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.

* Values: 'hello', -87.8, 6
* Expressions: \*, -, /, +

2. What is the difference between string and variable?

* A **string** is a data type that represents text (e.g., "Python").
* A **variable** is a name that stores a value (e.g., age = 25).

3. Describe three different data types.

1. **Integer (int):** Whole numbers (e.g., 10, -5).
2. **Float (float):** Decimal numbers (e.g., 3.14, -0.5).
3. **String (str):** Text enclosed in quotes (e.g., "Hello", 'Python').

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

* An **expression** consists of **values, variables, and operators** (e.g., 5 + x).
* All expressions **evaluate to a single value** (e.g., 5 + 3 → 8).

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

* **Expression:** Evaluates to a value (e.g., 2 + 2 → 4).
* **Statement:** Performs an action (e.g., spam = 10 assigns a value).

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

bacon = 22

bacon + 1

* bacon remains 22 because bacon + 1 does not update the variable.

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

'spam' + 'spamspam'

'spam' \* 3

* 'spam' + 'spamspam' → 'spamspamspam'
* 'spam' \* 3 → 'spamspamspam'

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

* eggs is valid because variable names **must start with a letter or underscore**.
* 100 is invalid because it **starts with a number**.

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

* int() → Converts to integer (e.g., int("5") → 5).
* float() → Converts to float (e.g., float(3) → 3.0).
* str() → Converts to string (e.g., str(10) → "10").

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

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

'I have eaten ' + str(99) + ' burritos.'