HallyuGo ✈️

Map App for K-culture Lover

Capstone Design Project Team F
Kim Jisu, Lee Yoojin, Jung Daegyo, Jose Antunes

Table of Contents

Motivation and Objective

Motivation

➡️ Korean Pop Culture attracts tourists to South Korea

➡️ Lack of tools for those seeking relevant locations

Solving this problem

➡️ Korean tourism industry

➡️ Global Hallyu fandom

Objective

🎯 Target

Anyone who loves Hallyu Culture, including visitors

🎯 What

Information of hotspots related to Hallyu Culture

🎯 How

Guide map application for Hallyu Culture hotspots

Project Progress and Roles

Project Progress

Weeks	2 - 3	4 - 5	6 - 7	8 - 9	10 - 11	12 - 13	14 - 15
Refinement of Topic	■	■					
UI & UX Design		■	■				
DB Design		■	■				
Implementation		■	■	■	■	■	
Data Collection			■	■	■	■	
Testing & Deployment						■	■

Roles

Frontend	Backend
José Antunes Yoojin Lee	Daegyo Jung Jisu Kim

Frontend Team

| Name	Role
Yoojin	**Design / Layout:** Design Figma UI / Implement Main, Map, Detail Page **API Integration:** Customize Naver Map API, Connect backend APIs **Deployment:** Deploy Next.js with Nginx
Jose	**Design / Layout:** Design Figma My Page UI / Implement My Page **Data Collection:** Design DataSet, Collect Location Information

Backend Team

Name	Role
Daegyo	**Implementation:** Design DB, Auth API(Spring Security, JWT), User Side API **Infra & Deployment:** AWS Configuration(EC2, S3, RDS), Github Actions CI/CD **Data Collection:** Collect Content and Location images
Jisu	**Implementation:** Modify DB Design, User Side API, Content lookup API, Location and Image lookup API, Test **Data Collection:** Collect Content and Location information

Final Design and Implementation

Logo and Icons

HallyuGO

Map App for K-culture Lover
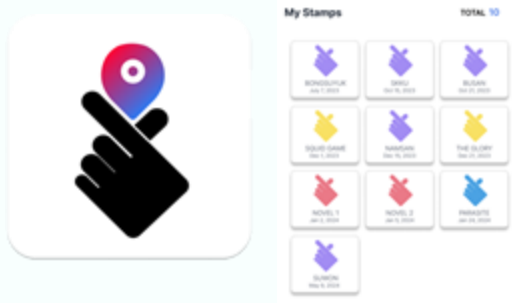
Map Marker + K-Heart

K-POP: Violet   Drama: Yellow   Novel: Pink   Movie: Blue

Sign In / Sign Up Page

Main Page

2 random contents

Main Page: Click *see more*
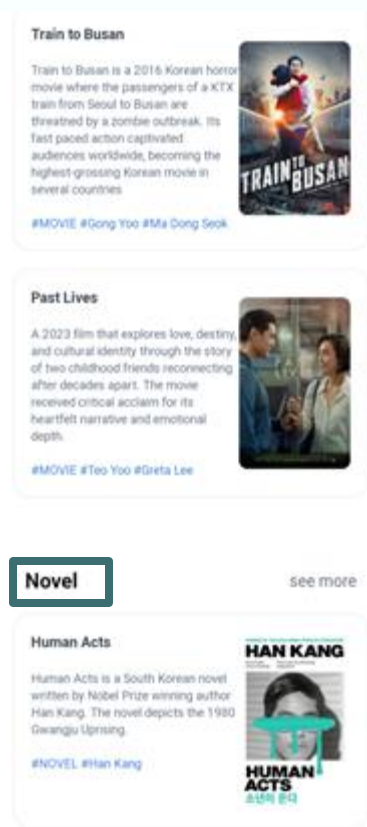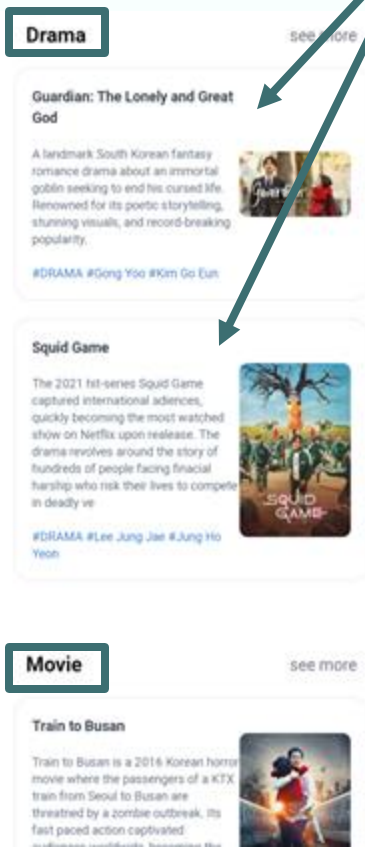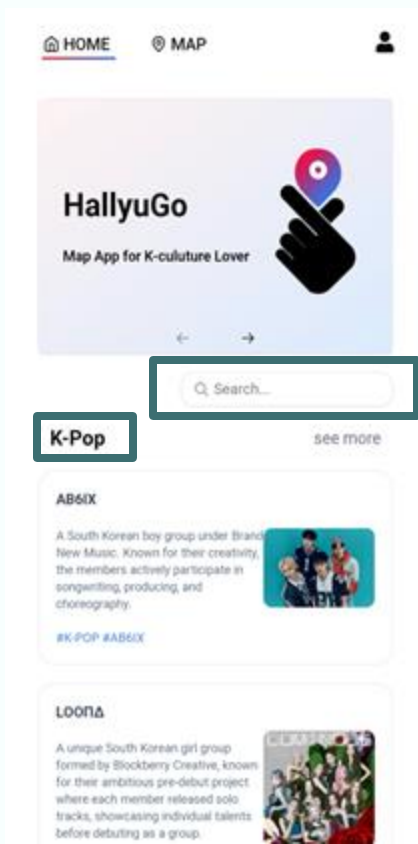

Total contents

HOME   MAP

HallyuGo

Map App for K-cululture Lover

← →

Q Search...

K-Pop   see more

VIXX

A veteran K-pop boy group known for their conceptual music and theatrical performances. Their songs often explore unique themes, earning them the title "Concept Kings."

#K-POP #VIXX

SOYA

A South Korean soloist known for her sweet vocals and versatile music, ranging from ballads to upbeat pop tracks.

HOME   MAP

All About The K_POP ⭐

BTS

Debuting in 2013 and sweeping rookie awards both domestically and internationally, BTS has grown into Korea's most iconic boy group, representing the pinnacle of success. They are globally celebrated as the "21st-century pop icons," igniting a worldwide B

#K-POP #BTS #HYBE

LE SSERAFIM

LE SSERAFIM is a girl group under SOURCE MUSIC, a label of HYBE, composed of five multinational members: Sakura, Kim Chaewon, Huh Yunjin, Kazuha, and Hong Eunchae. They are the first girl group launched through the collaboration between HYBE and SOURCE MU

#K-POP #LE SSERAFIM #HYBE

ITZY

ITZY is a five-member girl group under JYP Entertainment that debuted on February 12, 2019. The group
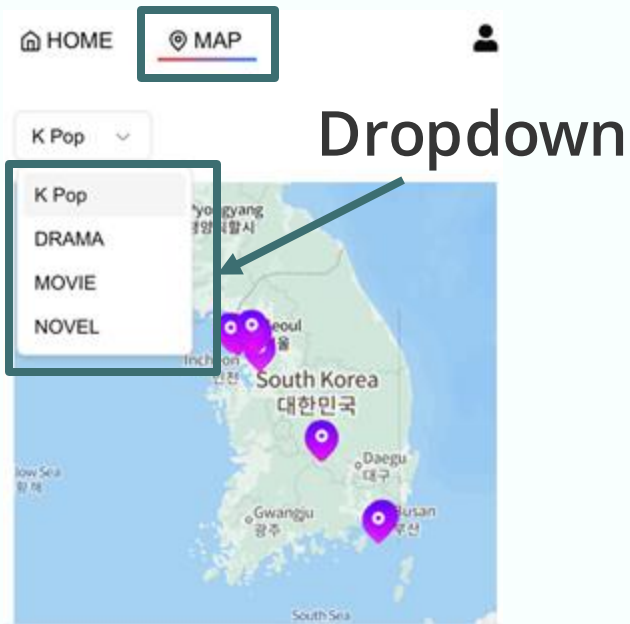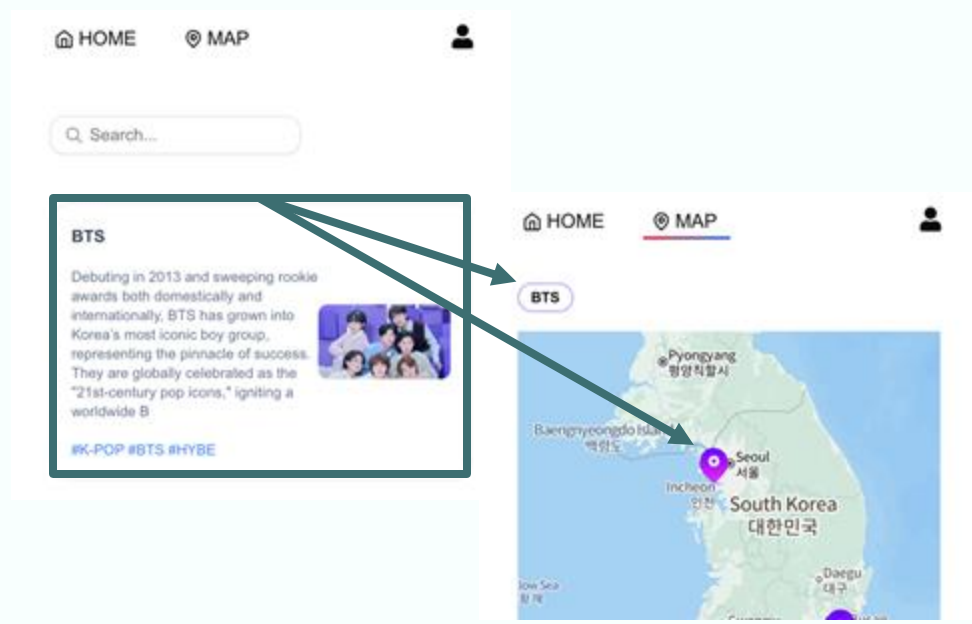
Map Page: Access

1 Header Access

Dropdown

2 Content Access

Map Page
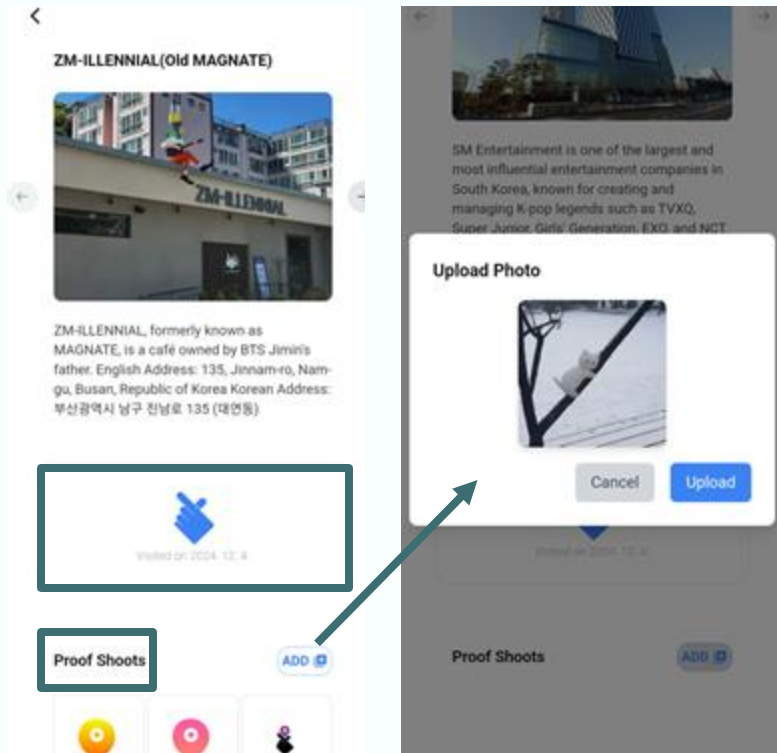

Map

- Allow Pan to Marker

Favorite

- View total Favorite counts
- Save in My List

Drawer

- Support Scroll Up
- Expand Card List

Detail Page

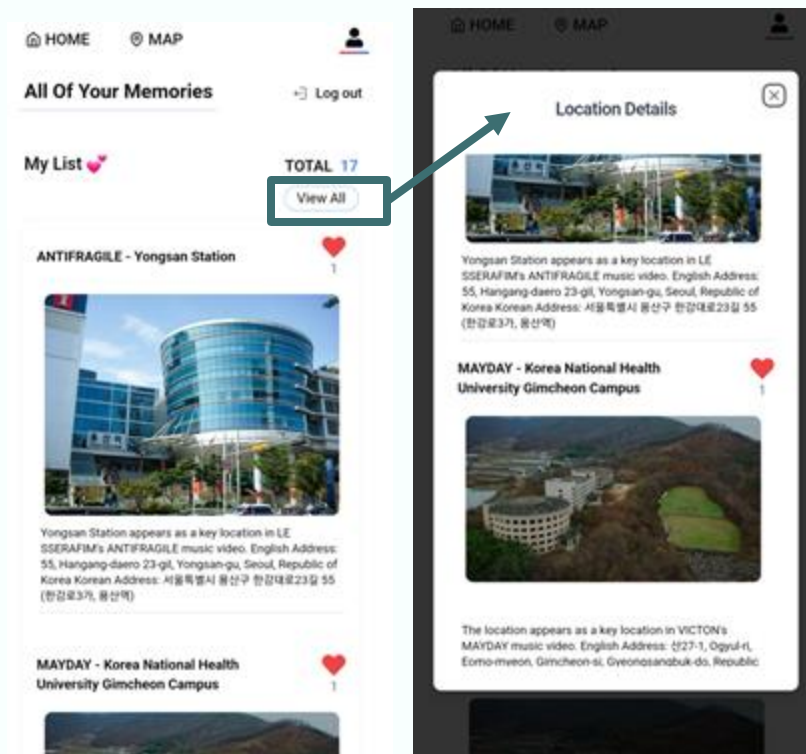## Images

- Support multiple Images

Stamp

- Activates within 1km Radius
- Save in My Page

Proof Shots
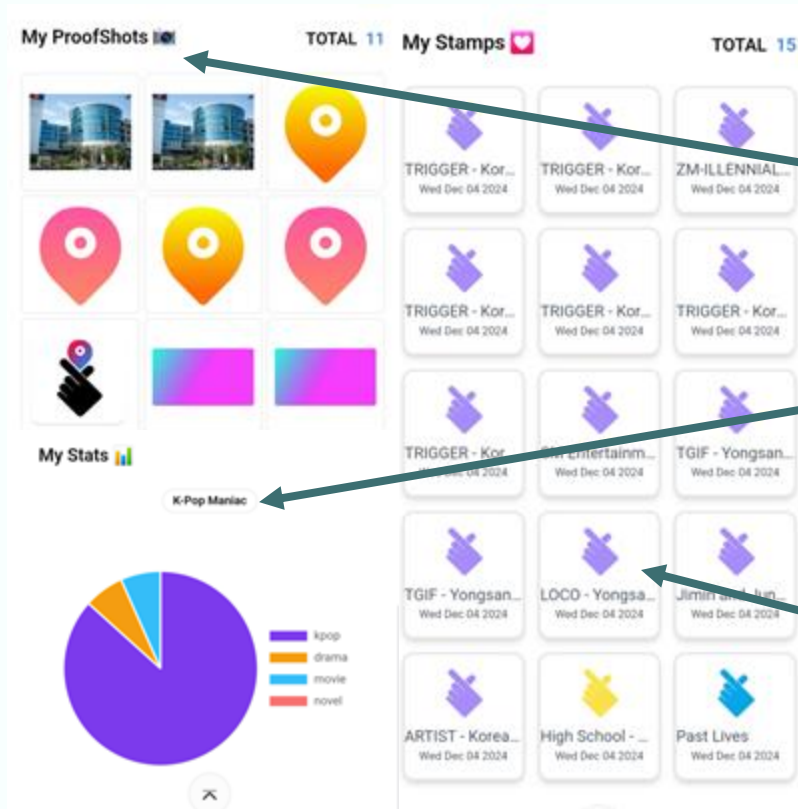
- View others' Proof Shots
- Upload your Proof Shots

My Page

My List

- **Display all your Favorites**

- **Show 2 Locations by default**

- *View All* -> Show entire list

My Page

My Proof Shots
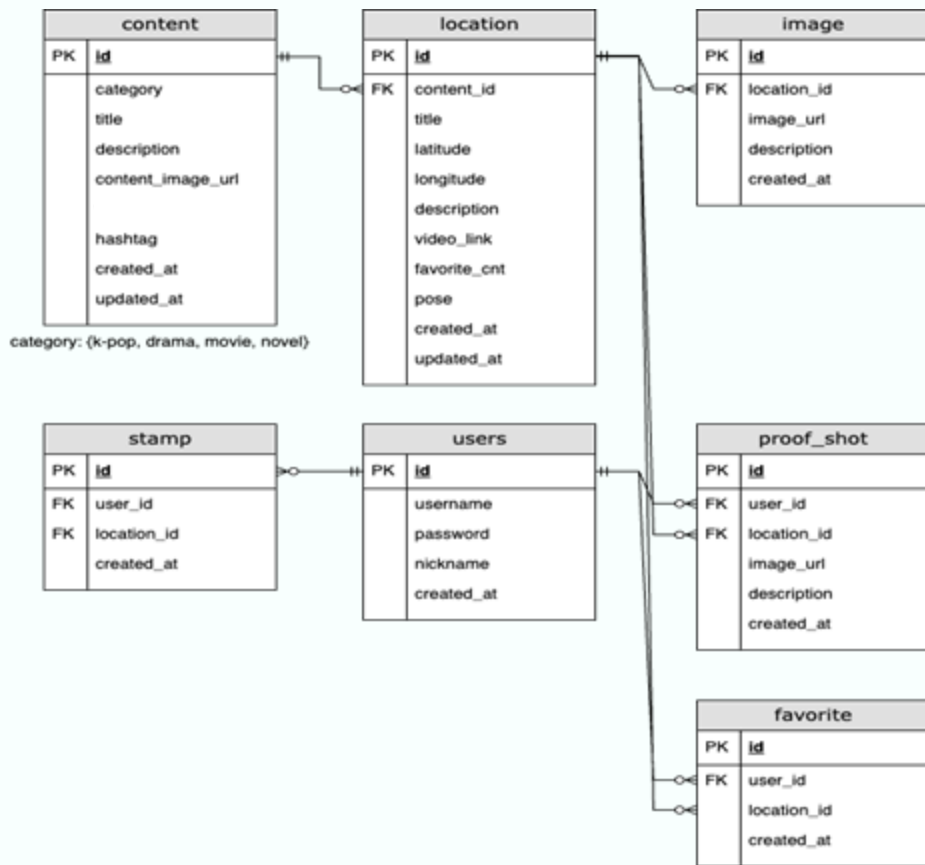
- **Display all your Proof Shots**
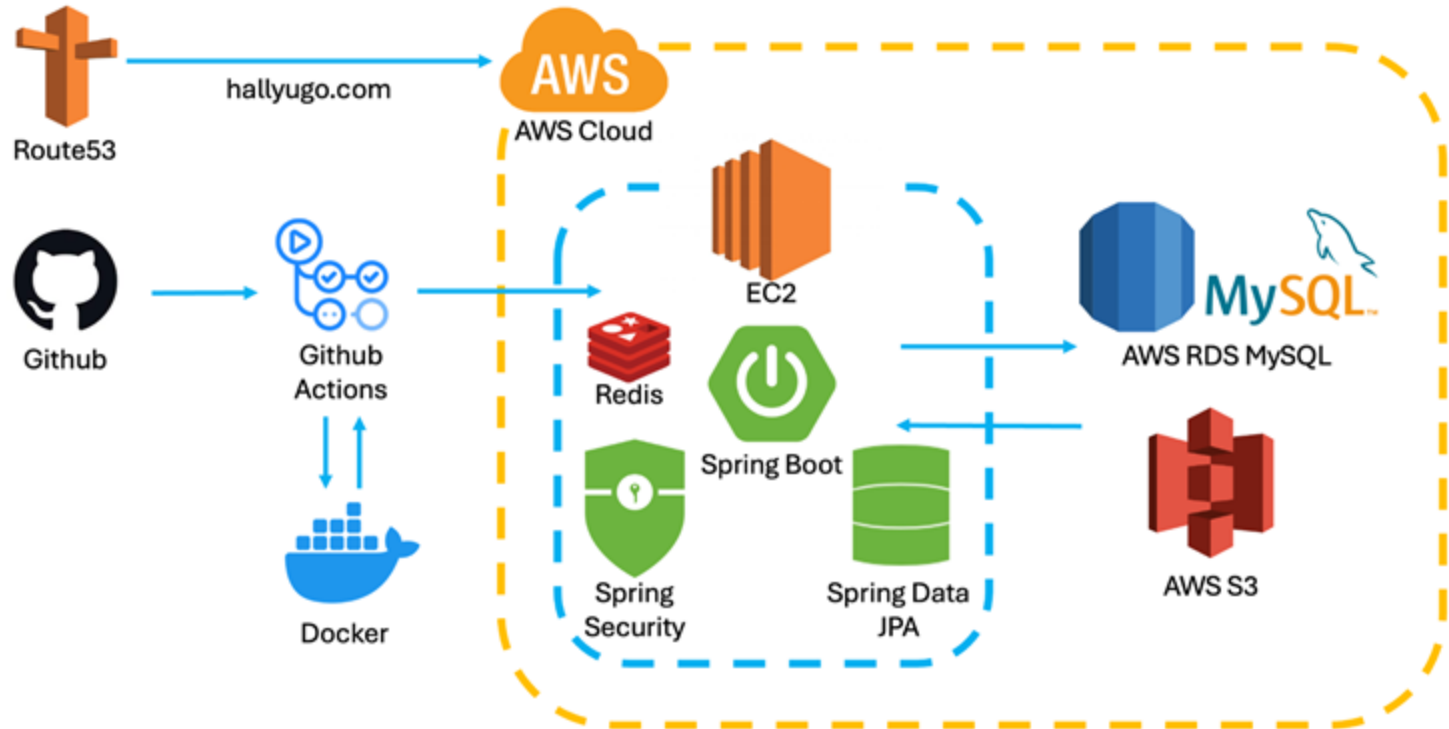
My Stats

- **"OOO Maniac" badge**

My Stamps

- **Display collected Stamps**
- **Include Location & Date**

Database

content

PK	**id**
	category
	title
	description
	content_image_url
	hashtag
	created_at
	updated_at

category: {k-pop, drama, movie, novel}

location

PK	**id**
FK	content_id
	title
	latitude
	longitude
	description
	video_link
	favorite_cnt
	pose
	created_at
	updated_at

image

PK	**id**
FK	location_id
	image_url
	description
	created_at

stamp

PK	**id**
FK	user_id
FK	location_id
	created_at

users

PK	**id**
	username
	password
	nickname
	created_at

proof_shot

PK	**id**
FK	user_id
FK	location_id
	image_url
	description
	created_at

favorite

PK	**id**
FK	user_id
	location_id
	created_at

Backend Architecture

Implemented Features

1. Sign in / Sign up
2. Content search
3. Location information
4. Stamp collection
5. Proofshot sharing
6. Favorite
7. My page
8. Visit record analysis (My stats in My Page)

Tests

1 Integration tests for Service
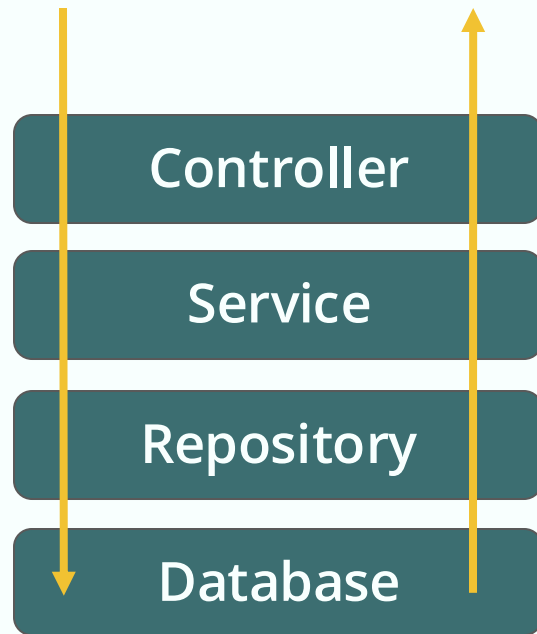
2 Unit tests for Controller, Repository

```
✓ Tests passed: 54 of 54 tests – 10 sec 954 ms

Starting Gradle Daemon...

Gradle Daemon started in 3 s 504 ms

> Task :compileJava UP-TO-DATE

> Task :processResources UP-TO-DATE
```

Controller

Service

Repository

Database

Deployment

1. Automate CI/CD using Github Actions

2. Deploy Frontend application with Nginx

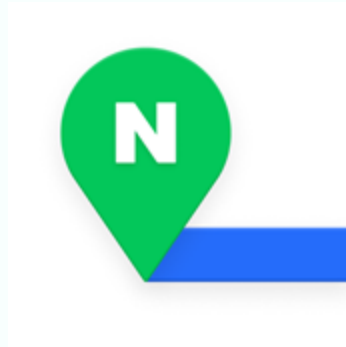3. Deploy Backend server on AWS EC2

Challenges and Limitations

Challenges: Naver Map API

1 Map API decision

- Initial plan: Kakao Map API
  - Issue: No English language support
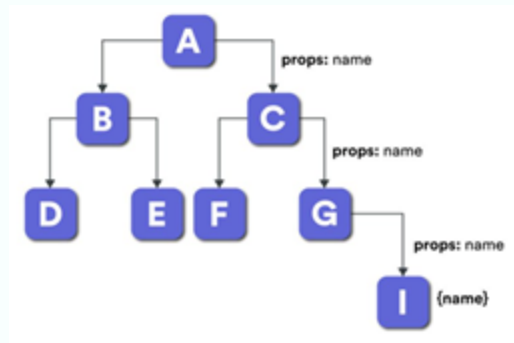- Solution: Switch to Naver Map API

2 Customization needs

- Issue: Extensive customization needs
- Solution: Use react-naver-maps library

Challenges: State Management

!! Prop drilling issue

- Problem: Increasing complexity
- Example: Location card -> its Detail

💡 State management

- Solution: Use Zustand library

Challenges: DB version Management

‼️ Frequent DB schema update

- Problem: Difficulty of DB version management

💡 DB version management, Automated migration

- Solution: Use Flyway DB

Limitations

1 Geography: Korean location information only

2 Device: Mobile only (Not suitable for Desktop)

3 Dataset: 34 Contents, 38 Locations, 101 Images

4 Technology: Next.js, Spring

5 Time: 2nd week ~ 14th week

Demonstration

www.hallyugo.com

Thank you