Full Stack Data Science Python Assignment-1

Q1. 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. \* is a mathematical operator thus it is an expression.

‘hello’ is a string thus it is a value.

-87.8 isa floating point number thus it is a value.

- is a mathematical operator thus it is an expression.

/ is a mathematical operator thus it is an expression.

+ is a mathematical operator thus it is an expression.

6 is a number thus it is a value

Q2. What is the difference between string and variable?

Variables are symbols that are used to store data in coding. Variables are containers which can contain any type of value like strings, numbers, lists etc.

Strings are the data that go inside a variable which might be a collections of alphabets, numbers, symbols etc.

Q3. Describe three different data types.

1. Strings- Strings are sequences of characters, enclosed within either single (' ') or double (" ") quotes. These quotes can contain alphabets, numbers and/or symbols.
2. Integer- Integers are whole numbers, positive or negative, without a decimal point.
3. Float- Floating-point numbers, or floats, represent real numbers and have a decimal point.

Q4. What is an expression made up of? What do all expressions do?

An expression is a combination of values, variables, operators, that produce a result. Expressions can be as simple as a single value or as complex as a mathematical.

Expressions allow us to perform all sorts of functions like performing operations, value calculations, data manipulation and create functional programs.

Q5. This assignment statements, like spam = 10. What is the difference between an

expression and a statement?

An expression is a piece of code which produces some result/value when executed, which may a combination of values, variables, operators etc.

A statement is a line of code that performs an action. It may or may not produce a value/result.

Q6. After running the following code, what does the variable bacon contain?

bacon = 22

bacon + 1

bacon contains the integer value 22.

Q7. What should the values of the following two terms be?

‘spam’+’spamspam’: ’spamspamspam’

‘spam’\*3: ’spamspamspam’

Q8. Why is eggs a valid variable name while 100 is invalid?

This is because in python a variable must start with a letter (upper or lowercase both valid) or an underscore.

Q9. What three functions can be used to get the integer, floating-point number, or string

version of a value?

For integer value- int(value)

For floating point number value- float(value)

For string value- str(value)

Q10. Why does this expression cause an error? How can you fix it?

‘I have eaten’+99+’burritos.’

This is because 99 here is an integer value which is getting added to 2 string values. + operator is used for concatenation in strings.

To fix this 99 can be converted into a string either by using str(99) or ‘99’.