1.In the below elements, which of them are values or expressions:

Values: 'hello', -87.8, 6

Expressions: \*, -, /, +

2.Difference between string and variable:

String: A string is a data type used to represent text. It is a sequence of characters enclosed in single (' ') or double (" ") quotes.

Variable: A variable is a name assigned to a memory location in a program, used to store and manipulate data. It can hold various types of values, including strings.

3.Three different data types:

Integer: Represents whole numbers without any decimal points (e.g., 5, -10).

Float (Floating-point): Represents numbers with decimal points or in exponential form (e.g., 3.14, -0.001).

String: Represents sequences of characters, usually used for text (e.g., 'hello', "world").

4.Expression composition and purpose:

An expression is made up of values, variables, operators, and functions that can be evaluated to produce a result.

Expressions represent computations, conditions, or values within a program.

Components include values, variables, operators, and functions.

1. Difference between expression and statement:

Expression: A combination of values, variables, operators, and functions that can be evaluated to produce a result.

Statement: A complete line of code that performs an action. Assignment statements, like spam = 10, are examples of statements.

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

The variable bacon still contains the value 22 because the expression bacon + 1 is not assigned to any variable. To update bacon, you should use bacon = bacon + 1 or the shorthand bacon += 1.

Values of the following terms:

7.'spam' + 'spamspam': 'spamspamspam'

'spam' \* 3: 'spamspamspam'

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

Variable names cannot start with a number. eggs starts with a letter and is therefore valid, while 100 starts with a number and is invalid as a variable name.

9.Three functions for conversion:

int() : Converts a value to an integer.

float() : Converts a value to a floating-point number.

str() : Converts a value to a string.

10.Why does this expression cause an error, and how to fix it:

The expression 'I have eaten ' + 99 + ' burritos.' causes an error because you are trying to concatenate a string with an integer directly. To fix it, convert the integer to a string using str(99):

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'I have eaten ' + str(99) + ' burritos.'