

# CKIE-APP

**Convergent Capstone Design 1  
9th Week Progress Report**

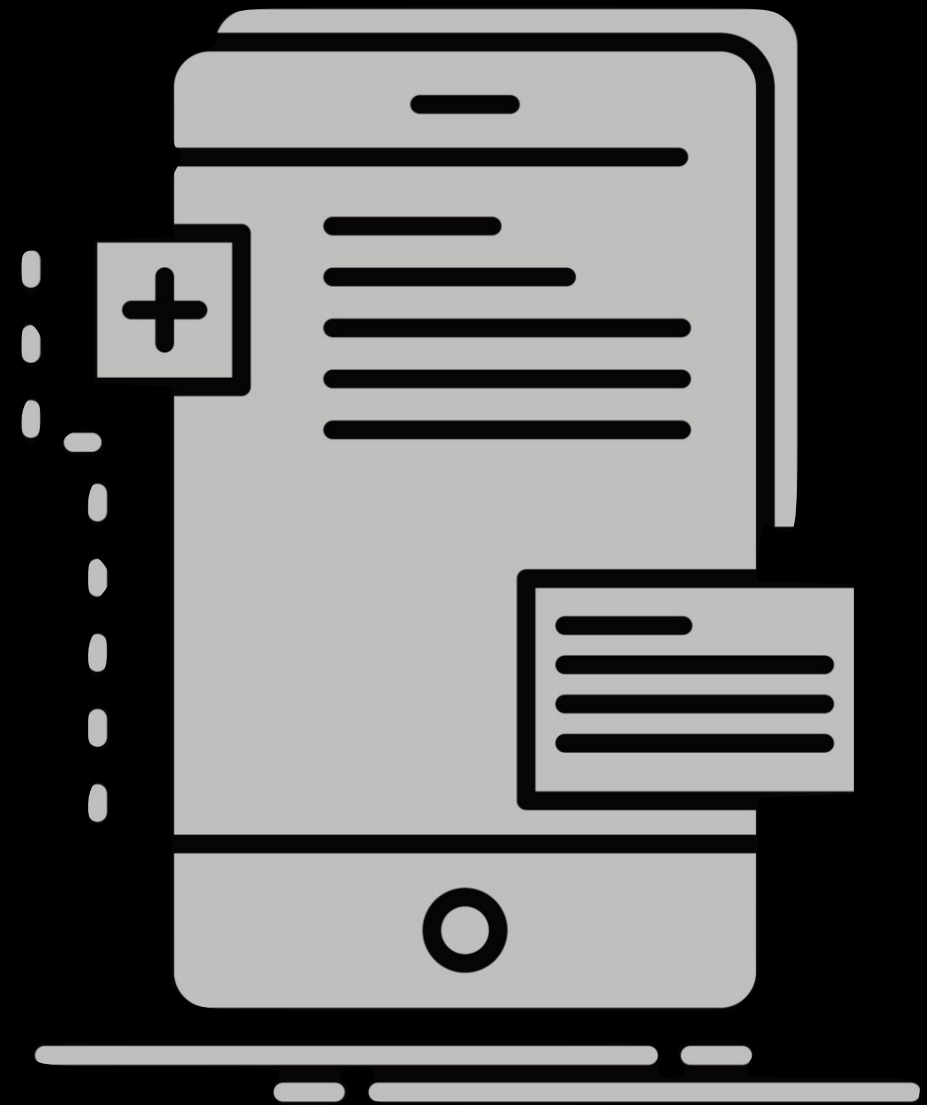
**Group 5 Park JongBeum & Baek SeungHeon, April 25th 2023**

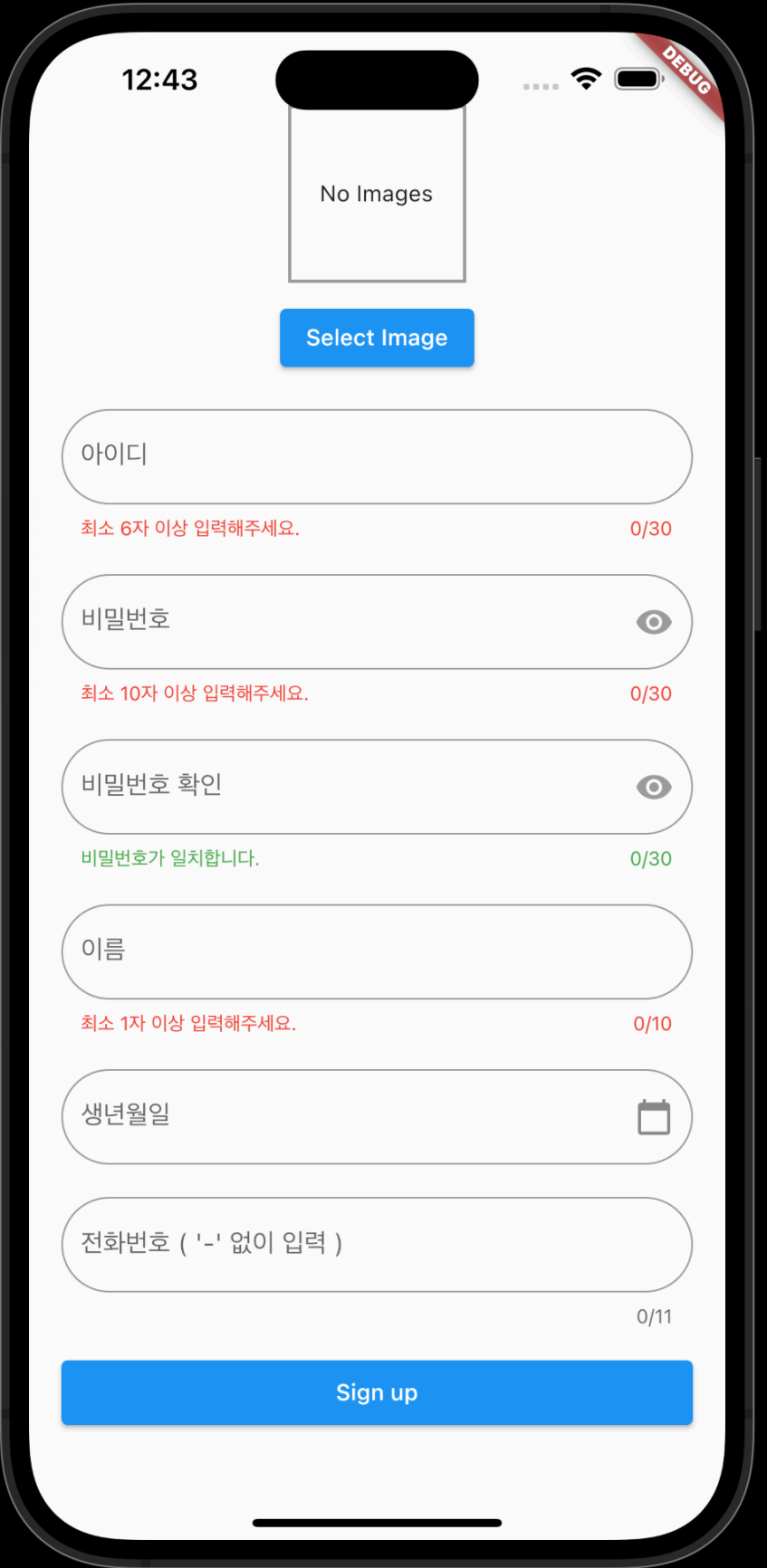
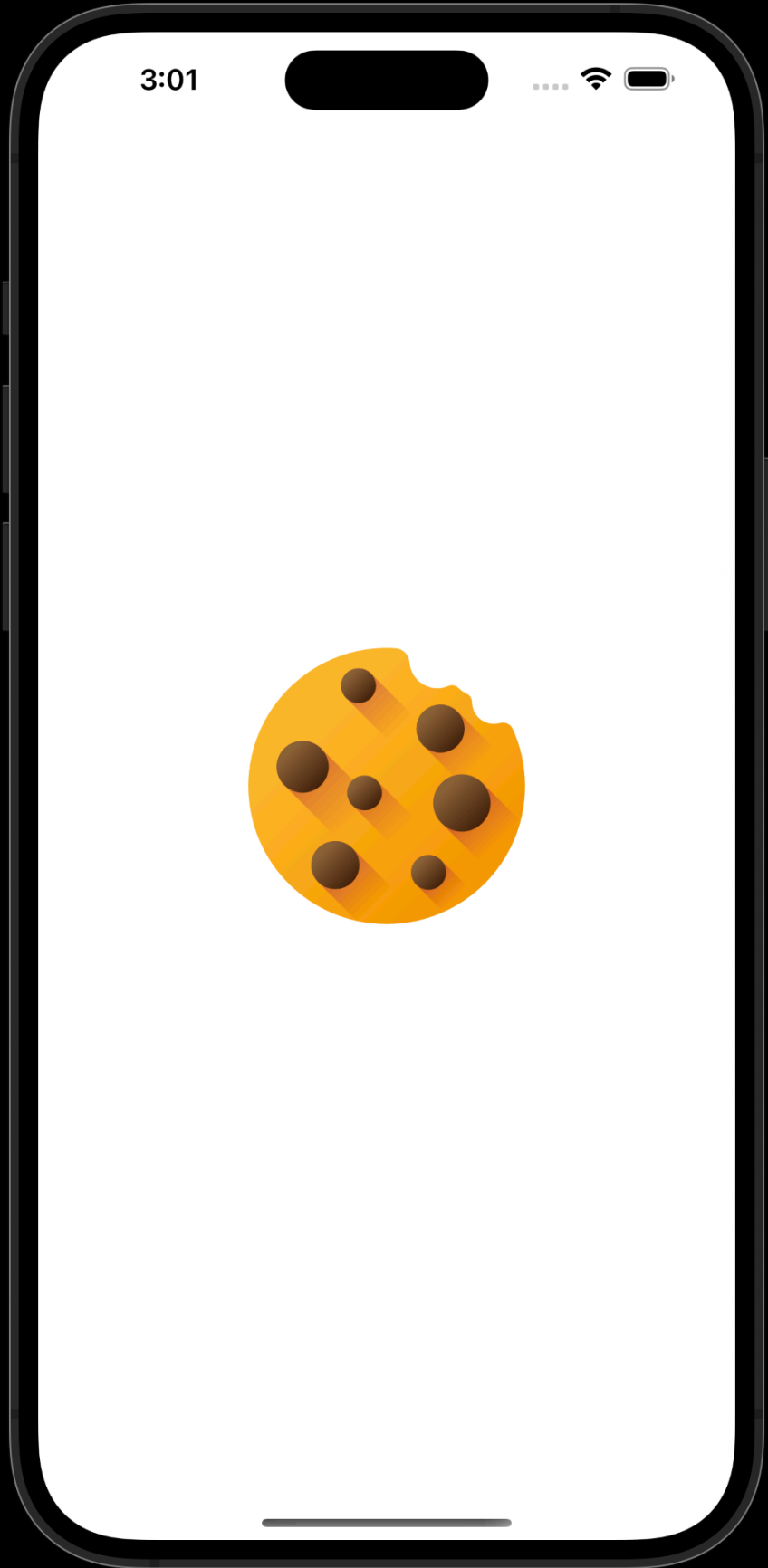
Recall

# Front End

## What we did last week

- Add App Icon
- Create Sign-In Page
- Create Sign-Up Page
- Request Device Permission
- Improve UI







12:51

COOKIE

Connected

김채원  
안녕

김채원  
ㅎㅇ

김채원  
ㅎㅇ ㅎㅇ

김채원  
ㅋㅋㅋㅋ

김채원  
😊😊😊😊😊😊😊😊😊😊😊😊😊😊😊😊

김채원  
🍪🍪🍪🍪🍪

Type your message...

The

q w e r t y u i o p

a s d f g h j k l

z x c v b n m

space done

12:43

COOKIE

박종범

백승현

Jane

JB

cw1

cw2

cw3

cw4

cw5

Friends

12:45

COOKIE

Map view showing locations like Safeway, Apple Infinite Loop, and Lawson Middle School.

Location

# Back End

## What we did last week

- Launch Test Server
- Account API & DB
  - Sign-In
  - Sign-Up
  - Existence of Account



# Account API & DB

`/account/signup`  
`/account/signin`  
`/account/exists`

```
cookie_server - test_account

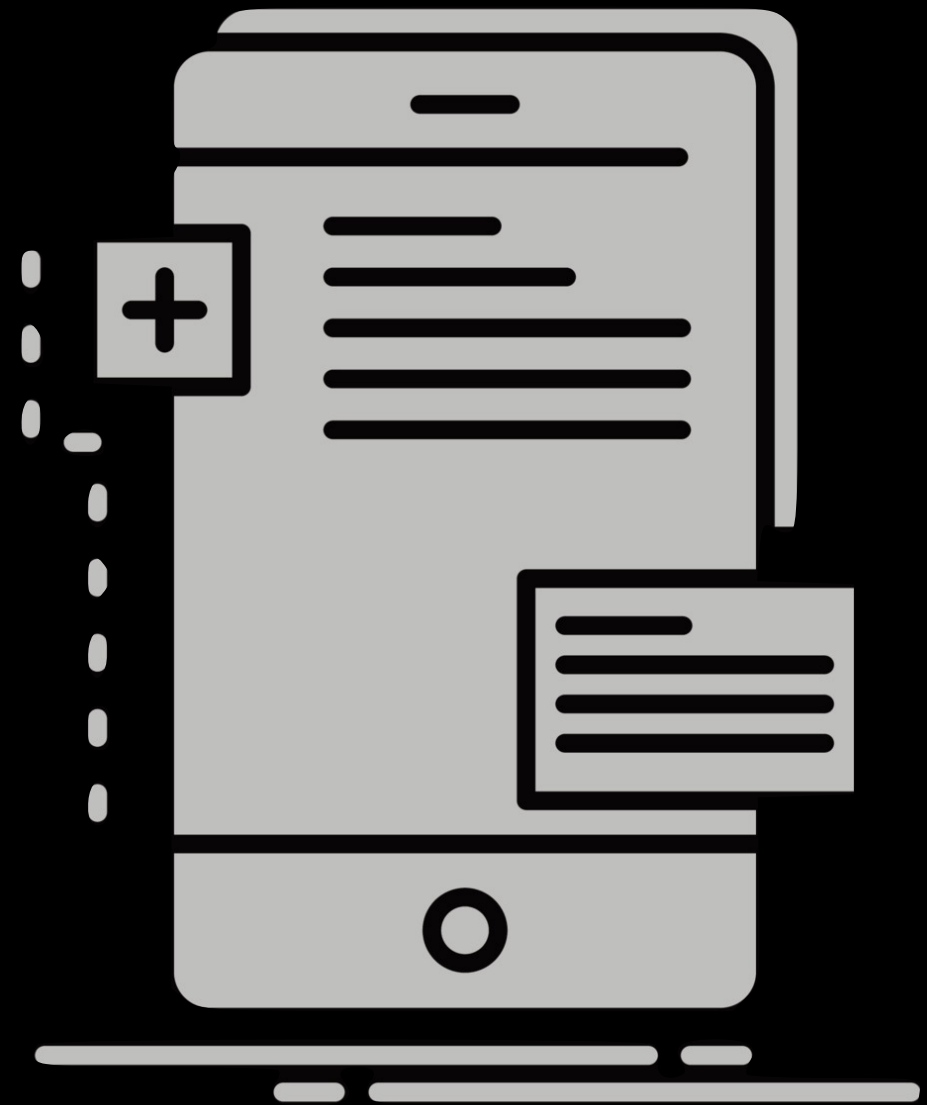
1  {
2    "_id": {
3      "$oid": "6432463eb9cf0924039d4777"
4    },
5    "userid": "testtest",
6    "password": "8d9124b80290dfd92a1ecec45c7d6555c5fe06c3913a7edb4666ed1a50af6c5",
7    "username": "안녕",
8    "birthday": {
9      "$date": "2022-02-02T00:00:00.000Z"
10   },
11   "phone": "01000000000",
12   "profile": {
13     "image": "https://i.imgur.com/1Q9ZQ9r.png",
14     "message": "Hello, I'm new here!"
15   },
16   "friendList": [],
17   "chatList": [],
18   "createdAt": {
19     "$date": "2023-04-09T04:59:42.920Z"
20   },
21   "updatedAt": {
22     "$date": "2023-04-09T04:59:42.920Z"
23   },
24   "__v": 0
25 }
26
```

**Frontend**

# Front End

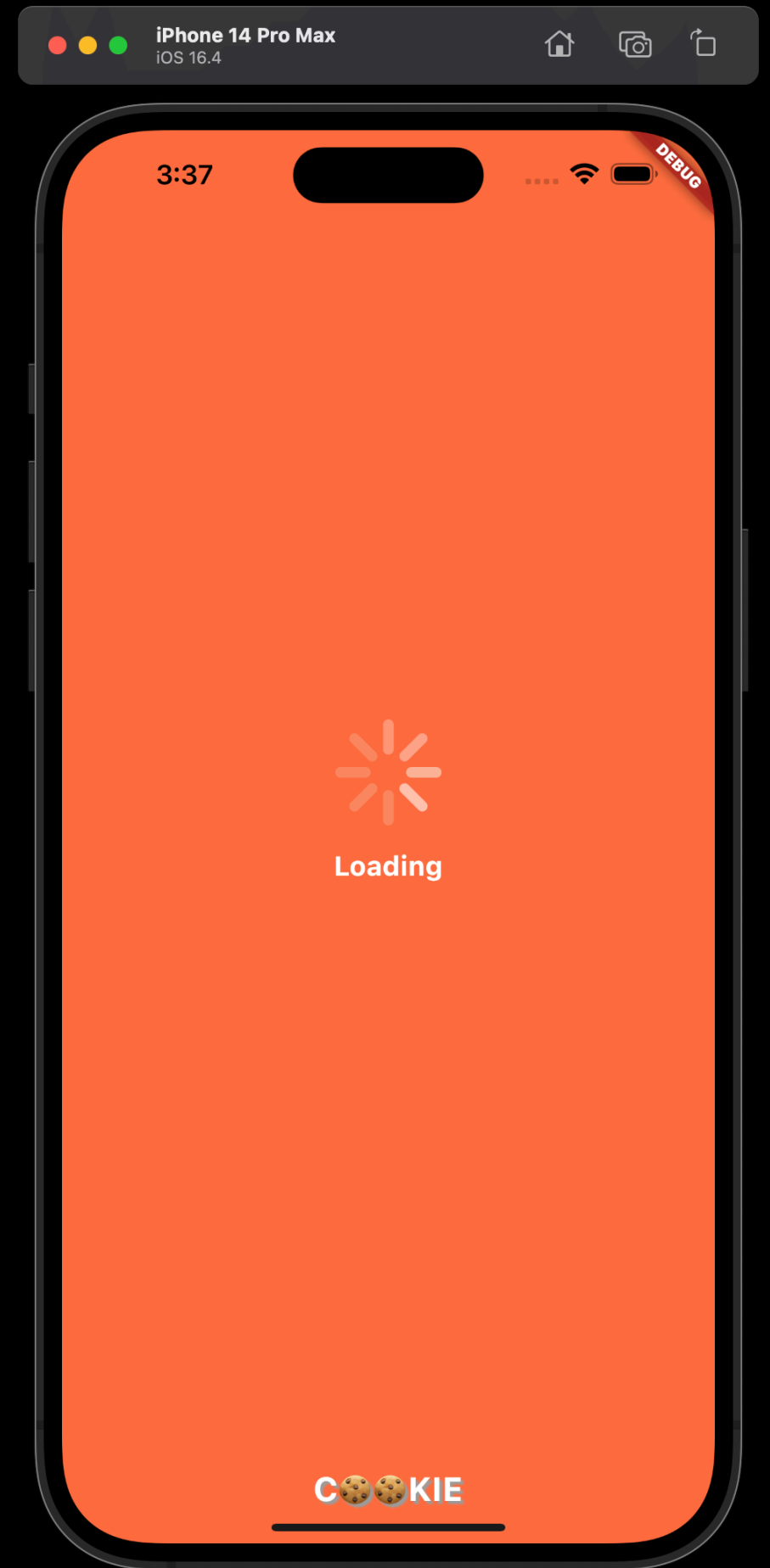
## What Our Team Have Done

- Auto login
- Chat history tab
- Settings tab
- Improve UI



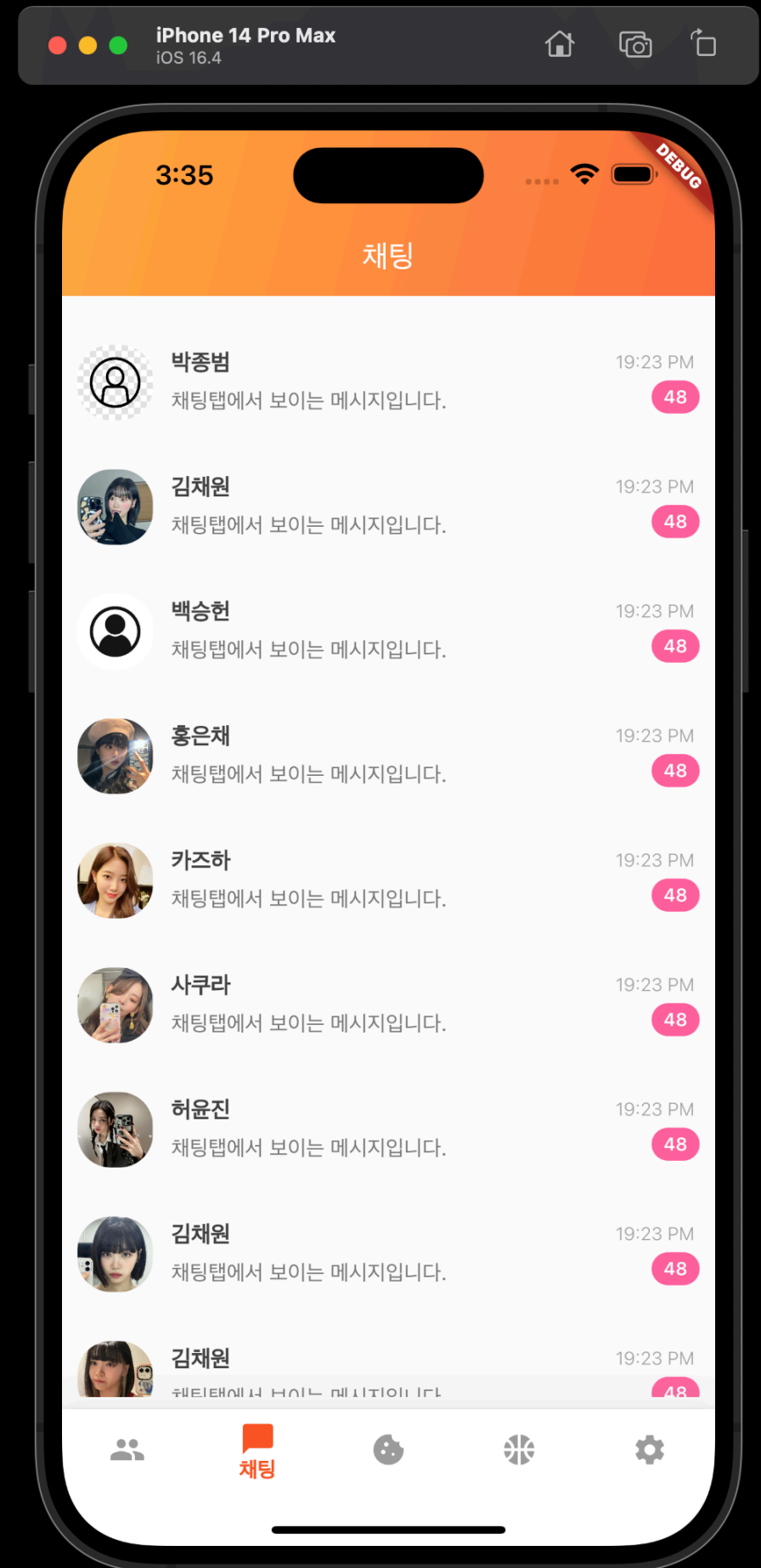
# Auto login

- Flutter secure storage
  - Encrypts data
  - Very simple
- Adding a loading screen
  - Check your login information



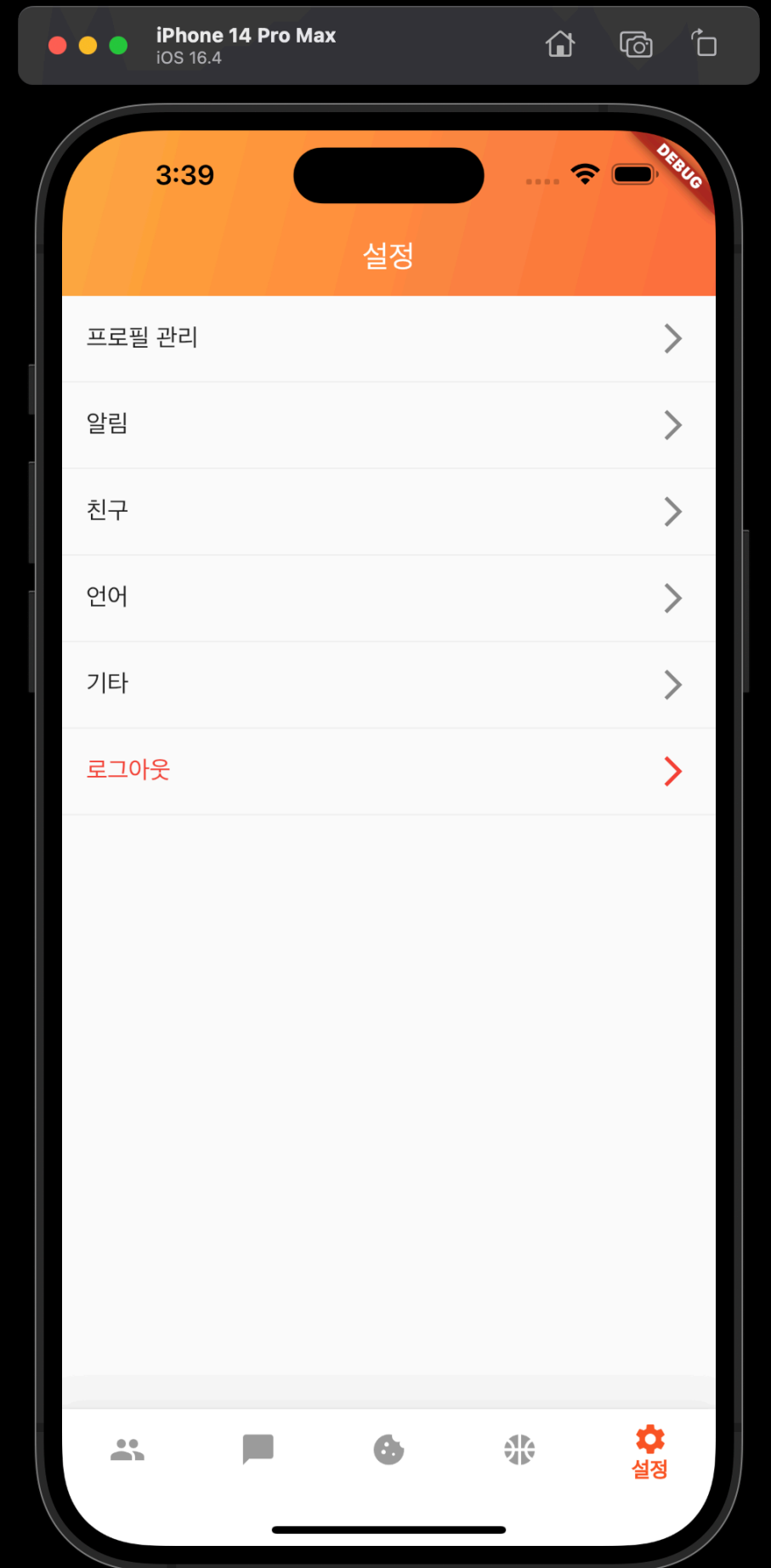
# Chat history tab

- Show a record of a conversation with friends
  - Use the ListView
  - Last conversation history
  - Number of unread messages
  - etc.

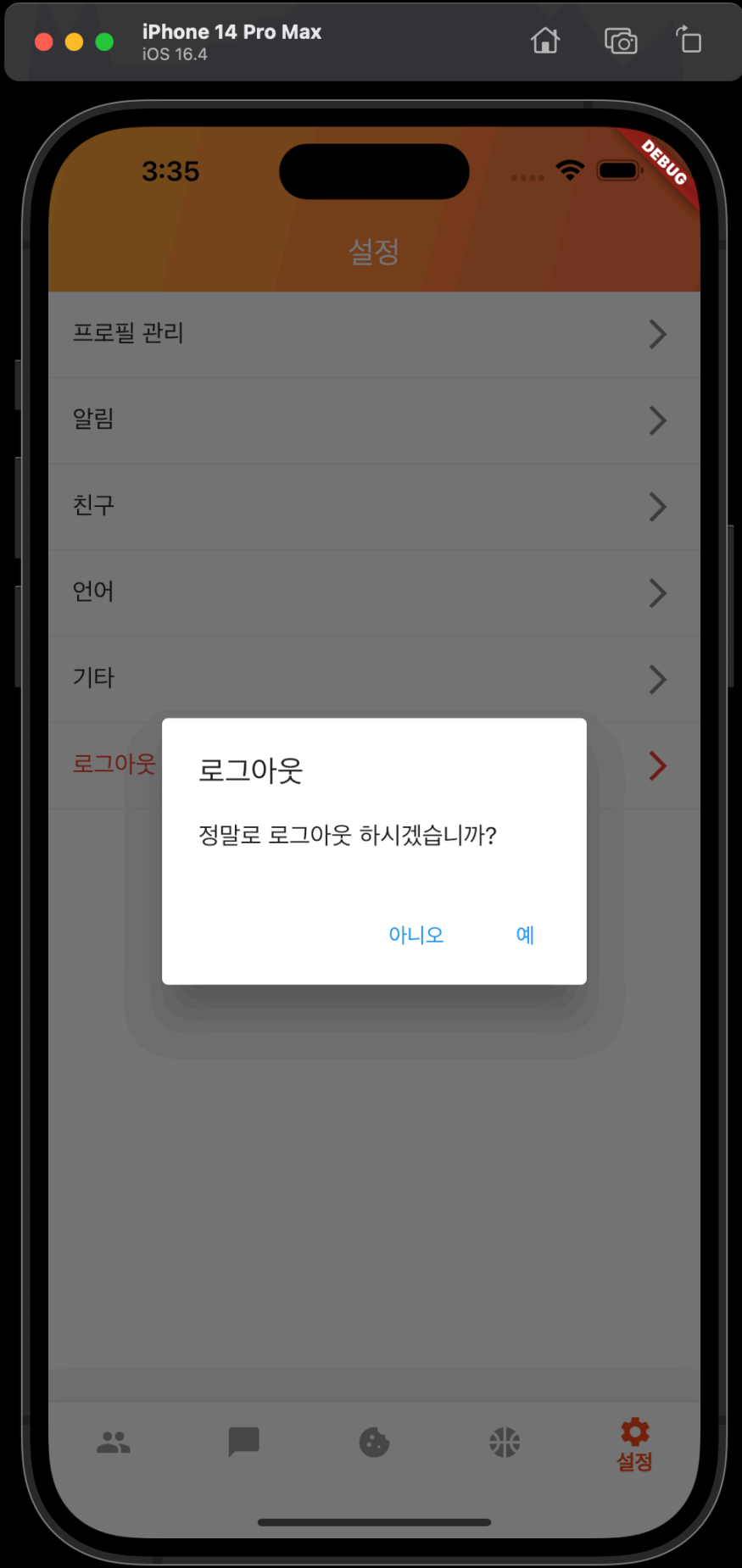


# Setting tab

- Various functional controls
  - Personal profile settings
  - Logout function
  - More to come

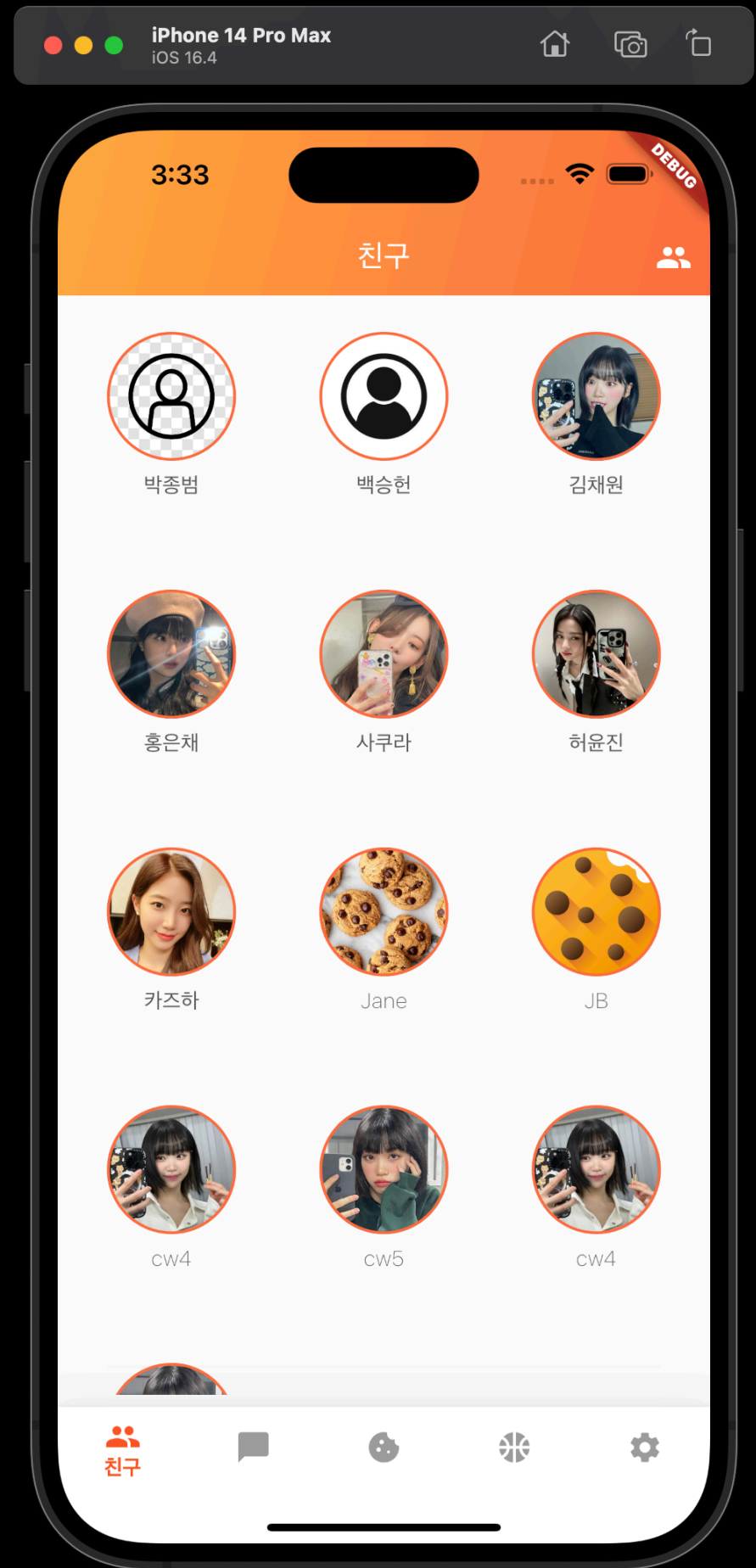


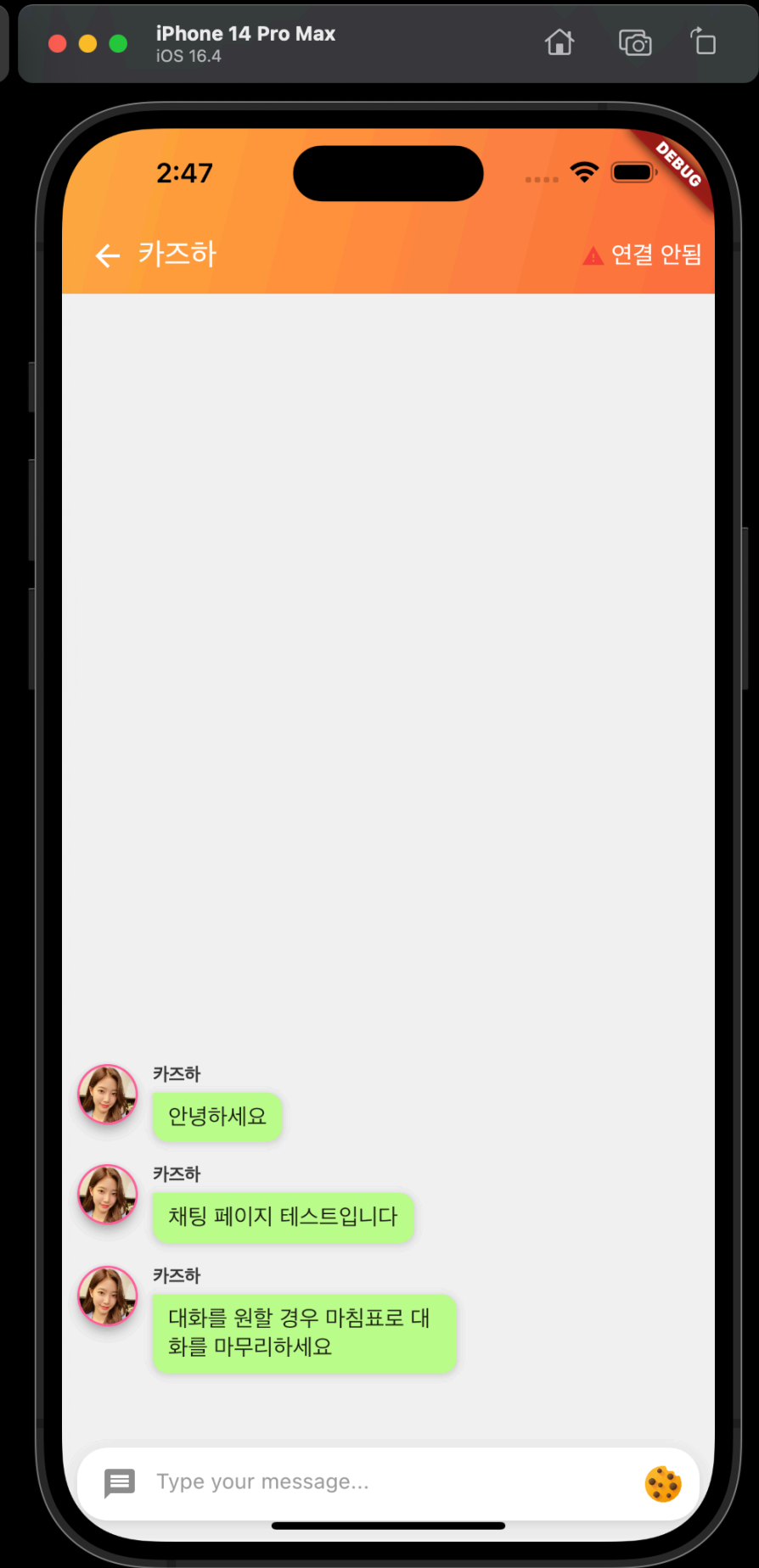
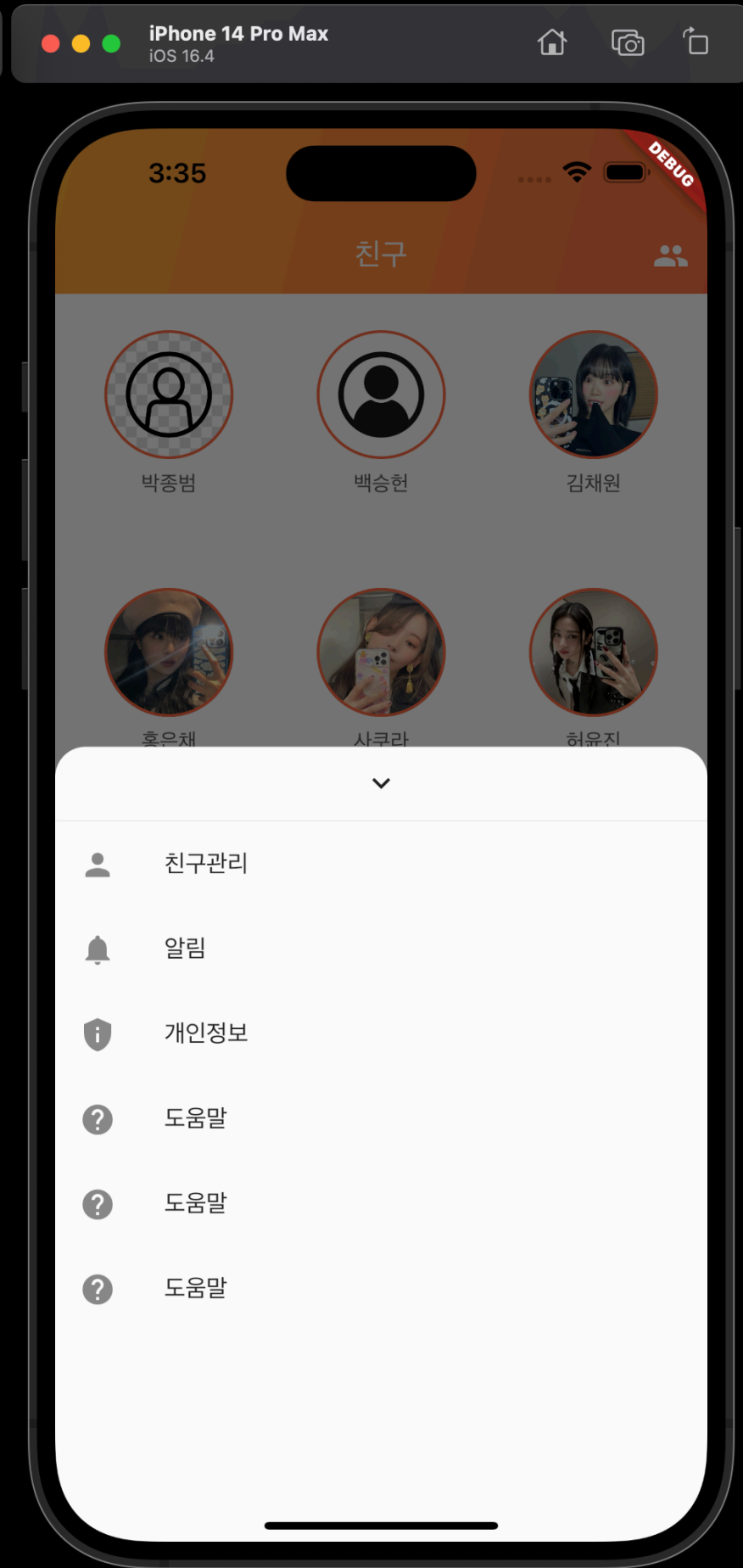
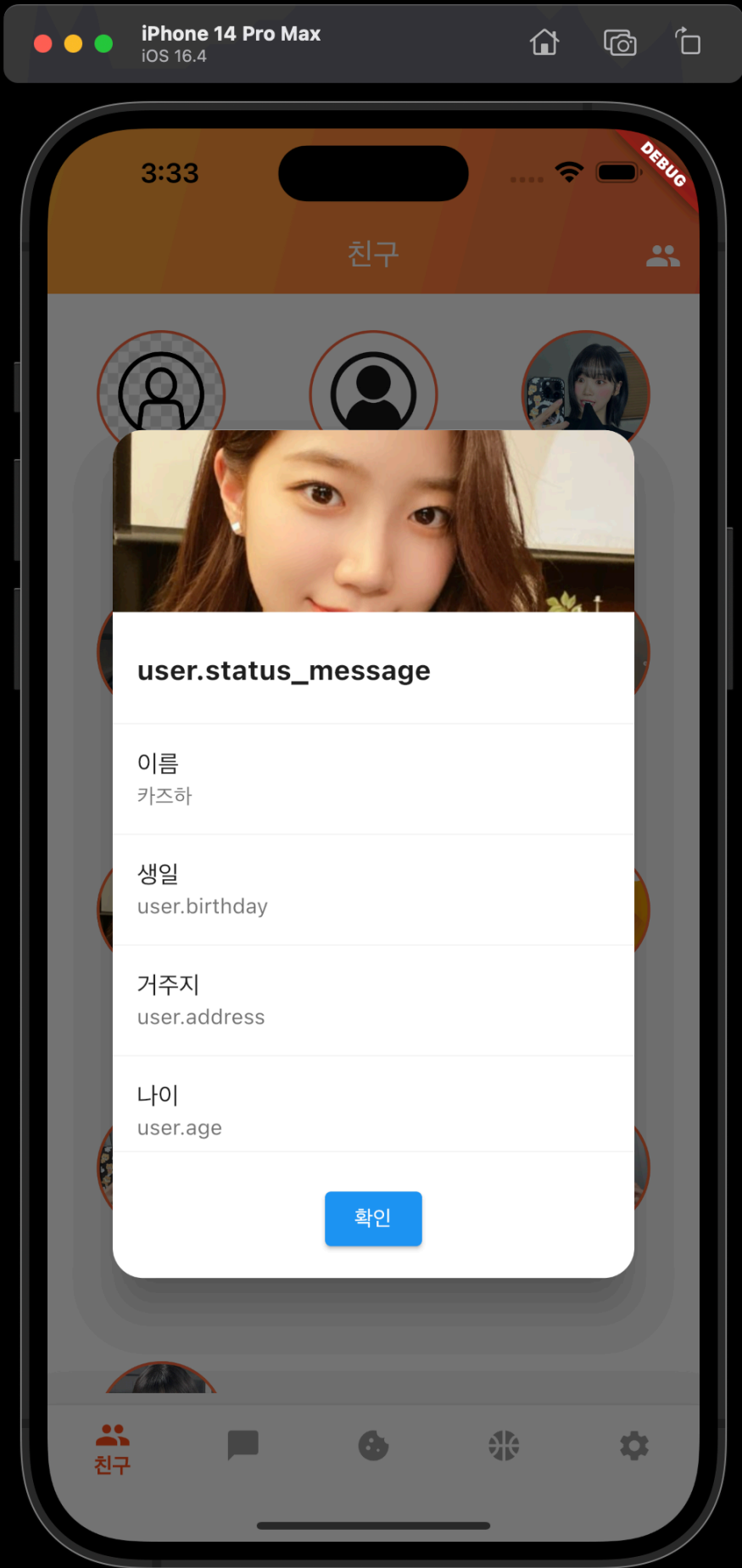




# UI Improvements

- Continue to develop
  - Friend tab
    - Friend profile
    - Bottom sheet
  - Navigation bar
  - Chat bubble





**Backend**

# Back End

## What Our Team Have Done

- HTTPS
- JSON Web Token
- socket.io changes..
  - Session
  - Rooms
  - More events
  - Admin Page



**HTTPS & SSL/TLS**

개인정보 보호법 시행령

제30조(개인정보의 안전성 확보 조치)

① 개인정보처리자는 법 제29조에 따라 다음 각 호의 안전성 확보 조치를 하여야 한다.

3. 개인정보를 안전하게 저장·전송할 수 있는 암호화 기술의 적용 또는 이에 상응하는 조치

Application Layer

HTTP

FTP

NNTP

XMPP

Handshake Layer

HandShake

HandShake

HandShake

SSL / TLS

Record Layer

Record

Transport Layer

TCP/IP



# Let's Encrypt

- Certificate Authority (CA)
- Auto renew (every 90 days) via certbot
- \*.parkjb.com wildcard subdomain support
- **Free!**



# Let's Encrypt

You are here: [Home](#) > [Projects](#) > [SSL Server Test](#) > parkjb.com

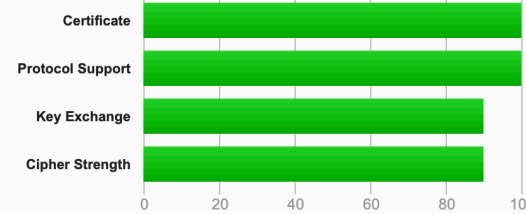
## SSL Report: parkjb.com (211.243.126.115)

Assessed on: Mon, 24 Apr 2023 15:44:20 UTC | [Hide](#) | [Clear cache](#)

[Scan Another »](#)

### Summary

Overall Rating



Visit our [documentation page](#) for more information, configuration guides, and books. Known issues are documented [here](#).

This server supports TLS 1.3.

HTTP Strict Transport Security (HSTS) with long duration deployed on this server. [MORE INFO »](#)

DNS Certification Authority Authorization (CAA) Policy found for this domain. [MORE INFO »](#)

### Certificate #1: EC 256 bits (SHA256withRSA)



#### Server Key and Certificate #1

Subject	parkjb.com Fingerprint SHA256: e34db6046f3f363c2c6d75b6e573aca571ece8a361dc9e8d6ea4e41aaccf3cf Pin SHA256: Y59oWUR7Ird6moqDurcp9Snn3+jYZwj4VUJo3ygM5k=
Common names	parkjb.com
Alternative names	*,parkjb.com parkjb.com
Serial Number	046c3e58924af4b46995444ed5042eeebc98
Valid from	Sun, 16 Apr 2023 15:19:40 UTC
Valid until	Sat, 15 Jul 2023 15:19:39 UTC (expires in 2 months and 20 days)
Key	EC 256 bits
Weak key (Debian)	No
Issuer	R3 AIA: <a href="http://r3.i.encr.org/">http://r3.i.encr.org/</a>
Signature algorithm	SHA256withRSA

# Qualys SSL Labs A+ Rated

You are here: [Home](#) > [Projects](#) > [SSL Server Test](#) > test.parkjb.com

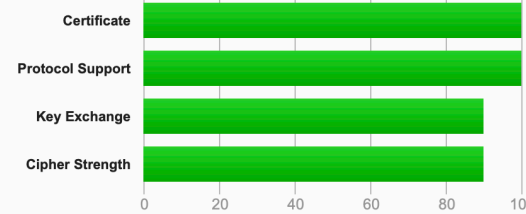
## SSL Report: test.parkjb.com (211.243.126.115)

Assessed on: Mon, 24 Apr 2023 18:22:07 UTC | [Hide](#) | [Clear cache](#)

[Scan Another »](#)

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Overall Rating



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Common names	parkjb.com
Alternative names	*,parkjb.com parkjb.com
Serial Number	046c3e58924af4b46995444ed5042eeebc98
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Signature algorithm	SHA256withRSA

Qualys SSL Labs A+ Rated  
ssllabs.com

**JSON WEB TOKEN**

# Authentication

Are you the real “testtest” user?

# Authorization

Is this operation (read, write, send message etc.) permitted to “testtest” user?



```
1 {  
2   "success": true,  
3   "account": {  
4     "_id": "6432463eb9cf0924039d4777",  
5     "userid": "testtest",  
6     "phone": "010000000000"  
7   }  
8 }
```





Algorithm HS256

## Encoded

 PASTE A TOKEN HERE

```
eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJfaWQiOiI2NDMyNDYzZWl5Y2YwOTI0MDM5ZDQ3NzciLCJ1c2VyaWQiOiJ0ZXN0dGVzdCI6InVzZXJ1YW11Ijoi7JWI64WVIiwiaWF0IjoxNjgyMzUxNjMzLCJleHAiOiE2ODI5NTY0MzMsImIzcyI6InRlc3QucGFya2piLmNvbSI6InN1YiI6InVzZXJJbmZvIn0.r3-o6R-1f8vSvZnENAg0F0eFbgyj7Q140u7uNk7RhM
```

## Decoded

 EDIT THE PAYLOAD AND SECRET

HEADER: ALGORITHM &amp; TOKEN TYPE

```
{  "alg": "HS256",  "typ": "JWT"}
```

PAYLOAD: DATA

```
{  "_id": "6432463eb9cf0924039d4777",  "userid": "testtest",  "username": "안녕",  "iat": 1682351633,  "exp": 1682956433,  "iss": "test.parkjb.com",  "sub": "userInfo"}
```

VERIFY SIGNATURE

```
HMACSHA256(  
  base64UrlEncode(header) + "." +  
  base64UrlEncode(payload),  
  256bit SECRET KEY  
)  secret base64 encoded
```

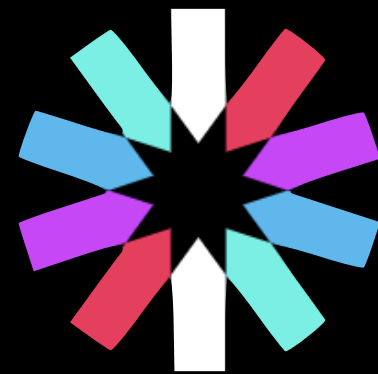
⊗ Invalid Signature

SHARE JWT

# JWT

## Header

- alg: signature or encryption algorithm
- typ: type of token

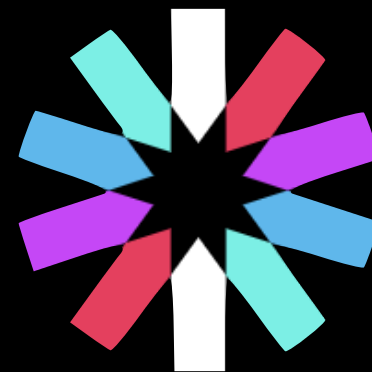


JWT

# JWT

## Payload

- Any payloads needed (ex. User info)
- sub: whom the token refers to
- iat: Issued at
- exp: expired at
- iss: Issuer (who created and signed)
- And more... (ex. aud, nbf, jti)

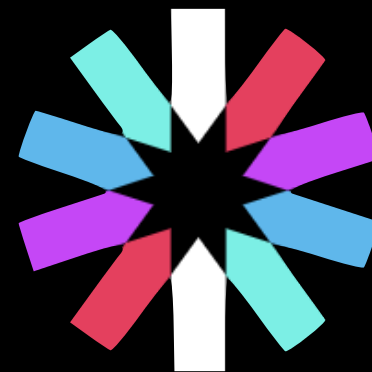


JWT

# JWT

## Signature

- HMACSHA256(  
    <header>.<payload>,  
    <secret key>  
)



JWT

[socket.io](https://socket.io)

localhost

testuser1 (yourself) online

baeksh online

parkjb online

testuser2 online

testuser2

(yourself) this is message from testtest1

testuser2 this is message from testtest2

Your message... Send

localhost

parkjb (yourself) online

baeksh online

testuser1 online

testuser2 online

baeksh

(yourself) hello world

baeksh hi world

(yourself) this is message from parkjb

baeksh this is message from baeksh

Your message... Send

localhost

testuser2 (yourself) online

baeksh online

parkjb online

testuser1 online

testuser1

testuser1 this is message from testtest1

(yourself) this is message from testtest2

Your message... Send

localhost

baeksh (yourself) online

parkjb online

testuser1 online

testuser2 online

parkjb

parkjb hello world

(yourself) hi world

parkjb this is message from parkjb

(yourself) this is message from baeksh

Your message... Send

Socket.IO Admin UI 0.5.1 Server URL: test.parkjb.com  
Status: CONNECTED UPDATE

- Dashboard
- Sockets
- Rooms
- Clients
- Events
- Servers

### Clients

Transport	#	%
WebSocket	2	100.0 %
HTTP long-polling	0	0.0 %

### Servers

Status	#	%
HEALTHY	1	100.0 %
UNHEALTHY	0	0.0 %

### Namespaces

Name	# of sockets
/	0
/admin	1

#### Connection and disconnection events

#### Bytes received and sent

Language: English

Dark theme?

Read-only?

socket.io admin page

# Thank You

Questions are welcome