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.

Answer

*   ---- expression

'hello'   --- value

-87.8   --- expression

-     ---- expression

/   ----expression

+   ----expression

6   -----value

2. What is the difference between string and variable?

Answer:

string : String can be written in quotes such :'Assignment', "Assignment"

variable : it is the thing in which we can store data just like a container.

3. Describe three different data types.

Answer: **Integer**: Integer can store only numerical value.

e.g: 5,7.

List: The list is a ordered collection of data. It is very flexible as the items in a list do not need to be of the same type.

e.g: ['str',{a=5},[1,5],5.5,('Assignment')].

Tuple: Tuple is also an ordered collection of Python objects. The only difference between tuple and list is that tuples are immutable i.e. tuples cannot be modified after it is created.

e.g:(5,7,8,'python',5.6)

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

Answer: Expression is made up of values, containers, and mathematical operators (operands) and expressions are used to evaluate the values or represent the result on the screen.
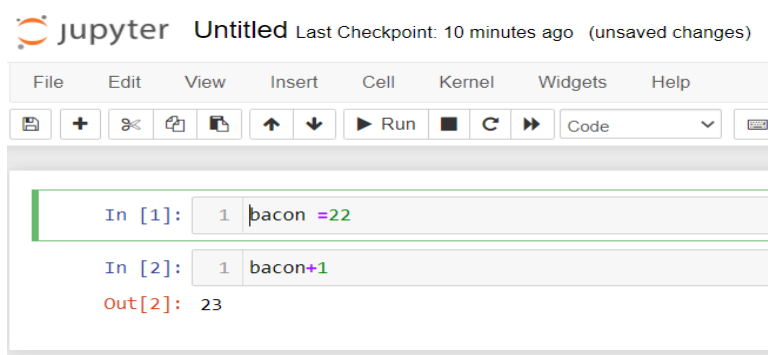
e.g 5>4

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

Answer: Expression is made up of values, containers, and mathematical operators (operands) and the statement is just like a command that a python interpreter executes like print.

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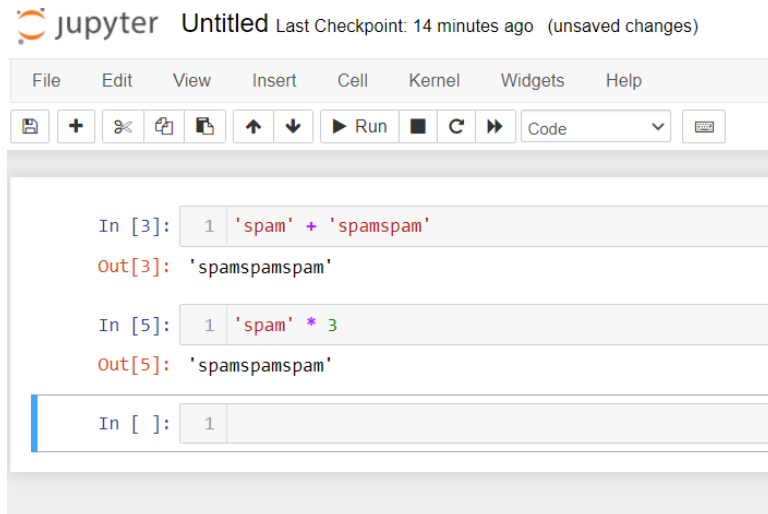
Answer :

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

'spam' + 'spamspam'

'spam' * 3

```
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   In [3]:   1  'spam' + 'spamspam'
   Out[3]:  'spamspamspam'

   In [5]:   1  'spam' * 3
   Out[5]:  'spamspamspam'

   In [ ]:   1
```

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

Answer: A variable name must start with letters or the underscore character. Just because eggs a valid variable name and 100 is invalid .

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

Answer: str(), int(), float().

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

'I have eaten' + 99 + 'burritos'

Answer : because 99 is an integer it cannot be concatenated with strings, if we have to concatenate it we need to do typecasting.

Code

```
In [11]: 1 'I have eaten ' + str(99) + ' burritos.'

Out[11]: 'I have eaten 99 burritos.'
```