Day 3

Typecasting in Python:

What is Typecasting?

Typecasting means changing one data type into another data type.

Example: Converting "10" (string) into 10 (integer).

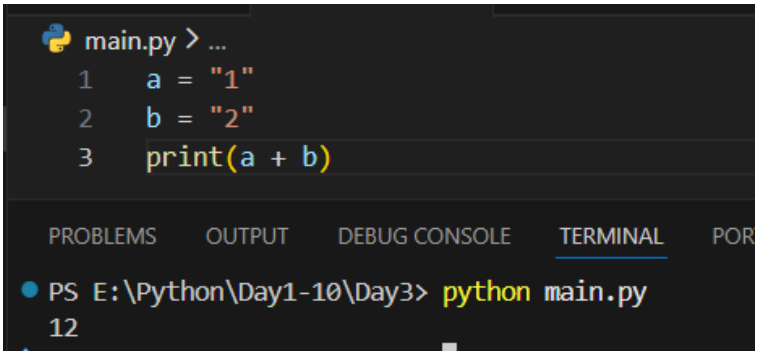
Why do we need Typecasting?

- To perform calculations
- To take input from users
- To avoid errors
- To convert data into required format

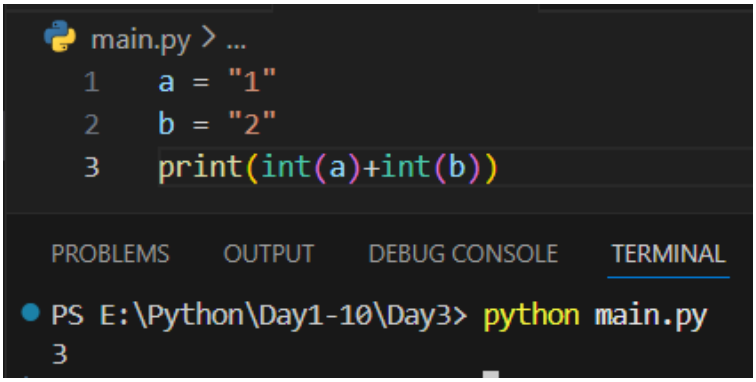
Types of Typecasting in Python:

1. Implicit Typecasting (Automatic): Python converts data automatically.
2. Explicit Typecasting (Manual): We convert data manually using functions.

Example: without typecasting we expect the sum, but get the concatenation.



Example: converting the string to the integer.



Summary:

1. Typecasting means changing data type
2. Two types:
   - Implicit → done automatically by Python
   - Explicit → done by programmer
3. Common functions:
   - int() → integer
   - float() → decimal
   - str() → string
   - bool() → True/False
4. Input is always string, so typecasting is needed

Taking User Input in Python :

What is User Input?

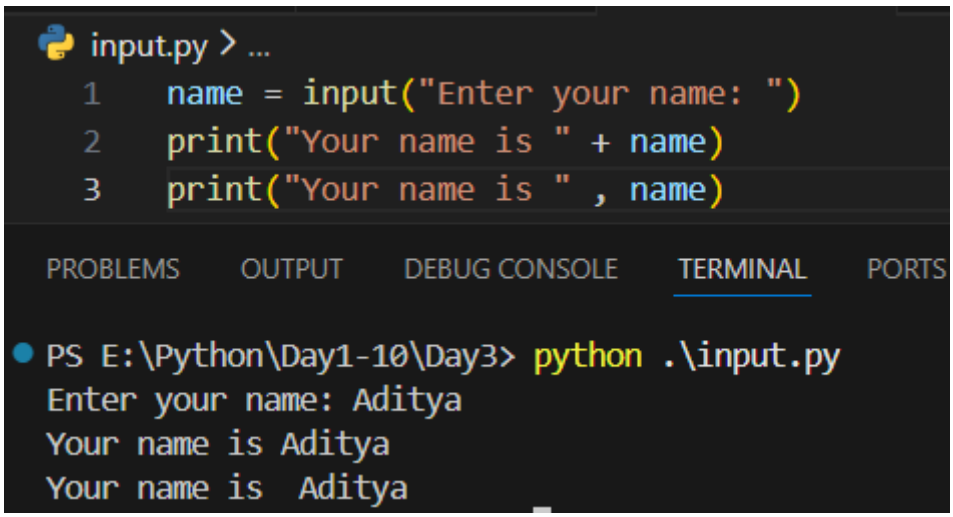
User input means taking data from the user while the program is running. Python uses the input() function to take input.

input() Function:

Basic Syntax:

input("message")

Example: a basic example



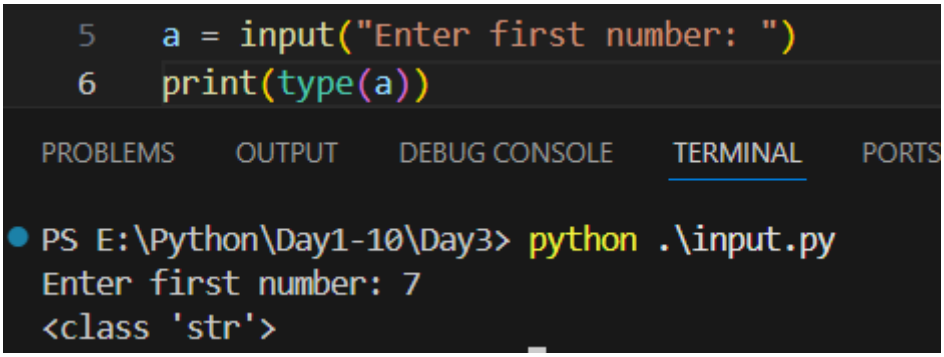
They differ in how the text and the variable are combined:

- In print("Your name is " + name), the + joins (concatenates) the string and the variable. Both must be strings, or it will cause an error.
- In print("Your name is ", name), the comma lets print handle them separately and automatically adds a space between them. It can also print different data types without error.

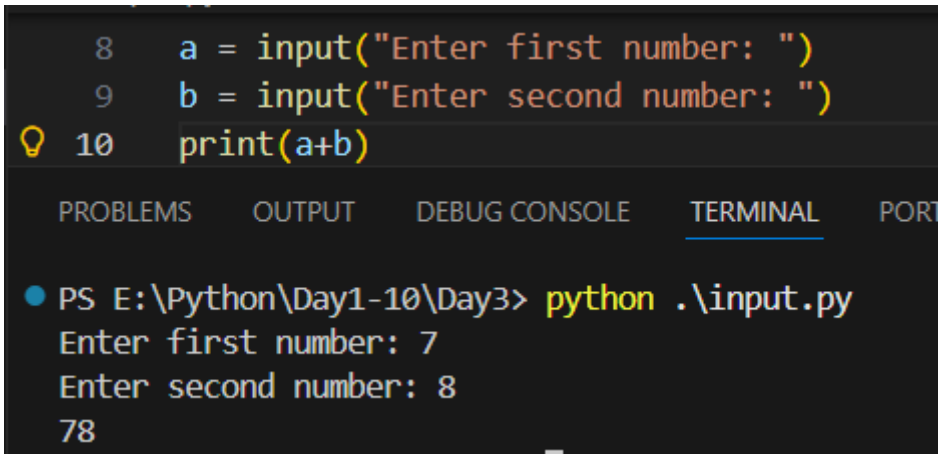
So, the main difference is that + joins strings manually, while , lets print combine values more safely and easily.

Important Point (Very Important): Input is always taken as a STRING.

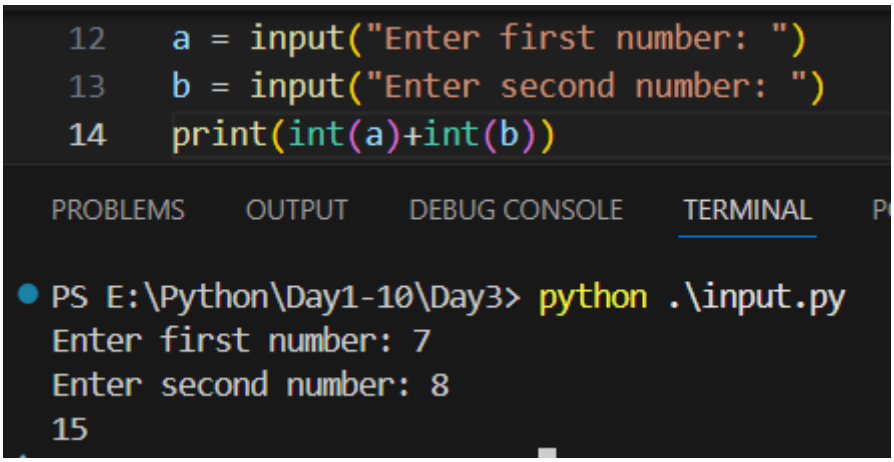
Example:



Example: as they are treated as strings, they get concatenated.



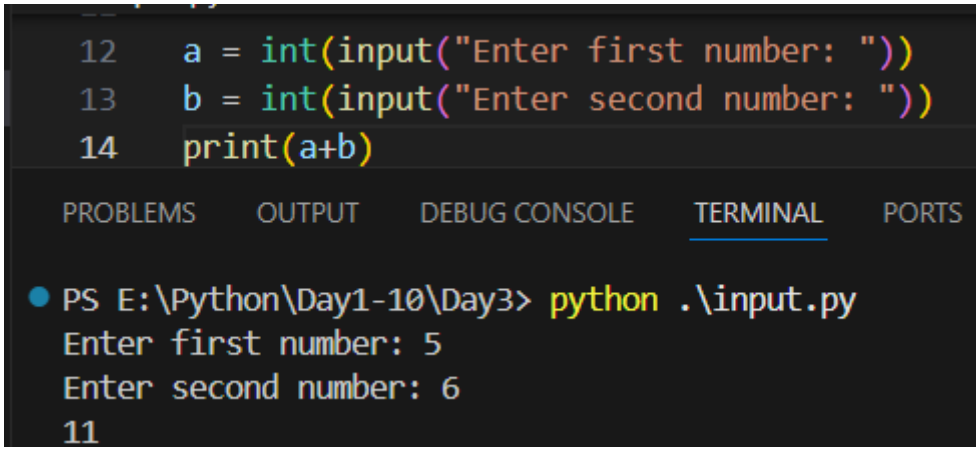
Example: typecasting the taken input



Using User Input with Numbers (Typecasting)

To perform calculations, we must convert input.

Example: another way to typecast



Summary:

- User input means taking data from the user
- Python uses input() function
- Input is always string by default
- Use typecasting (int(), float()) for calculations
- split() and map() help take multiple inputs

--The End--