

# INEURON ASSIGNMENTS

## Python Basics : Assignment 1

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**Question 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.

\*  
'hello'  
-87.8  
-  
/  
+  
6

**Answer:**

- Values: 'hello', -87.8, 6
- Expressions: \*, -, /, +

**Question 2:** What is the difference between string and variable

**Answer:**

- Variable is a container to store data of any datatype. Variable can be named with alphanumeric characters. It can be start with underscore (\_) or any alphabets, but it cannot be started with numeric characters like 1a = 10.
- String is a datatype represented within single quotes or double quotes or triple quotes while storing them in variable.
  - Eg, 'hello', "hello", '''hello''', """hello"""

**Question 3:** Describe three different data types

**Answer:**

- Most common used datatypes are int, float and str
  - **Int** – Numbers without decimal is integer datatype. It can be 32 and 64 bit. The range of integer is -2147483648 through 2147483647
  - **Float** – Numbers having decimal is float datatype. It is 64 bit double precision. The max values is 1.8 x 10<sup>308</sup>
  - **String**: Any sequence of characters represented within quotes is String. The string is enclosed between single quotes or double quotes or triple quotes.
- Arithmetic operations can be done with integer and float data, but not with String.

**Question 4:** What is an expression made up of? What do all expressions do

**Answer:**

- Expression is made up of variables, values, operators and calls to functions. Eg.,
  - x = x + 1,
  - a = 'hello' + 'world'

- return x
- Python interpreter evaluates the expressions and displays the result

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

**Answer:**

- Expressions contains identifiers, literals, operators and function calls which reduced to some results and displayed.
- Statements are a single line or several lines of python code. Eg., `a = 10`. No operations taken place here.

**Question 6:** After running the following code, what does the variable `bacon` contain

```
bacon = 22
```

```
bacon + 1
```

**Answer:**

It will returns the result 23

**Question 7:** What should the values of the following two terms be

`'spam' + 'spamspam'`

`'spam' * 3`

**Answer:**

1. Result of `'spam' + 'spamspam'` --> `'spamspamspam'`

2. Result of `'spam' * 3` --> `'spamspamspam'`

**Question 8:** Why is `eggs` a valid variable name while `100` is invalid?

**Answer:**

- As per the rules for naming a variable, variable name should start with (`_`) or any upper case or lower case alphabets and followed by any alphanumeric characters are allowed. Eg. `Age1`, `_age1` are valid.
- Hence, `eggs` is valid variable name and `100` is not.

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

**Answer:**

- `int()` function to get integer
- `float()` function to get float
- `str()` function to get string

**Question 10:** Why does this expression cause an error? How can you fix it?

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

**Answer:**

- We cannot concatenate String and Numbers datatypes using (+) symbol.
- Fix: converting 99 as string will solve the issue.
  - `'I have eaten ' + '99' + ' burritos.'`