Summarization

Datatypes, Variables and Type Casting:

1-Datatypes: Define the kind of data that can be stored in a variable include integers (int), floating-point numbers (float), strings (str), booleans (bool)

2-Variables: Store data values. In Python, you can create a variable and assign a value to it using the assignment operator =. For example, x = 6 assigns the value 6 to the variable x.

3-Type Casting: Convert a value from one datatype to another, functions like int(), float(), str().

Input and Output:

1-Input: Use the input() function to take input from the user. It reads a line from input, converts it to a string, and returns it.

2-Output: Use the print() function to display output to the console. It takes one or more lines as input and prints them to the standard output.

Conditions and Loops:

1-Conditions: Make decisions in the program. In Python, use if, elif, and else statements to execute different blocks of code based on different conditions.

2-Loops: Iterate over a sequence of items or execute a block of code repeatedly. Python provides for and while loops. for loops are used when you know the number of iterations in advance, while while loops are used when you want to repeat a block of code until a condition is no longer true.

Math Library and Strings:

1-Math Library: Python's math module provides functions Import it using import math and use functions like math.sqrt(), math.sin(), math.cos().

2-Strings: Strings in Python are sequences of characters enclosed within either single quotes (') or double quotes (''),Concatenation (+): You can concatenate (join together) strings using the + operator.