

1. TODO & Chat App:

Title: Collaborative Todo App with Chat Functionality

Goal: Help us assess the developer's ability to create a fully functional todo app with real-time collaboration, Firebase-based user authentication, and a chat feature inspired by Telegram, all while handling background tasks, data synchronization, and a responsive UI.

The task is designed to evaluate:

- **Firebase integration:** User authentication (login/signup), real-time database for todos, and chat functionality.
- **Collaborative real-time editing:** The ability to collaborate on todo items in real-time, similar to Google Keep.
- **Background worker implementation:** Periodically load todos and new chat messages, even when the app is in the background.
- **Chat functionality:** A Telegram-like chat interface, with single and group chats, user presence (online/offline indicators), and support for text, images, and audio messages, and also search users from chat.

Task Outline:

1. **Firebase Authentication**
 - Implement **Firebase authentication** for login and signup.
 - If a user is registered, when they reopen the app, they should be automatically directed to the home page without needing to log in again.
 - Use Firebase **email/password** authentication, with options for users to reset their password.
2. **UI Design**
 - The app should feature a **bottom tab navigation** with two tabs:
 - **Todo Tab:** For managing todo items.
 - **Chat Tab:** For real-time chats.
 - Design a clean, responsive interface that adapts well to both small and large screens.
3. **Todo Functionality**
 - **Grid-like view** for todos (similar to Google Keep) with an option to switch between list and grid views. You can check the screenshot
 - Allow users to **pin important todos** at the top.
 - Enable **real-time collaboration** using Firebase Realtime Database, where multiple users can edit a todo simultaneously and see changes in real-time.
 - **Firebase Realtime Database** should store the todos, supporting updates as users collaborate.
 - Implement a **color-coding system** or tags for easy organization.
4. **Chat Functionality**
 - Create a **Telegram-like chat interface** using Firebase Realtime Database for real-time communication.

- Implement both **single-person** and **group chat** options.
- Display a **user presence indicator** (online/offline status) for users in the chat.
- In **group chats**, users should be able to see who is currently online and actively participating.
- Allow users to send **text messages, images, and audio**.
- Create a simple **message search** feature for users to quickly find past messages.

5. **Background Worker**

- Implement a **background worker** that checks Firebase periodically for new messages in chats, even if the app is not open.
- Use platform-specific background services (i.e., **WorkManager** on Android and **Background Fetch** for iOS) to schedule this task. For iOS just put the code, and do what you can to add permission but it's not required.
- Show notifications when new messages arrive, with the ability to tap the notification to open the chat directly.

6. **Challenges & Problem Solving**

- **Collaborative Todo Editing**: Ensure real-time synchronization between multiple users editing the same todo item.
- **Background Services**: Properly implement background tasks that work across platforms and handle real-time message updates while keeping battery usage and performance in check.
- **Handling Media in Chat**: Efficiently manage sending and receiving images and audio files, ensuring they are stored correctly in Firebase Storage.

7. **Testing & Deliverables**

- Submit the app with Firebase authentication, real-time todos, and chat functionality fully implemented, must be apk and github link.
- **Bonus**: For Todo items support **reminders and due dates**. (optional)
- **Bonus**: For Todo editing add voice to text input(optional).
- **Bonus**: Include tests for the todo collaboration and background worker.(optional).
- **Bonus**: Provide documentation on the app architecture, Firebase setup, and how real-time collaboration and background workers are implemented.(optional).



5:04



Dreams

An orphan with magic powers is stranded on a planet with two moons... a green alien takes him under his wing.

A space cowboy teams up with a giant canine human and travels the universe taking odd jobs.



Edited 4:00 AM





5:04



Search your notes



PINNED

Material Design

Material design is a foundation upon which applications for Google platforms are built. These principles are intended for a wide audience.



1175 Borregas
Ave Sunnyvale,
CA 94089

Shopping list

- ☐ Paper towels
- ☐ Skim milk
- ☐ Eggs
- ☐ French bread
- ☐ Tomato sauce
- ☐ Cilantro
- ☐ Onions
- ☐ Peppers
- ☐ Chicken

Drawing by Rocky



Surprise party
for Rocky



Telegram



Holiday Plans



Alicia Torreaux

15:02

Bob says hi.

2



Roberto

14:59

Say hello to Alice 🙌

1



Graduation Party

14:42

Dan: Almost 3000 members!



Karen Stanford

14:40

Table for four, 2 PM. Be there.

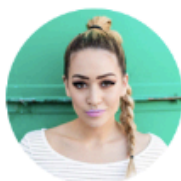


Cat Videos

13:15



Video



Little Sister

12:45

I got a job at NASA! 🎉🚀



Monika Parker

✓✓ 10:00



Wave Hunters

2,168 members, 196 online



Holiday Plans



Roberto

Good morning everyone 🖐️

Any idea what time it is? 15:37 ✓✓



Roberto

Still morning in Tokyo! 😎 15:37



15:38



Monika Parker

Best waves so far?

Anonymous Poll

67% South Coast



33% White Sands

