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 with Data types | Expressions / Operators |
| ‘hello’  -87.8  6 | \*  -  /  + |

2. What is the difference between string and variable?

Answer:

String is the datatype to represent text format data whereas variable is identification/name of memory location where we can store the data.

In variable we can store different types of data, whereas in string is the datatype which represent only textual data, on which we can’t perform mathematical operations.

Ex: ‘nandkumar’ 🡺 Is the string

Int A=10 🡺 A is the variable with datatype integer and stores the value 10 into it.

3. Describe three different data types.

Answer:

1. int: Used to store and identify the integer values
2. Float: Used to store and identify decimal point values
3. String: Used to store and identify textual data

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

Answer:

An expression is made up of combination of operators, operands, function calls, which will be evaluated to produce a single value output of that expression.

Expressions used to perform computations which gives an output value on execution of it. Basically, it helps to compute and manipulate data.

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

Answer:

An expression evaluates to a single value, whereas a statement does not.

Statement can have a expression into it, or we can say an expression is always a statement but statement is not always a expression.

Ex. In given assignment statement, spam=10, is both statement as well as expression.

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

bacon = 22

bacon + 1

Answer:

bacon contains 22 only as second expression is not operated on bacon whereas it is operated with help of bacon but value is not stored in bacon or not affecting at all to bacon value.

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

'spam' + 'spamspam'

'spam' \* 3

Answer:

Values of the given terms should be same as ‘spamspamspam’

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

Answer:

Variable name can’t be start with number, it should be always start with alphabet or underscore.

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

Answer:

The int(), float(), and str() functions will evaluate to the integer, floating-point number, and string versions of the value passed to them.

Ex. Let’s consider input as 10,

int(10)=10

float(10)= 10.0

str(10)=’10’

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

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

Answer:

Possibility 1:

If we consider whole as just a string then it will give us error as we cant use single inverted comma inside a single inverted comma. And so to fix this error we have to remove single inverted comma inside the single inverted comma

Possibility 2:

If we consider it as expression of concatenation then it will give us error as we can’t add string and numeric value in concatenation, we have to first convert 99 into string variable data to fix this error. Like given below,

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

'I have eaten ' + ‘99’ + ' burritos.'