Day 2

Comments, Escape Sequences & Print Statement:

What are Comments?

Comments are notes written inside code for humans to understand. Python ignores comments while running the program.

Why are Comments used?

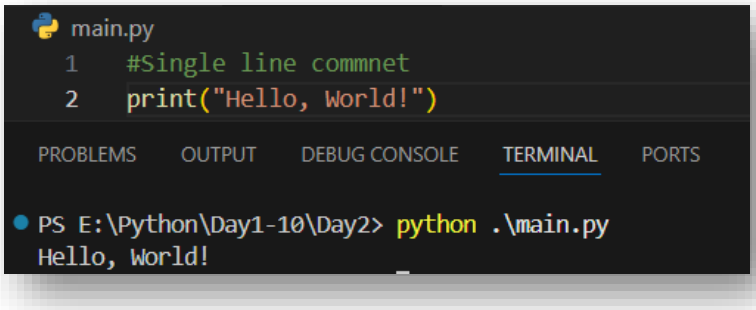
- To explain code
- To make code easy to read
- To remember why we wrote something

Types of Comments

1. Single-line comment

Use #

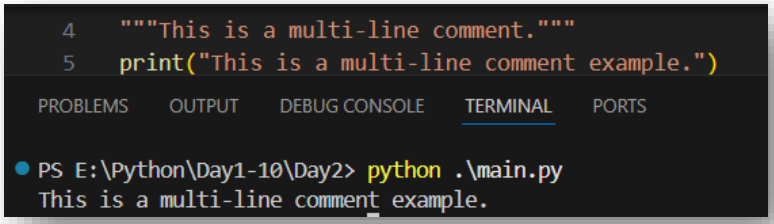
Example:



2. Multi-line comment

Python does not have a special syntax, but we use """ """ or multiple #.

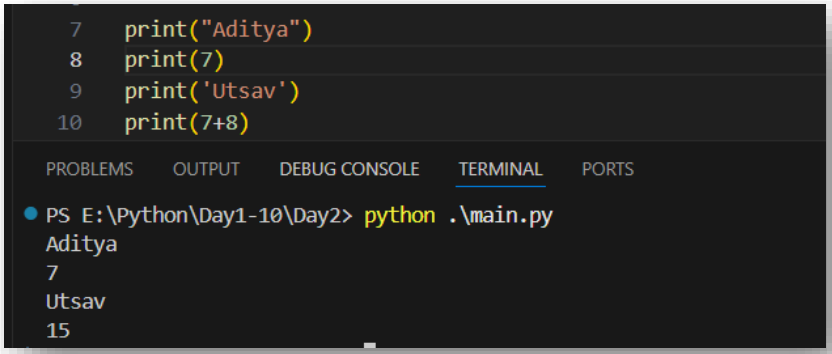
Example:



What is the print statement?

print() is used to show output on the screen.

Example:



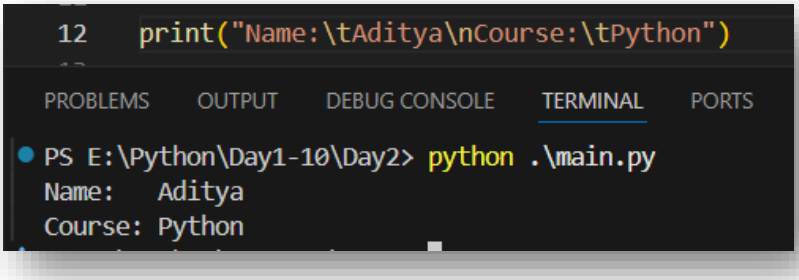
What are Escape Sequences?

Escape sequences are special characters used inside strings to add:

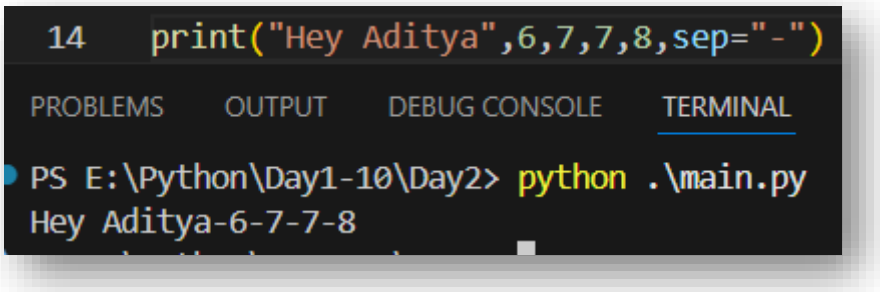
- new line
- tab space
- quotes
- special formatting

They start with a backslash (\).

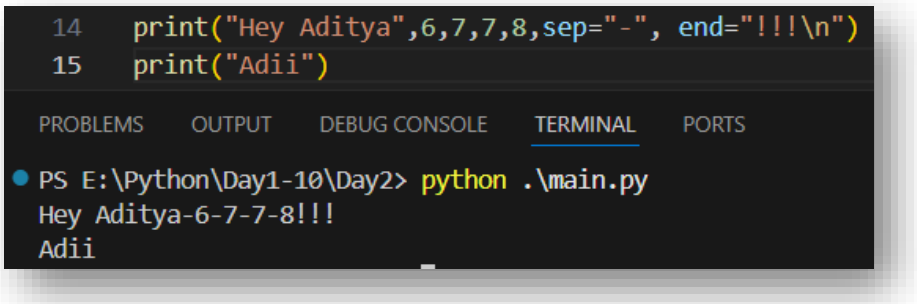
Example:



Example: using “sep” with the print.



Example: using “sep” and “end” with the print.



Summary:

- Comments are notes in code and are ignored by Python
- Use # for single-line comments
- print() is used to display output on the screen
- Escape sequences add special formatting in text
- Common escape sequences:
  - \n → new line
  - \t → tab
  - \" → double quote
  - \\ → backslash

Variables and Data Types:

What is a Variable?

A variable is a name that stores a value in memory. You can think of a variable as a container that holds data.

Why do we need Variables?

- To store data
- To reuse values
- To make programs dynamic

How to create a Variable?

In Python, you do not need to declare a type.

Example:

x = 10

name = "Aditya"

Rules for Naming Variables:

- Must start with a letter or _
- Can contain letters, numbers, _
- Cannot start with a number
- Cannot use spaces

Example:

Valid:

age = 21

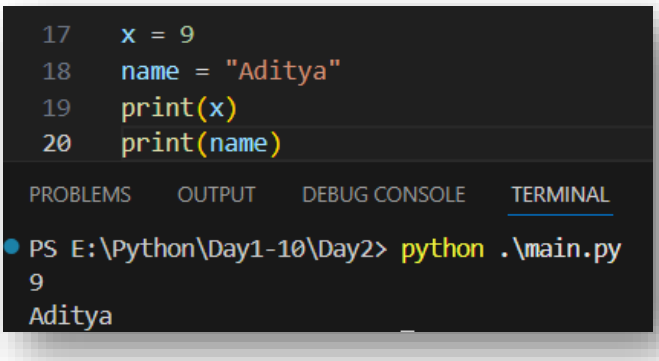
_user = "Admin"

Invalid:

1age = 21

my name = "A"

Example: using variable and printing that too.



Example: variables can change value.

```
22    x = 9
23    x = 8
24    print(x)
```

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL
PS E:\Python\Day1-10\Day2> python .\main.py
8
```

What is a Data Type?

Data type tells Python what kind of data a variable is storing.

Common Data Types:

- int → whole numbers
- float → decimal numbers
- str → text
- bool → True/False

Example:

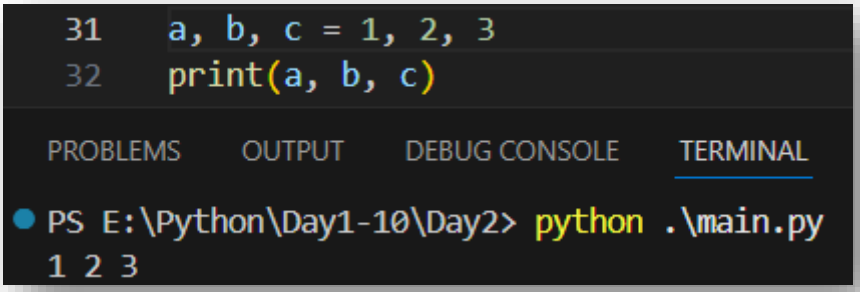
```
27    name = "Aditya" #String
28    a = 7           #Integer
29    b = 8.5         #Float
30    is_student = True  #Boolean
```

Example: to get the type of the variable.

```
27    print(type(7))
28    print(type("Aditya"))
```

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PO
PS E:\Python\Day1-10\Day2> python .\main.py
<class 'int'>
<class 'str'>
```

Example: Multiple Variables Assignment



Summary:

- Variable is a container to store data
- Python variables do not need type declaration
- Variables can change values
- Data Types tell the type of data stored
- Common data types:
    - int → whole numbers
    - float → decimal numbers
    - str → text
    - bool → True/False
- type() is used to check data type

--The End--