

Assignment 1

Solutions

1)

Here we have:

| Values | Expressions |
|---------|-------------|
| 'hello' | * |
| -87.8 | - |
| 6 | / |
| | + |

2)

A variable is a name (given by the programmer) to refer to a value. Actually, a variable in python is a memory location reserved for the data value that is assigned to that variable.

Different type of data values can be assigned to the variables. Now, string is a datatype in python. String belongs to the class "str".

For example, in the expression `x = "America"`, `x` is the variable and "America" is a string.

3)

Three different data types:

- 1) Integers: Integer values belongs to class "int". int data type can store discrete integer values (Not decimals or fractional).
- 2) Float: Floating type values belongs to class "float". float data type can store real numbers (continuous values, decimals or fractional).

- 3) Complex: Complex values belongs to class “complex”. complex data type can store complex number values i.e., $a + ib$
- 4) In python, expressions are made up of operators, identifiers and literals. Basically, expressions are sequence of operators and operands that evaluates to a single value.
- 5) The difference between an expression and a statement is that expression only yields a resultant value whereas statements do something, like computation or action.

For example: `5*9` is an expression but `print(5*9)` is a statement

- 6) Variable `bacon` will contain value 22 after running the code.
- 7) Both will result in: ‘spamspamspam’
- 8) Because `100` is a literal and values cannot be assigned to a literal. It will raise a `SyntaxError` message.
- 9) We can use:
 - a. `int()` function to get the integer version of a value
 - b. `float()` function to get the floating-point version of a value
 - c. `str()` function to get the string version of a value
- 10)
This will raise an error because we cannot concatenate `int` datatype to a string. I have to concatenate `str` datatype to a string.

The correct form would be: `'I have eaten ' + '99 ' + 'burritos'`