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CS-360

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**Overview**

GPRICEApplication is a Android mobile phone app that enables registration, login, inserting and updating records with a local SQLite database, and sending SMS. Android Studio is used to show persistent database management, dealing with permissions, and best mobile application development practices.

**App Description and Purpose**

The GPRICEApplication was created in order to enable users to record and log into things that they add to a user list. Everything gets stored into the database even after the application has been shut down. SMS support within the application sends test messages, showing how Android handles permissions and live features.

**Supported Versions**

* *Minimum SDK: Android 8.0 (API 26, Oreo)*
* *Target SDK: Android 14 (API 34)*

The app was tested on a Pixel 7 emulator on API 34 so that it will work perfectly, resize perfectly, and won’t crash on newer devices. Old Android versions are supported for better accessibility.

**Required Permissions**

The app uses the SEND\_SMS permission to send messages through the built-in Android SmsManager. Permissions are requested at runtime so users can choose whether to allow or deny them. If permission is denied, the rest of the app still works fine, following good security practices.

**Launch Process**

1. **Testing and Debugging:**

*Verify registration, login, CRUD functions, and SMS notifications work properly across multiple devices and Android versions.*

1. **Optimization and Packaging:**

*Remove debug code, tidy layouts, and create a signed release build.*

1. **Set Up Play Store:**

*Create a Google Play Console account, upload screens, upload short and full description, and upload signed .aab file.*

1. **Internal Testing:**  
    *Publish the app to the testers using the internal testing facility of Play Store and collect user reviews.*
2. **Public Launch:**

*Publish the app in the category of Productivity on the Play Store after testing and validation.*

**Strategy**

On first release, the app should have no ads and cost to promote adoption and acceptance of use. Later releases could introduce premium functionalities like cloud syncing, customizable reminders, or extensive reports. They could be bought through in-app purchases or subscription but included with the basic version.

**Opportunities**

* *Firebase Cloud Messaging push notifications*
* *Cross-device syncing online cloud database*
* *Settings and user profiles after launch one*
* *Theme-able, customizable themes (light themes, dark themes)*

**Wrap Up**

GPRICEApplication includes secure login, user registration, persistent storage of databases, and SMS permission management. It manages all the technical and functional aspects of a completely done Android application. The app is complete and ready and can be uploaded, tested, and published to the Google Play Store potentially.