**Assignment 1:**

**Submitted by Abhishek Hukkerikar**

**Note: The answers are in Blue color**

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.

\* - This is a mathematical operator

'hello' – This is a string and hence an integer

-87.8 – This is a floating point number and hence a value

- This is a subtraction symbol and hence it is a mathematical operator

/ This is also a mathematical operator

* Mathematical operator

6 This is a value

2. What is the difference between string and variable?

A string is a combination of letters or characters while a variable comprises of mathematical numbers.

3. Describe three different data types.

The three important data types are int (for numbers), str, float (for decimals)

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

An expression is a combination of operators and operands that is interpreted to produce some other value. In any programming language, an expression is evaluated as per the precedence of its operators. This means that when multiple operators are present the Python will decide which operator will work first and which operator will be followed. There are multiple expressions like:

**Constant expressions, Arithmetic expressions (Ex. Addition, Substraction, Multiplication, Division, Quotient, Remainder, Exponent), Integral expressions, Floating, Relational expressions, and Logical expressions, Bitwise and Combination expressions..**

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

The main difference between is as follows:

An expression in python will produce some result after being interpreted by python interpreter but a statement in Python is used for creating variables or for displaying values. This means that the execution of a statement (*if)* will change the value of a variable but the execution of an expression will not result in change of value.

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

bacon = 22

bacon + 1

When we execute print(bacon + 1), then the a value of 23 is returned. The type of the variable is int.

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?

Eggs are valid variable name because we can assign values to a string character. At the same time 100 being an integer value itself cannot be assigned any variable other than itself. Therefore, it cannot store any value. Thus, it cannot be a variable name.

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

value =

int (value), float(value), str(value)

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

'I have eaten ' + 99 + ' burritos.'The error we get is *can only concatenate str (not “int”) to str.* The error can be rid by:

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

**References:**

1. Geek for Geeks

2. Scaler