

PYTHON ASSIGNMENT 1

BY SAHIN AHMED

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.

* expression

'hello' is string(value)

-87.8 is value

- expression

/ expression

+ expression

6 value

2. What is the difference between string and variable?

Ans: a variable is something which can store data like integer,float,list etc.

A string is collection of characters. E.g 'hello'. they are usually written inside ' ' or " "

3. Describe three different data types.

Ans: integer:numbers without decimal points. e.g 1,2,3,4 etc

Float:float is numbers with decimal points.

Boolean: it have two values either true or false.

Complex: complex numbers are in this data type.

String:Strings are sequences of character data.In Python is called str.

List: it is a collection of values which are kept inside [], e.g- [1,2,3,4],lists are mutable.

Tuple: it is a collection of values which are kept inside () e.g (1,2,3,4), tuples are not mutable.

Dictionary:A dictionary Dict() object is an unordered collection of data in a key:value pair form. A collection of such pairs is enclosed in curly brackets.

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SET: Set is mutable, unordered collection of distinct hashable objects. The set is a Python implementation of the set in Mathematics. A set object has suitable methods to perform mathematical set operations like union, intersection, difference, etc.

FROZENSET: Frozenset is immutable version of set whose elements are added from other iterables.

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

Ans: Expressions are representations of value. For example any string is also an expressions since it represents the value of the string as well. Python expressions only contain identifiers, literals, and operators. Expressions always returns a value

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

Ans: expression are different from statement in the fact that statements do something while expressions are representation of value. Statements represent an action or command e.g print statement, assignment . Expression is a combination of variables, operations and values that yields a result value. Expressions always returns a value. An expression is something that can be reduced to a value, for example `"1+6"` or `"x= 1+3"`

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

```
bacon = 22
```

```
bacon + 1
```

Ans: 22

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

```
'spam' + 'spamspam'
```

```
'spam' * 3
```

Ans: 'spamspamspam'

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

Ans: we cant have integer as a variable name in python.

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

Ans: int(), float(), str()

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

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

Ans: we cant add string to integer in python. We can fix this as shown

'I have eaten + 99 + burritos.'