

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

Ans: There are 4 operators and 3 variables:

Operators: *, -, /, +

Variables: 'hello', -87.8, 6

2. What is the difference between string and variable?

Ans: A Variable is used to store the information; it basically acts like a container. A string is a type of information and a group of characters or a single character which is enclosed in a

Double Quotes “ ” or Single Quotes ‘ ’.

3. Describe three different data types.

Ans:

1. **Int Datatype:** Is used to represent whole numbers.
2. **Float Datatype:** Is used to represent floating point values or decimal values.
3. **Complex Datatype:** Complex Number is represented by complex class. It is specified as (Real Part) + (Imaginary Part).

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

Ans: An expression is a combination of values, operators and variables. In python an interpreter, evaluates the expression and display the result according to the flow of an expression.

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

Ans: An expression is a combination of values, operators and variables.

Eg: `20+30*5`-----> this is an expression

Whereas a Statement is a unit of code that creates variable, display value. Assignment statements are statements which do not return any value. It only assigns.

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

```
bacon = 22
```

```
bacon + 1
```

Ans: 23

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

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

```
'spam' * 3
```

Ans:

1. `'spamspamspam'`
2. `'spamspamspam'`

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

Ans: Because variable creation has some set of rules,

- Variable name cannot start with numbers.
- It can only contain alpha numeric characters and underscore.
- Reserved keywords cannot be used as variable name.

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

Ans: The `int()`, `float()`, `str()` are the functions will evaluate to the integer , float and string respectively in values are passed.

Eg:

- `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.'

Ans: The error is caused because 99 is an integer and integer cannot concatenate with string. For Fixing this issue we have to convert integer into string by using typecasting.

Input: 'I have eaten' + str(99) + ' burritos'

Output: I have eaten 99 burritos