CS-360

Chris Wactor

My application, InventoryApp\_ChrisWactor, is a simple and practical mobile inventory management tool that allows users to create accounts, log in, and track their stock in real time. Users can add, update, or remove items stored in a persistent SQLite database, which keeps data saved even after the app closes. The app also includes an optional SMS notification feature that alerts users when inventory levels are running low.

The app was built in Android Studio using Java, following a clean modular structure for easier maintenance and readability. The LoginActivity handles user sign-in and new account creation. The MainActivity manages inventory operations and displays a live grid of items. Supporting classes like DBHelper and Repositories handle all database transactions, while the SMS system integrates Android’s permission process for sending low inventory alerts. The app was tested using the Android Emulator (API 34) to ensure smooth operation across devices.

The InventoryApp runs on Android 10 (API 29) and higher, including Android 14, ensuring compatibility with modern Material UI elements and Android’s latest permission system. It only asks for permissions that are absolutely necessary, like “SEND\_SMS” which is used to send alerts. If the user denies this permission, the app still functions normally, just without the SMS notifications.

If released to the public, I would use a few strategies for monetization. The first option would be a freemium model, where users get the base version for free and can unlock extra features like analytics, backup options, or cloud syncing. All this for a small one-time fee. Another option could include non-intrusive ads, such as small banner ads for free users, while offering an ad-free version through a premium upgrade. For small businesses, a paid license model could allow multi-device syncing and advanced reporting features.

Before a full launch, I would run beta testing through Google Play’s internal testing track to gather feedback and fix any issues early. The Play Store description would be simple and clear, “Manage inventory easily. Track item counts and receive low stock alerts”. All in one place.”

For the app icon, I would choose a modern, inventory style symbol like a barcode on a green box to make the purpose clear at a glance.

To market the app, I would focus on TikTok, small business Facebook groups, and community pages related to retail and supply management. These platforms reach users directly. I’d also plan occasional updates to maintain Android compatibility, improve security, and fine tune user experience based on the feedback I got.