Android Mini Project - HitPay Interview

💡 This project should take approximately 3 hours to finish

Simple To-Do List App

Objective: Build a simple Android application that allows users to manage a to-do list. The app should focus on using SQLite for the local database, handle basic CRUD operations, and demonstrate basic handling of a large dataset.

Requirements:

1. **Basic Functionality:**
    - The app should have a main screen displaying a list of to-do items.
    - Each to-do item should have a title and a timestamp of when it was created.
    - Users should be able to add and delete to-do items.
2. **SQLite Database:**
    - Implement the local database using SQLite.
    - Create tables to store the to-do items.
    - Implement the necessary CRUD operations (Create, Read, Delete).
3. **Scaling Considerations:**
    - Ensure that database operations are performed asynchronously.
    - Implement a method to prepopulate the database with 2,000 to-do items for performance testing
4. **User Interface:**
    - Provide a simple UI to interact with the to-do list.
    - Ensure the UI is responsive even with a large number of items.
5. **Testing:**
    - Write at least one unit test for the SQLite database operations.
6. **Third-Party Libraries:**
    - While third-party libraries can be used, preference will be given to those who can demonstrate native Android SDK proficiency.

Additional Requirement:

- Implement a method to add 2,000 to-do list items to the database. This can be a script or a feature within the app (A simple button) that allows for bulk insertion. This will be used to evaluate the performance of the app under moderate load.

Deliverables:

- Link to the GitHub repo (publicly available). If you like keep the repo private please share access to nitin@hit-pay.com
- Link to the final APK file
- A README file explaining the app's features, how to set it up, and any assumptions made.
- At least one unit test for the database operations.
- A method or script to insert 2,000 to-do list items

Evaluation Criteria:

- **Code Quality:** Clean, readable, and maintainable code.
- **Database Management:** Efficient handling of SQLite operations.
- **Scalability:** Ability to handle a moderate number of to-do items.
- **Performance:** How well the app handles 2,000 to-do items in terms of loading and querying.

Other Notes

- Keep the app UI simple with just one page. Design is not an evaluation criterion.
- No need for any REST API calls.