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CS 360   
Reflection

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The app I developed, **DailyBalance**, is a weight-tracking application designed to help users monitor their progress toward their health goals. Its main purpose is to address the need for an easy and intuitive way to record daily weight, view progress over time, and receive notifications when they reach their goal weight. The app supports users who want a simple yet effective tool to stay motivated and accountable in their wellness journey.

To support these user needs, several key screens and features were implemented. First, a **Login Screen** allows users to create an account or log in securely, ensuring their data is private and personalized. Next, the **Dashboard Screen** provides a clear display of recorded weights in a grid layout, along with options to add new entries or delete existing ones. Additionally, a notification feature prompts users when they reach their target weight. When designing the UI, I kept the user experience in mind by focusing on clean, simple layouts and intuitive navigation. Buttons were clearly labeled, input fields were easy to use, and the visual hierarchy ensured users could quickly find what they needed. I believe the designs were successful because they prioritized ease of use, allowing users to interact with the app efficiently without unnecessary distractions.

When coding the app, I broke the project into smaller, manageable tasks, which helped me stay organized and focused. I started by implementing the database functionality using **SQLite** to handle user accounts and weight entries. I then worked on integrating the RecyclerView to display data and connected the UI elements with their respective backend functions. I also prioritized permission handling for SMS notifications, ensuring the app responded correctly to both granted and denied permissions. This step-by-step approach allowed me to focus on one feature at a time, reducing the chances of overwhelming errors. I can apply this strategy in future projects to stay organized and ensure steady progress.

To test the app, I used the Android Emulator frequently to ensure the code was functional and responsive across different screens and scenarios. I tested the login functionality, CRUD operations for weight entries, and permission requests for SMS notifications. This process revealed a few small issues, such as handling edge cases for user input, which I fixed to improve the app’s reliability. Testing is essential because it ensures the app performs as expected and allows users to interact with it without frustration.

Throughout the design and development process, I encountered challenges that required innovation. For example, managing the flow of SMS permissions and ensuring the app continued functioning even when permission was denied required careful planning and coding. I also had to refine the database logic to ensure weight entries were stored and retrieved seamlessly.

One area where I was particularly successful was in implementing the database and integrating it with the UI. Creating a functional SQLite database that supported **Create, Read, Update, and Delete** operations demonstrated my ability to connect backend functionality with a user-friendly interface. This component of the app reflects my growing skills in managing data and creating seamless interactions for users.

Overall, this project helped me combine planning, design, coding, and testing into a cohesive development process. It allowed me to build a functional app that addresses real user needs while demonstrating my ability to overcome challenges and apply my knowledge effectively.