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: A string is a type of information we store in a variable. Generally represented as text within double /single quotes. String is immutable i.e. their value cannot be changed/updated. Whereas variable is a name that can refer to any value. Variables are symbols that we use to store data in a program. For example, my\_var=”hello”; here my\_var is the variable and “hello” is string.

3. Describe three different data types.

A: 3 data types are:

1. Numeric data type - Used for defining numerical data types. Literals used - 'int', 'float', 'complex'
2. Sequence data type - Used to define and perform operations on a collection data type variable. Literals used - 'list', 'tuple', 'range'
3. Boolean operators - Used for comparing data. Literals used - 'and', 'or', 'not.

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

A: A combination of operands and operators is called an **expression**. The expression in Python produces some value or result after being interpreted by the Python interpreter. An expression in Python is a combination of operators and operands. For example: x=10+25;  (expression).

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

expression and a statement?

A: Expressions can be assigned or used as operands, while statements can only be declared.Statements create side effects to be useful, while expressions are values or execute to values.

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

bacon = 22

bacon + 1

A: The bacon variable is set to 22. The bacon + 1 is an expression and it does not reassign the value in bacon (it would need an assignment statement: bacon = bacon + 1)

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

‘spam’ + ‘spamspam’

‘spam’\* 3

A: Both expressions evaluate to the string 'spamspamspam'

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

A: Variable names cannot begin with a number.

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

version of a value?

A: The int(), float(), and str() functions will evaluate to the integer, floating-point number, and string versions of the value passed to them

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

‘I have eaten ‘ + 99 ‘ burritos.’

A: The expression causes an error because 99 is an integer, and only strings can be concatenated to other strings with the + operator. The correct way is I have eaten ' + str(99) + ' burritos.'.