




DATA ANALYTICS

# PERSONAL TO-DO LIST APPLICATION (PYTHON CLI)

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# INTRODUCTION

- **Purpose:**

The Personal To-Do List Application is designed to help users efficiently organize, track, and manage their daily tasks through a simple and intuitive command-line interface. It aims to provide a lightweight tool that supports productivity by allowing users to add, update, complete, and delete tasks as needed.

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- **Importance:**

In modern life, staying organized and managing time effectively is critical. This application offers a practical solution for individuals who prefer a straightforward task manager without complex software. It supports better task prioritization and progress tracking, helping users increase focus and reduce stress related to incomplete or forgotten tasks.



- **Technologies:**

Python 3.x & CSV for data storage



# PROJECT OBJECTIVES

- **Create, Read, Update, Delete (CRUD) Tasks via CLI:**

Provide users with a simple command-line interface to efficiently add new tasks, view existing ones, update task details such as description and priority, and delete tasks when no longer needed

- **Persist Tasks in CSV Across Sessions:**

Ensure all task data is saved in a CSV file so that information remains available even after the application is closed and reopened, allowing for reliable long-term task management.

- **Filter Tasks by Status and Priority:**

Enable users to easily view tasks based on their status (e.g., pending or completed) and priority levels (high, medium, low), helping them focus on the most urgent or important items.

- **Provide Basic Statistics (Completion Rate):**

Offer simple insights such as total tasks, number of pending and completed tasks, and overall task completion rate, which help users monitor their productivity and progress effectively.



# ARCHITECTURE DIAGRAM





# KEY FEATURES

1. **Add Task:** Description + Priority
2. **View Tasks:** All, Pending, Completed
3. **Update & Delete Tasks**
4. **Mark Complete:** Auto date stamp
5. **Task Statistics:** Counts & completion rate





## A person's hand is reaching out, with a robotic hand visible in the foreground. The background is a mix of blue and purple light, creating a futuristic atmosphere. The robotic hand is detailed with mechanical components and glowing red lights.

```
1.py > TodoApp > delete_task
1
2   from task_manager import TaskManager
3   import sys
4
5   class TodoApp:
```

```
=====
PERSONAL TO-DO LIST MANAGER
=====
1. Add new task
2. View all tasks
3. View pending tasks
4. View completed tasks
```

```

5. Mark task as complete
6. Update task
7. Delete task
8. Filter tasks by priority
9. Task statistics
0. Exit

```

```
-----
Enter your choice (0-9): 8

--- Filter by Priority ---
Enter priority (High/Medium/Low) [default: Medium]: High

High Priority Tasks:
```

ID	Description	Priority	Status	Created
T001	Complete data analytic...	High	Pending	2025-08-15
T005	Prepare presentation s...	High	Completed	2025-08-13
T008	Submit project proposal	High	Pending	2025-08-17

```
Press Enter to continue...
```

```

PERSONAL TO-DO LIST MANAGER
=====
1. Add new task
2. View all tasks
3. View pending tasks
4. View completed tasks
5. Mark task as complete
6. Update task
7. Delete task
8. Filter tasks by priority
9. Task statistics
0. Exit
-----
Enter your choice (0-9): 1

--- Add New Task ---
Enter task description: Buy Flowers for gf
Enter priority (High/Medium/Low) [default: Medium]: high
✓ Task added successfully! ID: T010

Press Enter to continue...

```

```
1.py > 📁 TodoApp > 📁 delete_task
```

PERSONAL TO-DO LIST MANAGER

```
=====
. Add new task
. View all tasks
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

=====
PERSONAL TO-DO LIST MANAGER
=====
1. Add new task
2. View all tasks
```

3. View pending tasks
4. View completed tasks
5. Mark task as complete
6. Update task
7. Delete task
8. Filter tasks by priority
9. Task statistics
0. Exit

```
-----
Enter your choice (0-9): 2
```

ID	Description	Priority	Status	Created
T001	Complete data analytic...	High	Pending	2025-08-15
T002	Pay electricity bill	Medium	Completed	2025-08-14
T003	Buy groceries for the ...	Medium	Pending	2025-08-16
T004	Schedule dentist appoi...	Low	Pending	2025-08-17
T005	Prepare presentation s...	High	Completed	2025-08-13
T006	Call insurance company	Medium	Pending	2025-08-17
T007	Read Python programmin...	Low	Pending	2025-08-16
T008	Submit project proposal	High	Pending	2025-08-17
T009	Practice Python progra...	Medium	Pending	2025-08-17

```
Press Enter to continue...
```



# RESULTS & INSIGHTS

**ORGANIZATION:** Quick task tracking

**PRIORITY FOCUS:** Highlights high-priority items

**PERSISTENCE:** Tasks saved offline

**LIMITATIONS:** No GUI or database

01

02

03

04

# ETHICAL CONSIDERATIONS

(01)

- No personal data collection
- 

(02)

- Data stored locally
- 

(03)

- No bias concerns (personal use)
- 

(04)

- Transparency and User Control





# THANK YOU!

- **GitHub:** <https://github.com/ShuvangkarSaikia/Personal-to-do-list-cli>
- **Contact:** shuvangkar\_2312res752@iitp.ac.in

