To-Do List Application

A comprehensive task management application with both Command-Line Interface (CLI) and Graphical User Interface (GUI) built using Python.

Features

- Create tasks with title, description, priority, and due date
- Update existing tasks
- Delete tasks
- Mark tasks as completed or pending
- Search tasks by title or description
- Filter tasks by priority or status
- View task statistics
- Automatic data persistence using JSON

Priority Levels

High – Urgent and important tasks
Medium – Regular priority tasks
Low – Less urgent tasks

Project Structure

task_manager.py – Core task logic and data persistence
todo_cli.py – Command-line interface
todo_gui.py – Graphical user interface (tkinter)
requirements.txt – Project requirements
tasks.json – Auto-generated task data file

Installation

Prerequisites:
- Python 3.7 or higher
- tkinter (comes with Python)

Run the application from the project directory. No external libraries are required.

How to Run

GUI Version:
python todo_gui.py

CLI Version:
python todo_cli.py

Data Storage

All tasks are automatically saved in tasks.json. The file is created on first run and updated after every change.

Technical Overview

This project demonstrates object-oriented programming, file handling with JSON, GUI development using tkinter, and CLI-based application design.

Project Status

The application is fully functional, tested, and ready for submission or evaluation.