

Assignment-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.

Answer:

*	- expression
'hello'	- value
-87.8	- value
-	- expression
/	- expression
+	- expression
6	- value

2. What is the difference between string and variable?

Answer: **String:** Anything inside the quotes is called string.

Variable: It is used to store the data in main memory.

3. Describe three different data types.

Answer: **int:** Positive or negative whole numbers (without a fractional part) e.g. -10, 10, 456, 4654654.

float: Any real number with a floating-point representation in which a fractional component is denoted by a decimal symbol or scientific notation e.g. 1.23, 3.4556789e2.

complex: A number with a real and imaginary component represented as $x + 2y$.

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

Answer: An expression is a combination of values, variables, operators, and calls to functions. Expressions need to be evaluated. If you ask Python to print an expression, the interpreter evaluates the expression and displays the result.

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

Answer: An expression evaluates to a single value. A statement does not.

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

```
bacon = 22
bacon + 1
```

Answer: `bacon = 23`

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

```
'spam' + 'spamspam'
'spam' * 3
```

Answer: `'spam' + 'spamspam' = spamspamspam`
`'spam' * 3 = spamspamspam`

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

Answer: Variable names cannot begin with a number.

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

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

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

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

Answer: The expression causes an error because 99 is an integer, and only strings can be concatenated to other strings with the `+` operator. The correct way is `'I have eaten ' + str(99) + ' burritos.'`