# To-Do List (Dynamic)

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## Code Explanation

This Python code implements a simple, interactive To-Do list system that runs in the terminal. The user can add, remove, and view tasks dynamically. The program continues to prompt the user for actions until they choose to exit.

### How the Code Works

1. **Task Storage:**
   * All tasks are stored in a list called tasks.
2. **Display Function:**
   * The show\_tasks() function prints the current list of tasks. If there are no tasks, it notifies the user.
3. **Main Loop:**
   * The program runs an infinite loop, showing options to the user:
     + Add Task
     + Remove Task
     + Show Tasks
     + Exit
   * The user selects an option by entering a number (1-4).
4. **Adding a Task:**
   * If the user selects ‘1’, they are prompted to enter a new task, which is then added to the tasks list.
5. **Removing a Task:**
   * If the user selects ‘2’, the current tasks are displayed.
   * The user is asked to enter the number of the task to remove.
   * The code checks if the input is valid and removes the selected task.
6. **Showing Tasks:**
   * If the user selects ‘3’, the current list of tasks is displayed.
7. **Exiting:**
   * If the user selects ‘4’, the program prints a closing message and exits the loop.
8. **Input Validation:**
   * The code checks for invalid options and handles errors (like entering a non-number when removing a task).

## What the Code is Doing

* The code provides a simple way to manage a list of tasks from the terminal.
* It allows the user to add as many tasks as they want, remove any task by its number, and view the current list at any time.
* The program is interactive and continues running until the user chooses to exit.
* All actions and errors are clearly communicated to the user.

This makes it a practical example of a dynamic, menu-driven To-Do list in Python.

## Example Session / Output

Options: 1) Add Task 2) Remove Task 3) Show Tasks 4) Exit  
Choose an option (1-4): 1  
Enter new task: Buy groceries  
Task added.  
  
Options: 1) Add Task 2) Remove Task 3) Show Tasks 4) Exit  
Choose an option (1-4): 1  
Enter new task: Finish assignment  
Task added.  
  
Options: 1) Add Task 2) Remove Task 3) Show Tasks 4) Exit  
Choose an option (1-4): 3  
Your To-Do List:  
1. Buy groceries  
2. Finish assignment  
  
Options: 1) Add Task 2) Remove Task 3) Show Tasks 4) Exit  
Choose an option (1-4): 2  
Your To-Do List:  
1. Buy groceries  
2. Finish assignment  
Enter task number to remove: 1  
Removed: Buy groceries  
  
Options: 1) Add Task 2) Remove Task 3) Show Tasks 4) Exit  
Choose an option (1-4): 3  
Your To-Do List:  
1. Finish assignment  
  
Options: 1) Add Task 2) Remove Task 3) Show Tasks 4) Exit  
Choose an option (1-4): 4  
To-Do Task System Closed.