**Program Title:** Dynamic To-Do List in Python

**Purpose:**  
This program allows a user to **add, view, update, and delete tasks** dynamically. It keeps running until the user chooses to exit.

**Code Breakdown**

1. **show\_menu() Function**
   * Prints the menu with 5 options (View, Add, Update, Delete, Exit).
   * Helps guide the user through available actions.
2. **view\_tasks(tasks) Function**
   * Displays all current tasks with numbers using range().
   * If no tasks exist, it shows a friendly message.
3. **add\_task(tasks) Function**
   * Takes input from the user for a new task.
   * Adds the task to the tasks list using append().
   * Confirms the addition.
4. **update\_task(tasks) Function**
   * Shows the current task list.
   * Asks for the task number to update.
   * Replaces the old task with the new one.
   * Handles invalid numbers or wrong input with error messages.
5. **delete\_task(tasks) Function**
   * Shows the current tasks.
   * Asks for the task number to delete.
   * Removes it using pop().
   * Handles invalid inputs safely.
6. **main() Function**
   * Starts the program with a greeting.
   * Creates an empty list tasks to store tasks.
   * Runs a while True loop to repeatedly show the menu.
   * Based on user choice, it calls the right function.
   * Exits only if the user presses 5.
7. **if \_\_name\_\_ == "\_\_main\_\_":**
   * Ensures the program runs only when executed directly, not when imported.

**Why This Code Works**

* **Lists** are used because they can dynamically grow and shrink.
* **Functions** keep the code modular, clean, and easy to understand.
* **Loops & Conditions** ensure continuous user interaction until exit.
* **Error Handling (try/except)** prevents crashes if the user enters invalid input.

