

To-Do Console App

A console-based task management system designed to help individuals organize tasks, track progress, and enhance productivity.

◆ Features & Functionality

1- Authentication System (20 points)

✓ Registration:

- ID Number (exactly 14 digits, unique)
- First Name
- Last Name
- Email (validated email formula)
- Password (**Bouns** Hashing Password (using `hashlib`))
- Confirm Password
- Mobile Number (validated for Egyptian numbers)
- Status (active , inactive)
- Role (Admin, Regular User)

✓ Login:

- Users can log in using their email and password after activation.
- Only active users can log in

✓ Profile Management:

- Users can update their profile (name, phone number). (Email , id) can not edit
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2- Task Management System (30 points)

✓ Create a New Task:

- Task Title
- Task Description (optional)
- Priority Level (Low, Medium, High)
- Task Status (To-Do, In Progress, Completed)
- Due Date (must be in the future; validate the date format)
- Assigned Owner (task creator)

✓ View Tasks:

- Display all tasks owned by the logged-in user.

✓ Edit Tasks:

- Users can update the title, description, priority, or due date of their own tasks.
- Change task status to "Completed".

✓ Delete Tasks:

- Users can delete their own tasks.

✓ Search Tasks:

- Search for tasks using task title.

✓ Sorting Tasks:

- By due date, priority, status

✓ Filter Tasks:

- Filter tasks by priority, status, or due date.
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3. Roles & Permissions System (New Feature)

Admin Role

- View all users, View all tasks, Delete any task, Deactivate users

Regular User Role

- Manage only their own tasks , View and edit personal profile

4- (Bonus) Task Reminders & Notifications (5 points)

✓ Users receive reminders (appear in the console when the user logs in) for:

- Upcoming deadlines (within 24 hours).
 - Overdue tasks.
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✓ Notes

- Store data in JSON/CSV format.
- Never trust user input—validate all inputs and handle exceptions properly.
- OOP Is required.
- Separated Files and use Packages and modules.

✓ Useful References:

<https://crawlbase.com/blog/how-to-read-json-files-in-python/>

<https://www.programiz.com/python-programming/json>

<https://realpython.com/python-csv/>

<https://docs.python.org/3/library/csv.html>