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.

* is an expression
'hello' is a value
-87.8 is a value
- is an expression
/ is an expression
 + is an expression
6 is a value

2. What is the difference between string and variable?
A variable is capable of storing some kind of value/data like an integer, boolean, or string. A string is a value made up of characters.

3. Describe three different data types.
A variable whose data type is integer can store any integer as its value.
A variable whose data type is boolean can store only True or False as its value.
A variable whose data type is string can store any character or a sequence of characters as its value.

4. What is an expression made up of? What do all expressions do?
An expression contains a combination of mathematical operators and values/variables. They all can be simplified to a value.

5. This assignment statements, like spam = 10. What is the difference between an expression and a statement?
An expression can be simplified to a value. A statement is similar to a command, like in the example above, it's saying that the variable named spam stores the value of 10.

6. After running the following code, what does the variable bacon contain? **22**
bacon = 22
bacon + 1

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?
In python, a variable name should not start with a number but may include a number anywhere in its name. So, 100 is invalid and eggs is valid.

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

To get an integer of a value, use the int() function.

To get a floating-point number of a value, use the float() function.

To get a string of a value, use the str() function.

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

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

We can only concatenate strings together. Since 99 is not a string, this expression causes an error. To fix this, we need to specify the integer as a string by placing 99 in quotes. So it should be '99'.