What is a Loop?

- In programming, a **loop** is used to repeat a block of code multiple times.
- Instead of writing the same code again and again, we use loops.

Types of Loops in Python:

- 1. While Loop \rightarrow repeats as long as a condition is True.
- 2. For Loop \rightarrow repeats for a fixed range or sequence.

While Loop Basics:

• While loop keeps running until the condition becomes False.

Syntax:

while condition: # code block

Key Points to Remember:

- Always update the variable inside loop, otherwise it will become infinite.
- Use while loop when you **don't know** in advance how many times to run.
- Common uses: login system, menu-driven programs, input validation.