

In [1]: 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.

In [3]: 'hello',-87.8,6 are values thus they are in integer and strings and *,-,+,/ are expression thus they are mathematical operators.

In [4]: 2. What is the difference between string and variable?

In [6]: String is defined as the sequence of characters enclosed by single quote or double quote.
Variables are used to store values.

In [7]: 3. Describe three different data types.

In [8]: The three different data types are:int,list,tuple
int:It is just a normal number
ex: a=8
list: Lists are used to store multiple items in a single variable.It uses [].It is mutable.
ex: list1=[1,2,3,4,5]
tuple: Tuples are used to store multiple items in a single variable.It uses (),It is immutable.

In [9]: 4. What is an expression made up of? What do all expressions do?

In [10]: An expression is a combination of values, variables, operators, and calls to functions.
Expressions are representations of value.

In [11]: 5.This assignment statements, like spam = 10. What is the difference between an expression and a statement?

In [12]: A statement in Python is used for creating variables or for displaying values.
The expression in Python produces some value or result after being interpreted by the Python interpreter.

In [14]: 6. After running the following code, what does the variable bacon contain?
bacon = 22
bacon + 1

In [17]: The variable bacon contains an integer value.
type(bacon)
simply giving '+' sign to bacon it cannot we have to assign it like bacon +=1.

Out[17]: int

In [18]: 7. What should the values of the following two terms be?
'spam' + 'spamspam'
'spam' *3

In [19]: First one is doing concating two strings using '+' operator.
Second one is doing replicating using '*' operator.

In [21]: print('spam' + 'spamspam')
print('spam' *3)

spamspamspam
spamspamspam

In [22]: 8. Why is eggs a valid variable name while 100 is invalid?

In [23]: eggs is a valid variable because, a variable can be start with a letter.
100 is invalid variable because, a variable cannot be start with an number.

In [24]: 9. What three functions can be used to get the integer, floating-point number, or string version of a value?

In [25]: The int(), float(), and str() functions will evaluate to the integer,
floating-point number, and string versions of the value passed to them.

In [26]: 10. Why does this expression cause an error? How can you fix it?
'I have eaten' + 99 + 'burritos'.

In [28]: This causes an error because a string cannot be concatenated with a number.
We can fix it by enclosing 99 with in a double quote.
print('I have eaten' + '99' + 'burritos')

I have eaten99burritos