**Universal Chat Application (User Story)**

Users should be able to log in and out of the application

Users should be able to view their messages even when offline

As a user, I want to be able to check my messages without needing an internet connection, because I may need to read them on the go

Given that I start the application without internet access, I should be able to view all past messages

Users should be able to send and receive messages in real-time.

Users should be able to view all messages by a given author

As a user, I want to be able to view a list of all messages sent by a given user, because I may need to view their contribution to the conversation without the noise of others' messages

Given that I click on a user's email, I should be taken to a profile view with all their messages

Users should receive push notifications when a message is sent by another user

As a user, I want to be constantly updated on the progress of the conversation, because I don't want to miss anything important

Given that the chat is not open or visible on my screen, I should receive notifications for each message sent by another user

Installation Specific Goals

Users should be able to install the app on their mobile device

As a user, I want to be able to open the application without navigating to the URL in my browser, because I want easy access to the chat room

Given that I have signed up to the chat for the first time, I should be prompted to install the app on my device

performance-specific goals:

Users should be able to load the app in under 5 seconds, even under shaky network conditions

As a user, I want to be able to interact with the app as quickly as possible, because I don't want to be stuck waiting for it to load

Given that I have opened the application using a poor internet connection, I should still have it load in under 5 seconds

Application challenges

Instant Loading

fast loading for the first visit, near-instant loading for every subsequent visit.

Push Notifications

Offline access

Mobile-first design

Progressive enhancement