

PYTHON BASICS ASSIGNMENT NUMBER: - 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.

*

'hello'

-87.8

-

/

+

6

Answer – The element can be categorized in: -

Values: -

'hello' (string)

-87.8 (float)

6 (int)

Expression: -

*(Multiplication)

-(subtraction)

/(division)

+(addition)

2. What is the difference between string and variable?

Answer: - String is a Datatype such as "Garv", 'Soni'. It can be in single quotes and double quotes and variable is a name that will refer to a object like this string. Example: - FirstName = "Garv", LastName = "Soni".

3. Describe three different data types.

Answer: -

Integer = Integer is a Numeric datatype, which allow us to store only number. Eg = 9,10.

Float = Float is a Decimal numeric datatype, which allow us to store decimal number. Eg = 10.5, 9.5.

String = String is a datatype to store languages like English or number or anything but in single or double quotes. Eg = "Garv", "Soni", "100".

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

Answer: - An expression is made up of one or more values, operators, and/or variables that are combined to represent a computation. Expressions can perform various tasks, such as arithmetic operations, logical operations, and comparison operations. All expressions in a programming language evaluate to a value or result.

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

Answer: - An expression is a combination of values, variables, operators, and function calls that can be evaluated to produce a single value.

A statement, on the other hand, is a unit of code that performs some action. It can contain expressions, but it can also contain other types of code such as assignments, loops, and function definitions.

In the case of the assignment statement "`spam = 10`", the expression on the right-hand side (10) is evaluated and then assigned to the variable on the left-hand side (spam). So, the assignment statement is a type of statement that contains an expression.

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

```
bacon = 22
```

```
bacon + 1
```

Answer: - `bacon` will be 22 because we increment it but did not assign to `bacon`. Like this (`bacon = bacon + 1` or `bacon += 1`)

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

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

```
'spam' * 3
```

Answer: - a. `'spam' + 'spamspam'` : - `'spamspamspam'`

b. `'spam' * 3` : - it will multiply 3 times like `'spamspamspam'`

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

Answer: - `eggs` is valid because we can start variable with a letter or `_` only that why `eggs` is a valid variable name and `100` is a invalid variable name because it starts from integer.

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

Answer: - for integer : - `int()` to convert any value to the int. if the value is in floating-point integer, for floating-point number : - `float()` to convert any value to float. If the value is in int by adding `.0.`, and for string : - `str()` can convert any value to string.

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

```
'I have eaten' + 99 + 'burritos'
```

Answer: - This Expression will cause an error because we are trying to concatenate a string with an int i.e. 99. To solve this we use this: - `'I have eaten' + str(99) + 'burritos'`
