Day 3 - Interview Questions

1. **How do you take user input in Python?**
   You can take user input in Python using the input() function.

2. **What is the return type of the input() function in Python?**
   The input() function returns a string.

3. **How can you convert user input to an integer in Python?**
   You can convert user input to an integer using the int() function.

4. **How can you prompt the user for multiple inputs in a single line and store them as separate variables?**
   You can use the split() method to split the user input into separate variables.

5. **What are the two types of comments supported in Python?**
   Python supports two types of comments:
   Single-line comments: These begin with a # character and extend to the end of the line.
   Multi-line comments (docstrings): These are enclosed in triple quotes (''' or """) and are often used for documenting functions, classes, or modules.

6. **Explain how you can handle different types of user input, such as integers, floats, and strings, based on user prompts.**
   You can use conditional statements and appropriate conversion functions (e.g., int(), float()) to handle different types of user input based on the prompt and input validation.

7. **What is the purpose of comments in Python code, and why are they important?**
   Answer: Comments in Python code serve as explanatory notes or documentation for the code. They are important for:
   Explaining code logic to others (including future maintainers).
   Adding context to code for easier understanding.
   Providing documentation for functions, classes, and modules.

8. **What is a program statement in Python?**
   A program statement in Python is a single line of code that performs a specific task or operation. Program statements are the building blocks of Python programs.

9. **Explain the significance of indentation in Python program statements.**

Indentation is used in Python to define block structure and scope. It is crucial for readability and determines which lines of code belong to a specific block or statement, such as within loops and functions.

10. **Differentiate between an expression statement and an assignment statement in Python.**
    An expression statement is a line of code that evaluates an expression but doesn't necessarily store its result. For example, print(5 + 3) is an expression statement that calculates the sum but doesn't save it.
    An assignment statement assigns a value to a variable, storing the result. For example, result = 5 + 3 is an assignment statement.