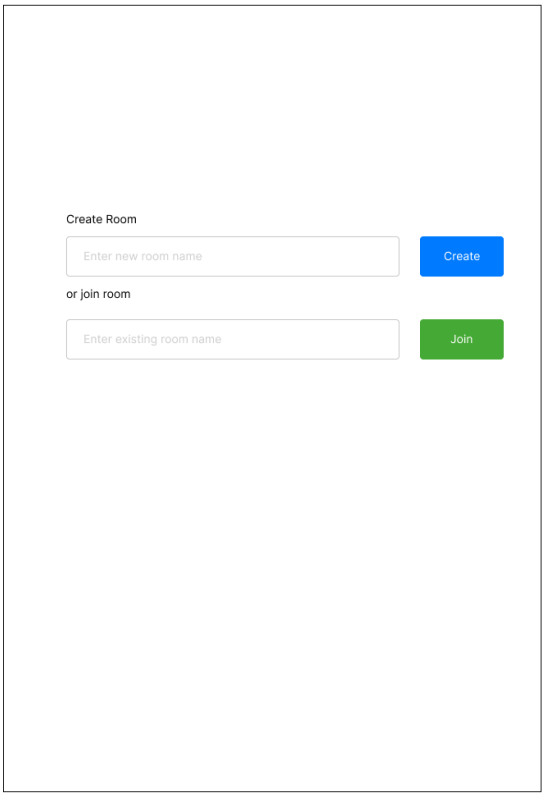
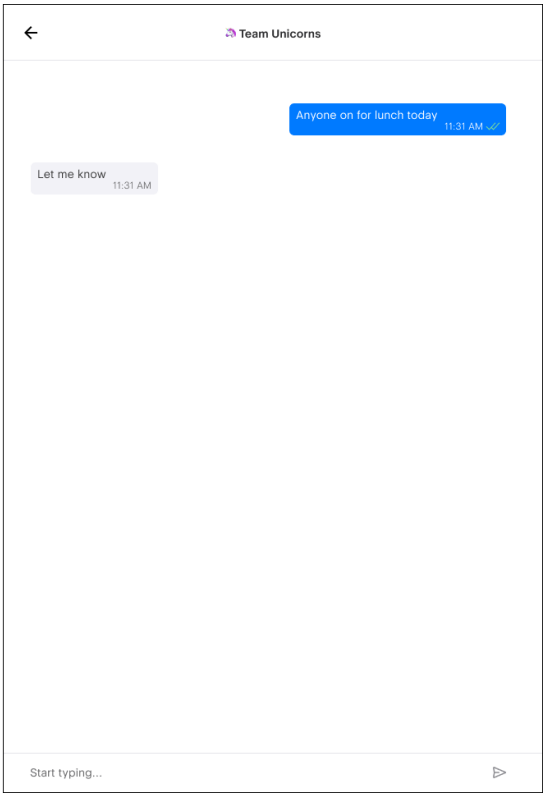
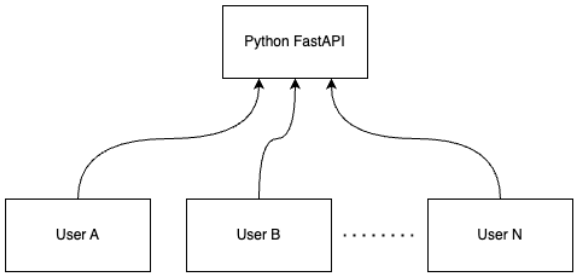
Fullstack Engineer Takehome Test

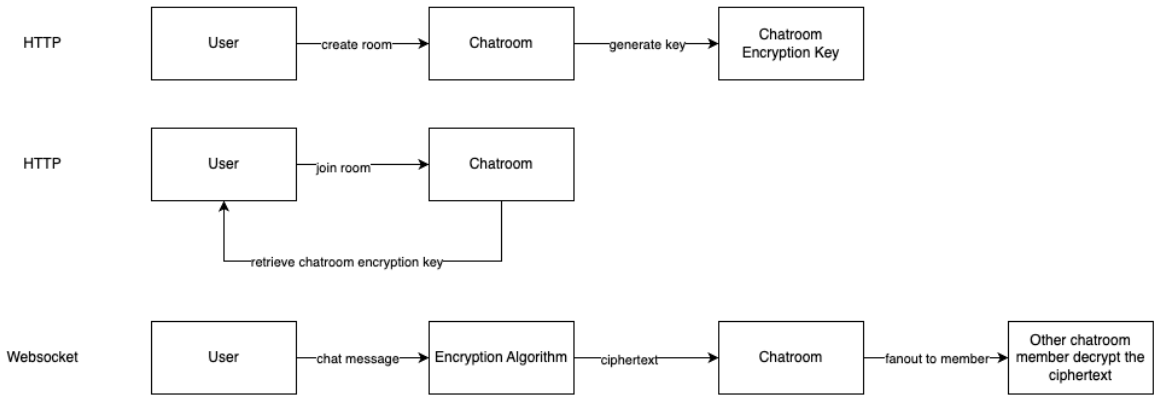
Duration: 3 days





Build a basic end-to-end encrypted chat mobile application. For simplicity the application should use REST API to create or to join the room and should use websocket to publish chat to all the chatroom members. The application consists two pages: the front page and the chat page. The front page allows user to create or to join a room, while the chat page will be the place the chatting take place.





The application will use FastAPI as an intermediary to handle all of the data traffic, thus the application is expected to be an end-to-end encrypted application. Upon chatroom creation, the chatroom encryption key will be generated. And when somebody join a room, this encryption key will be distributed to them. This encryption key is used to perform an encryption to the chat message before getting passed to the server and fanout to the chatroom member.

You should use these technology stack:

- Backend: Python, FastAPI
- Frontend: React Native

Other than what is specified, you may use any other libraries/technology stack to help you out.