**Assignment 1**

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.

\* expression

'hello' value

-87.8 value

- expression

/ expression

+ expression

6 value

2. What is the difference between string and variable?

A string is a collection of characters enclosed in “ “. Variable is an address where we store values which can be reused in future. The main difference between them is string is immutable (that is once defined cannot be modified), while variables are mutable and can be modified as per the need.

3. Describe three different data types.

Integer (int) this data type is used to hold numeric values (-1,-2 1,2 etc)

Float (float) this data type is used to hold fractional/decimal values (2.3, -5.6 etc)

String (str) this data type is used to hold string values (“mayank”, “ineuron” etc)

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

Expressions are collection up of operators, variables and constants which performs some dedicated operation. For e.g : x+5 , x + y etc

Say I want to define an expression to calculate simple interest –

(P \* R \* T) /100

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

Statement is something that tells what needs to be done with the result that gets calculated after solving an expression.

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

bacon = 22

bacon + 1

bacon will be 22 only

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?

Variable name cannot start with numeric.

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

int(), float(), str()

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

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

Because 99 is integer and string can concatenates with strings only. Hence this will throw an error. To rectify it, we can make it this way –

'I have eaten ' + str(99) + ' burritos.'