

Convergent Capstone Design 2
Week 2 - Introduction

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Introduction

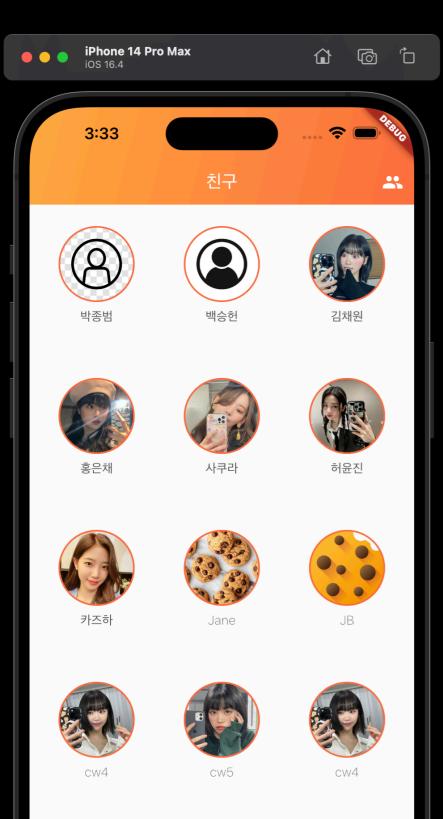
C KIE-APP SNS Service Development

- Encourage Real Connection
- Focused on Community (e.g. colleges, clubs etc.)
- Tech Stack
 - Frontend: Dart + Flutter
 - Backend: TypeScript + Express
 - DB: MongoDB Atlas

Recal

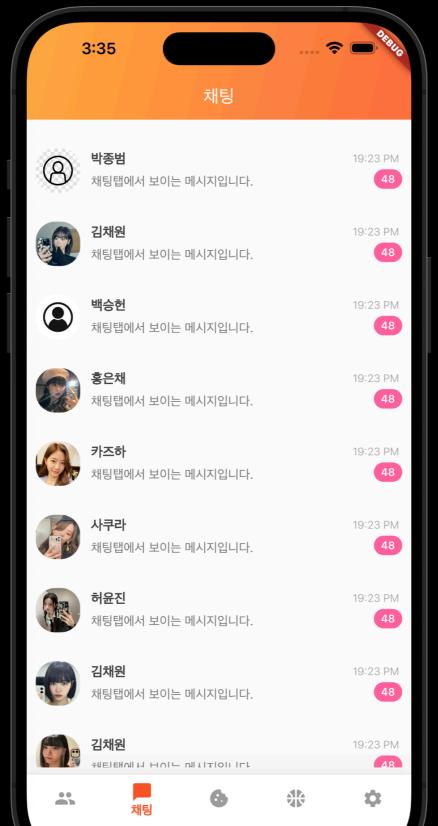
C KIE-APP Frontend

- Sign In & Sign Up
- Friends Tab
- Chat Tab & Chat Room
- Maps Tab & Settings Tab
- MVVM Structure
- State Management
- Error Handling



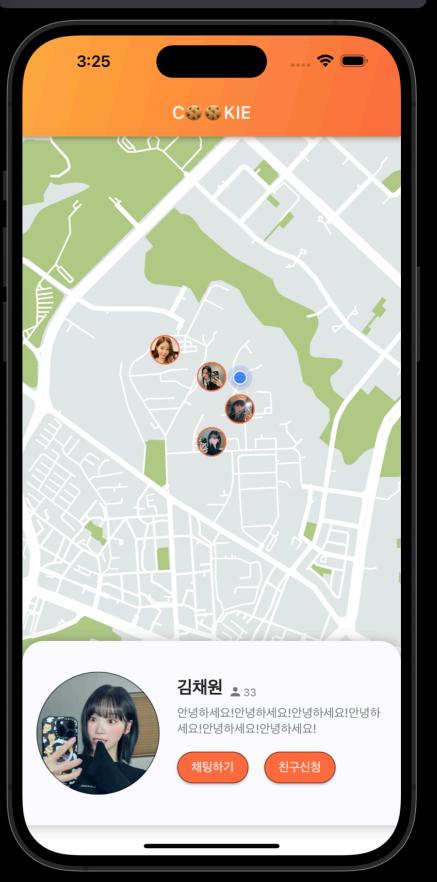
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iPhone 14 Pro Max

iOS 16.4



iPhone 14 Pro Max

iOS 16.4

C KIE-APP Backend

- RESTful API
- Authorization & Authentication API
- Account Info API
- DB
- (socket.io)

What we've learned

1st Semester

- Flutter framework & Dart language
- Design Architecture Pattern (MVC, MVP, MVVM...)
- Git & Github Collaboration
- Backend API Implementations
- JWT token Authorization
- Importance of TYPE

Progress

Progress During Summer

- Cleanups & Refactoring
- MVVM Structure
 - Following some MVVM tutorials
 - Making sure our app's structure is built well
 - Apply refined MVVM structure

Challenges

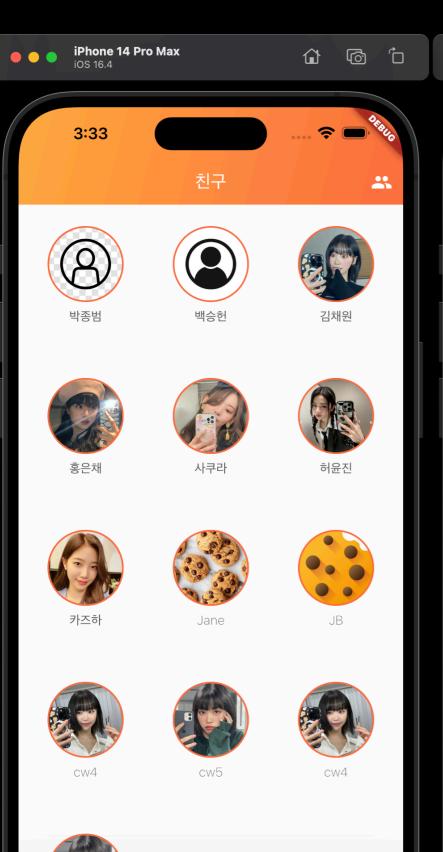
Frontend

How to manage App Theme?

- Each UI has individual properties
 - e.g. colors, shapes, etc.
- An overall management is needed
 - Applied it by Provider & Consumer
- Separate Interests
 - Between UI and Theme (usually colors & fonts)
- Can give user more freedom to change the app's theme

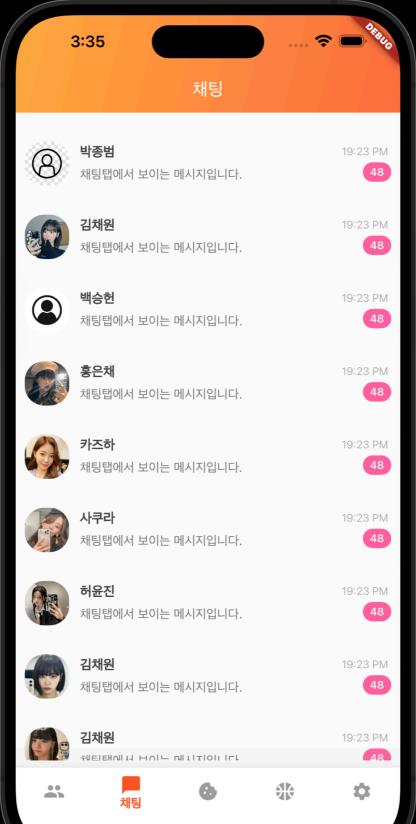
Frontend MVVM & State Management

- High Learning Curve
- A lot of changes were needed
- Importance of Structured Model
- Structural Concerns
 - Array of ViewModel inside other ViewModel?
 - e.g. User has lots of Chatrooms
 - e.g. ChatRoom has lots of Messages
 - Is this proper way to use MVVM?



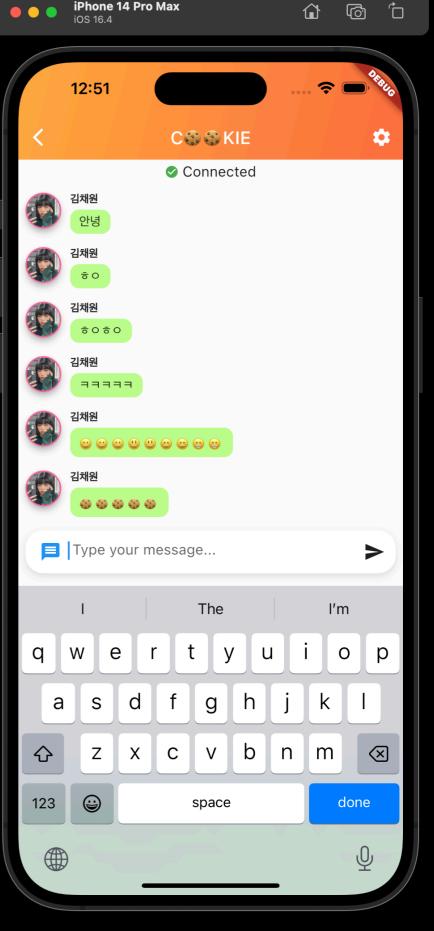
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Our Own Server vs Firebase

Backend

Firebase?

- Have to manage lots of 'ID'
 - User ID
 - Socket ID (which is different from user ID, used on socket.io)
 - User ID and Socket ID is not same
 - Which makes more complex & harder to develop
 - ChatRoom ID

Backend

Firebase?

- Push Service is Essential for SNS Service
 - Android: FCM (Firebase Cloud Messaging)
 - iOS: APNs or FCM
 - Adopting FCM is more efficient!

Backend

Firebase?

- Free from Security Concerns
 - Restrict Indiscreet Authentication Trials
- Reduce Lots of Chores (such as..)
 - Saving Chat Logs
 - Firebase RealTime Database
 - Backing Up Server
 - Extensions (Beta)

Plan

Future Plans

What we will do

- Chatting Service
- Location Sharing
- Alerts (FCM)
 - Apple requires \$99 fees...
- Club Service (if time allows)

Expectations

What we expect

- Satisfies the main function of SNS
- More communication with real friends
- Ease of use, intuitive UI

Thank You

Questions are welcome