

On the other hand, expressions are meaningless without being defined as a part of a statement or function.

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

bacon = 22

bacon + 1

Ans. Running the code doesn't change anything with ‘bacon variable’, it still has the value ‘22’.

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

'spam' + 'spamspam'

'spam' \* 3

Ans. Both the expressions yield the same value ie. 'spamspamspam'

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

Ans. In Python syntax, variable names with containing only integers (here,100) as characters or literals are not allowed.

‘eggs’ is allowed as variable name as it contains alphabetical characters allowed as per python syntax.

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

Ans. Int(), float() and str(), functions respectively return integer, floating-point number, or string version of a value respectively.

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

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

Ans. In python, string and integer data types cannot be concatenated.

In this case 99 needs to be converted using function- str(99) or put between quotes(‘99’) to convert it to string data type and then the expression can be run successfully.