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 are: ‘hello’ , -87.8, 6.

Expressions are: \*, - , /,+ .

2. What is the difference between string and variable?

A string consists of characters that are encapsulated surrounded by either single quotation marks, or double quotation marks.

Example: “Satya”

A variable is a placeholder for storing values such as integers, strings or any numerical value, complex values.

Example:

Name =’Satya’

Roll= 1

1. Describe three different data types.

Answer:

Data types describe the kind of data a variable can hold. A data type can be of an integer type, character type and many other.

Text type: str

Numerical type: int, float, complex

Boolean type: bool

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

An expression is made up of operators and operands.

Operators are the once responsible for any operations that take place between operands.

Operands are the one which the operations take place.

Operands can be any numerical values.

Operators are of many types such as:

Numerical operators: +,-,\*,/

Relational operators: > , < , >= , <=

Logical operators: and,or,not

1. This assignment statements, like spam = 10. What is the difference between an expression and a statement?

An expression is a combination of operands and operators.

An expression in Python can contain identifiers, operators, and operands

A statement is a group of expressions and/or statements that you design to carry out a task or an action.

Expressions can be assigned or used as operands, while statements can only be declared.

Statements create side effects to be useful, while expressions are values or execute to values.

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

bacon = 22

bacon + 1

Answer:

Bacon contains 22.

In the statement bacon+1, it just prints 23, but the values of bacon itself was not assigned the increment. Hence the values remains 22 for bacon.

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

'spam' + 'spamspam'

'spam' \* 3

Answer:

'spam' + 'spamspam' = ‘spamspamspam’

'spam' \* 3 = spamspamspam

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

Answer:

There are certain rules for naming a variable. A variable name must start with a letter or the underscore character. A variable name cannot start with a number.

Hence 100 is invalid as a variable name where as eggs is a valid, due to variable naming conventions.

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

Answer:

For integers we have the function - int()

For floating point number, we have the function - float()

For a string, we have the function - str()

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

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

Answer:

In the above statement, 99 is an integer, we cannot concatenate an integer with a str, which throws an error.

To fix this error, we need to convert the integer 99 by converting it into a string.

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

'I have eaten ' + ‘99’ + ' burritos.'