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Introduction

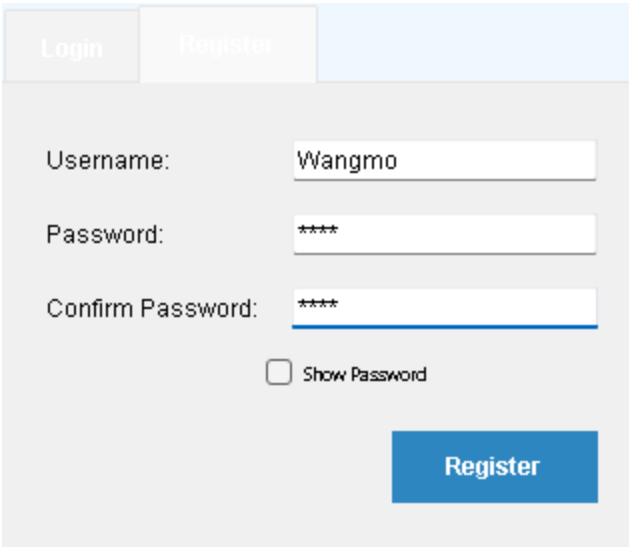
This comprehensive To-Do List Tracker application represents a sophisticated task management system designed to enhance productivity and organization for users. Developed as a complete desktop solution, the application incorporates robust user authentication, intuitive task management capabilities, and advanced features that cater to modern user expectations. The system is built using Python with Tkinter for the graphical interface and SQLite for reliable data storage, ensuring both functionality and performance.

The application addresses the fundamental need for effective task organization while providing additional features that elevate the user experience. From secure user registration and authentication to intelligent task filtering and reminder systems, every aspect has been designed with user convenience in mind. The inclusion of dark mode theming demonstrates attention to contemporary interface preferences, allowing users to work comfortably in various lighting conditions.

This documentation outlines the comprehensive feature set that makes this To-Do List Tracker not just a simple task manager, but a complete productivity solution that combines reliability, security, and user-friendly design in a single application.

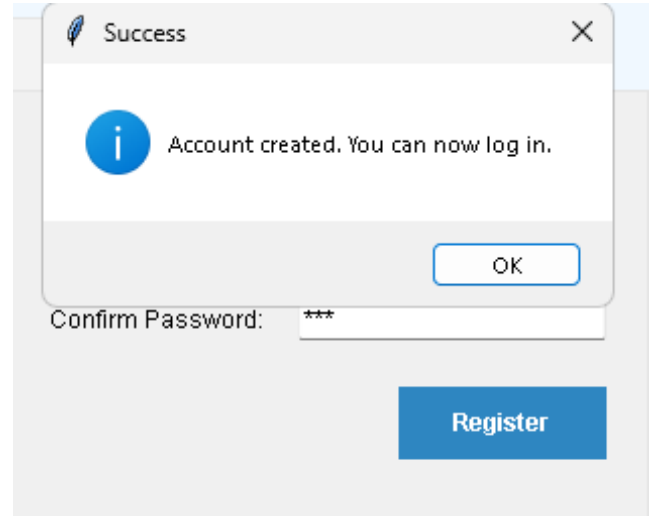
Register Feature

I implemented a user registration feature that validates credentials, requiring usernames of at least 3 characters and matching passwords. Successful registration triggers a confirmation message, while errors display appropriate warnings.



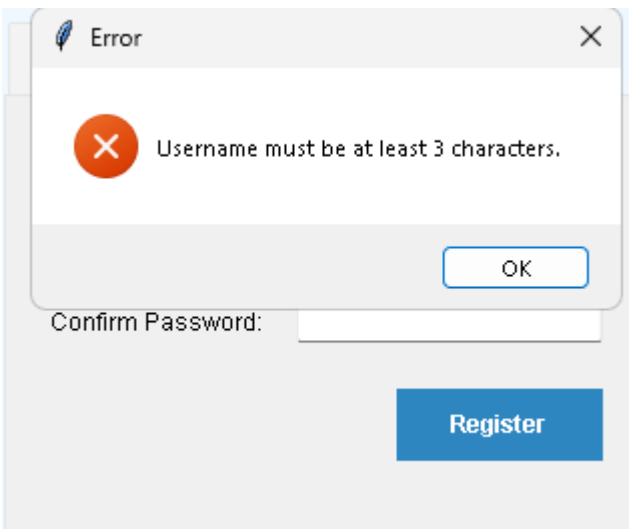
The Register interface features a light blue header with 'Login' and 'Register' tabs. The 'Register' tab is active. Below the tabs are three input fields: 'Username:' with the value 'Wangmo', 'Password:' with masked characters '****', and 'Confirm Password:' with masked characters '****'. A checkbox labeled 'Show Password' is positioned below the password fields. A blue 'Register' button is located at the bottom right of the form.

Figure 1 Register interface



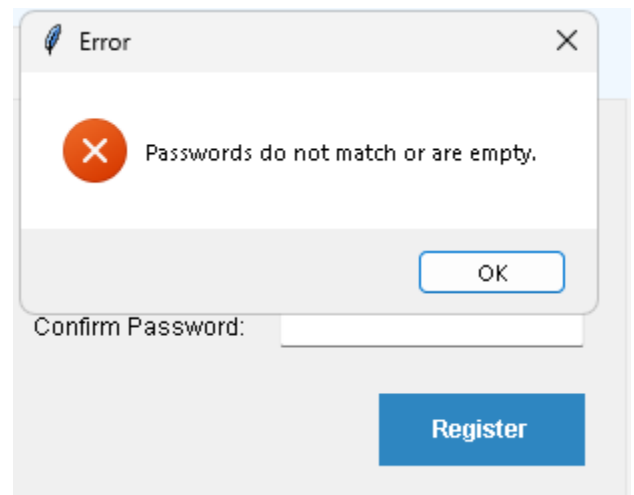
A 'Success' dialog box is displayed over the Register form. The dialog has a title bar with a feather icon and a close button. It contains an information icon and the text 'Account created. You can now log in.' Below the message is an 'OK' button. The background form is partially visible, showing the 'Confirm Password:' field with masked characters '***' and the 'Register' button.

Figure 2 Account created successfully



An 'Error' dialog box is shown over the Register form. The dialog has a title bar with a feather icon and a close button. It features a red error icon and the message 'Username must be at least 3 characters.' Below the message is an 'OK' button. The background form is partially visible, showing the 'Confirm Password:' field and the 'Register' button.

Figure 3 Username requirement

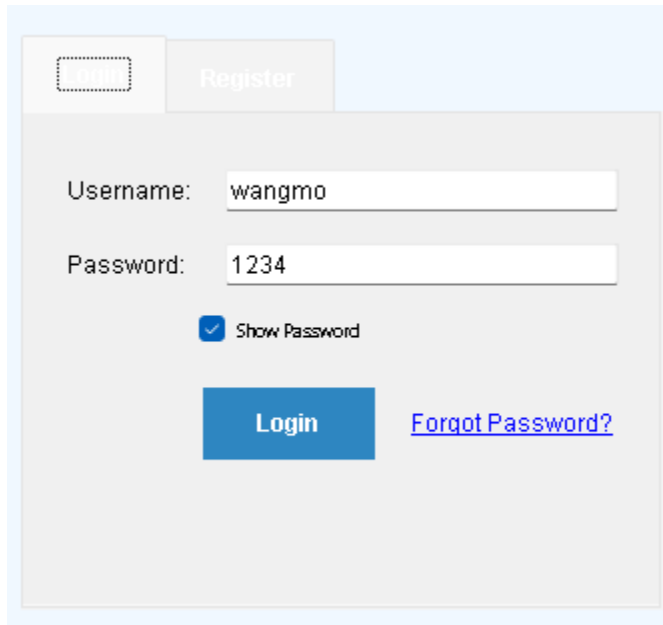


An 'Error' dialog box is shown over the Register form. The dialog has a title bar with a feather icon and a close button. It features a red error icon and the message 'Passwords do not match or are empty.' Below the message is an 'OK' button. The background form is partially visible, showing the 'Confirm Password:' field and the 'Register' button.

Figure 4 Password

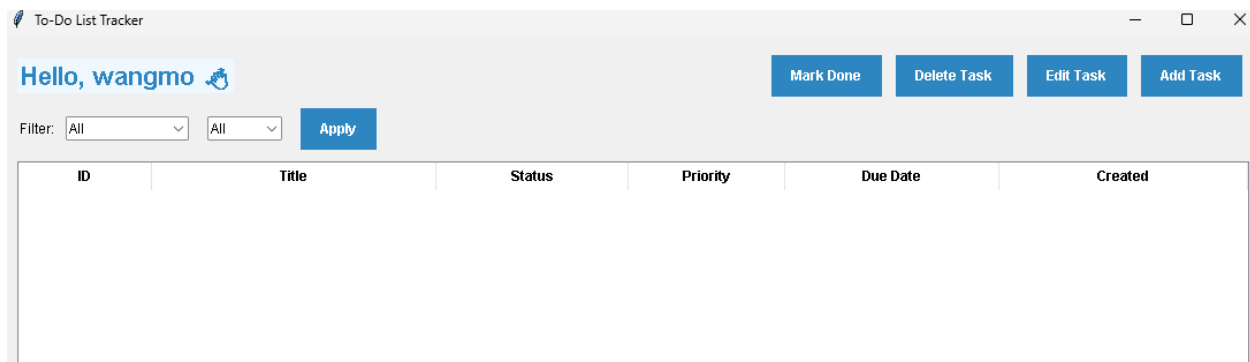
Login Feature

User should login with their username and password. After entering username and password users will be able to get access to user interface where they can add, edit, delete task.



The screenshot shows a login form with a light blue header containing 'Login' and 'Register' buttons. The form has two input fields: 'Username' with the value 'wangmo' and 'Password' with the value '1234'. Below the password field is a checkbox labeled 'Show Password' which is checked. At the bottom of the form are a blue 'Login' button and a blue link labeled 'Forgot Password?'.

Figure 5 Login Interface



The screenshot shows the main user interface of the 'To-Do List Tracker' application. At the top, there's a header with the title 'To-Do List Tracker' and a user greeting 'Hello, wangmo' with a profile icon. To the right of the greeting are four blue buttons: 'Mark Done', 'Delete Task', 'Edit Task', and 'Add Task'. Below the header, there's a filter section with two dropdown menus, both set to 'All', and an 'Apply' button. The main content area is a table with the following columns: ID, Title, Status, Priority, Due Date, and Created. The table is currently empty.

Figure 6 User interface

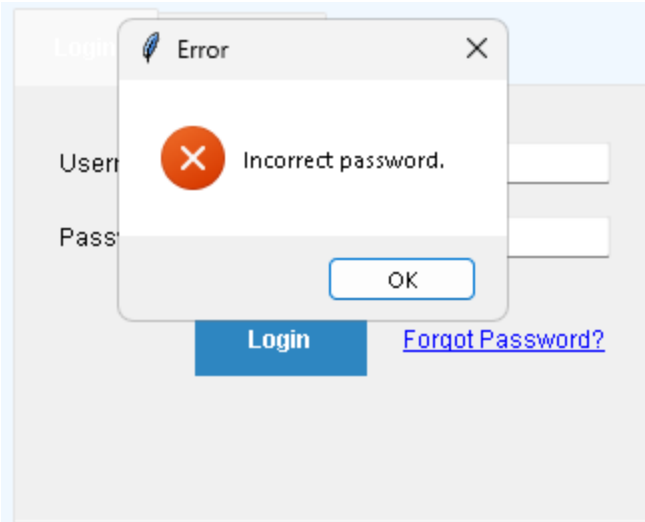


Figure 7 Incorrect password

Forgot password

If user forgets password, they can click to forgot password. After clicking it will ask for username and new password and the password will be reset successfully.

A screenshot of a 'Reset Password' dialog box. It contains three input fields: 'Username:' with the text 'wangmo', 'New Password:' with four asterisks, and 'Confirm Password:' with four asterisks. Below these fields is a checkbox labeled 'Show Password' which is unchecked. At the bottom is a blue button labeled 'Reset Password'.

Figure 8 Reset password

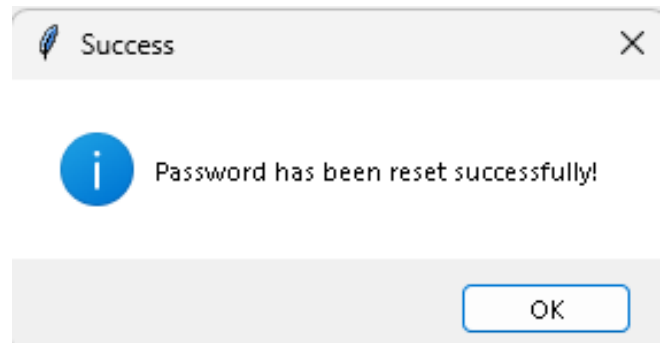


Figure 9 Password reset successfully

Filtering

Users can filter tasks by **status** and **priority**.

The screenshot shows a task management interface. At the top, there is a greeting "Hello, wangmo" with a user icon. To the right are four buttons: "Mark Done", "Delete Task", "Edit Task", and "Add Task". Below the greeting is a filter section with two dropdown menus. The first dropdown is labeled "Filter:" and has "All" selected. The second dropdown has "1" selected. To the right of these dropdowns is a blue "Apply" button. Below the filter section is a table with the following columns: ID, Title, Status, Priority, Due Date, and Created. The table contains one row with the following data: ID 3, Title "Club gathering", Status "Pending", Priority 1, Due Date "2025-08-22", and Created "2025-08-28 12:13:36".

ID	Title	Status	Priority	Due Date	Created
3	Club gathering	Pending	1	2025-08-22	2025-08-28 12:13:36

Figure 10 Filtering by priority

The screenshot shows the same task management interface as Figure 10, but with different filter settings. The first dropdown menu now has "Pending" selected, and the second dropdown menu has "2" selected. The "Apply" button is still present. The table below shows a single row with the following data: ID 2, Title "Group presentation", Status "Pending", Priority 2, Due Date "2025-08-19", and Created "2025-08-28 12:12:06".

ID	Title	Status	Priority	Due Date	Created
2	Group presentation	Pending	2	2025-08-19	2025-08-28 12:12:06

Figure 11 Filtering by status

Reminder

Users can add reminders to your tasks and view them anytime. Set dates, times, and optional messages for important deadlines.

The screenshot shows a dialog box titled "Add Reminder" with a close button (X) in the top right corner. Inside the dialog, there are three input fields. The first is labeled "Reminder Date (YYYY-MM-DD):" and contains the text "2025-08-17". The second is labeled "Reminder Time (HH:MM):" and contains the text "12:00:00". The third is labeled "Message (optional):" and contains the text "submit with packet tracer". Below these input fields is a blue button labeled "Save Reminder". Below the dialog box, there are two buttons: "Add Reminder" and "View Reminders".

Figure 12 Add reminder

Logout

After everything users can logout

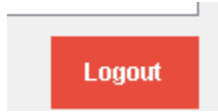


Figure 13 Logout

Dark Mode / Theming

Users can customize their interface by turning on dark mode.

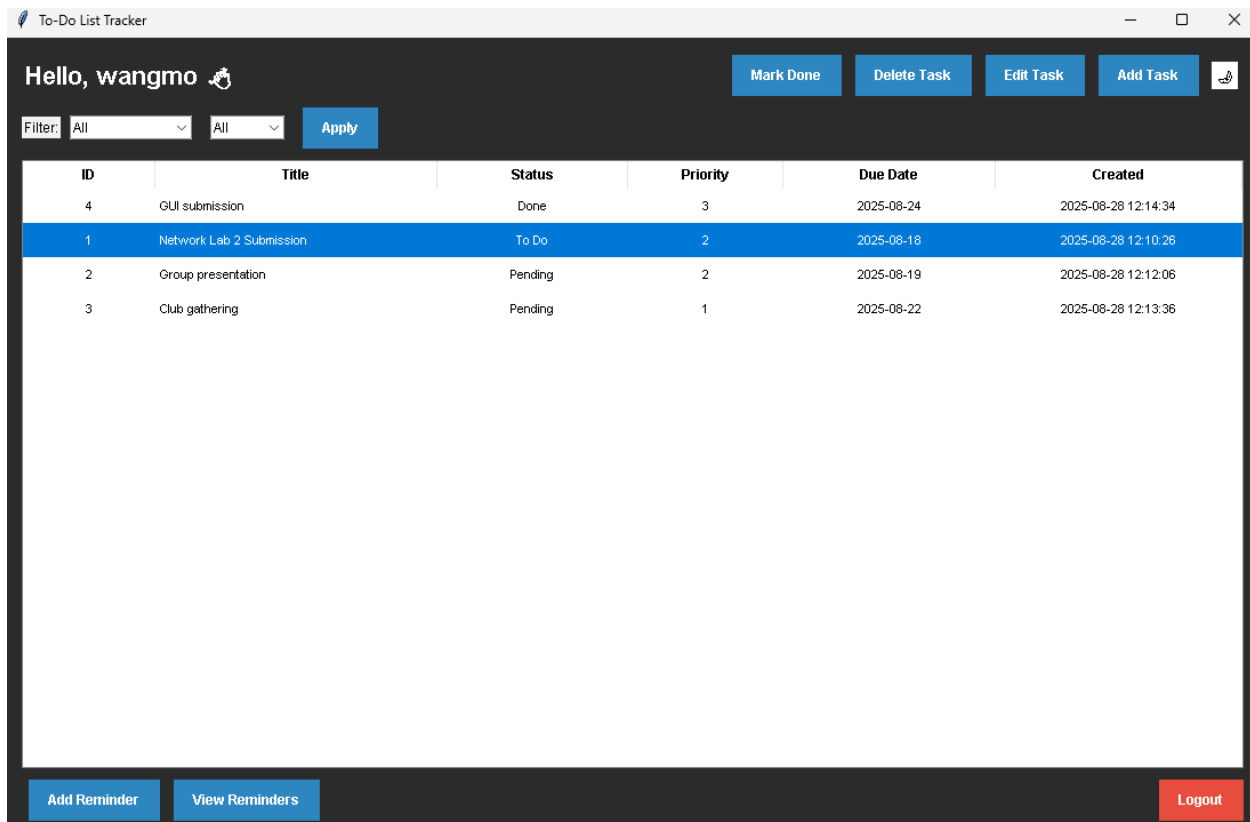


Figure 14 Dark mode/ Theme

Conclusion

The development of this To-Do List Tracker application has successfully resulted in a comprehensive productivity tool that effectively addresses the core requirements of task management while incorporating advanced features that enhance user experience. The application demonstrates robust functionality through its secure authentication system, intuitive task management capabilities, and thoughtful additional features like intelligent filtering, reminder systems, and customizable theming.

Throughout the development process, particular attention was paid to creating an interface that is both visually appealing and functionally efficient. The dark mode option, responsive design elements, and clear user feedback mechanisms contribute to an engaging user experience. The integration of SQLite database ensures data reliability and persistence, while the object-oriented design approach allows for maintainability and future expansion.

This project successfully showcases the implementation of fundamental programming principles alongside modern user interface considerations. The application stands as a testament to the effective combination of functionality and usability, providing users with a powerful yet accessible tool for managing their daily tasks and responsibilities. The features implemented not only meet basic task management needs but also anticipate user preferences for customization and control, resulting in a polished, professional application ready for real-world use.