

May 4, 2019
CSP586 Final Project

1. Brief project overview statement

Topic 3. Search for places in a zip-code, and show divvy nearest dock stations for a selected place. And a Dashboard to show the HeatMaps for the different review counts and ratings for the search results.

Additionally, show real-time HeatMap of divvy stations in a selected place, and show animated HeatMap of divvy stations in a selected place for last 30 minutes and last 24 hours.

Team Member:

Chen, Tianran
A20396751

Zhou, Yuqi
A20423555

2. Requirements/Feature lists

- Search for places by street name or zip-code
- Show HeatMap of different review counts for searched places
- Show HeatMap of different review ratings for searched places
- Show HeatMap of all divvy stations that near the searched places, updates automatically each 2 minutes
- Show nearest divvy stations for one selected place
- Show real-time HeatMap of divvy stations in one selected place, updates automatically each 2 minutes
- Show animated HeatMap of divvy stations in one selected place for last 30 minutes
- Show animated HeatMap of divvy stations in one selected place for last 24 hours
- Change color gradient of HeatMap

3. Use Cases and Use Case Diagram

Use Cases

User:

Search for places by street name

Search for places by zip code

Check HeatMap of different review counts for searched places

Check HeatMap of different review ratings for searched places

Check nearest divvy stations for a selected place

Check real-time HeatMap of divvy stations in a selected place,
updates automatically each 2 minutes

Check animated HeatMap of divvy stations in a selected place for last
30 minutes

Check animated HeatMap of divvy stations in a selected place for last
24 hours

Search Engine:

Search for places by street name

Search for places by zip code

System:

Check HeatMap of different review counts for searched places

Check HeatMap of different review ratings for searched places

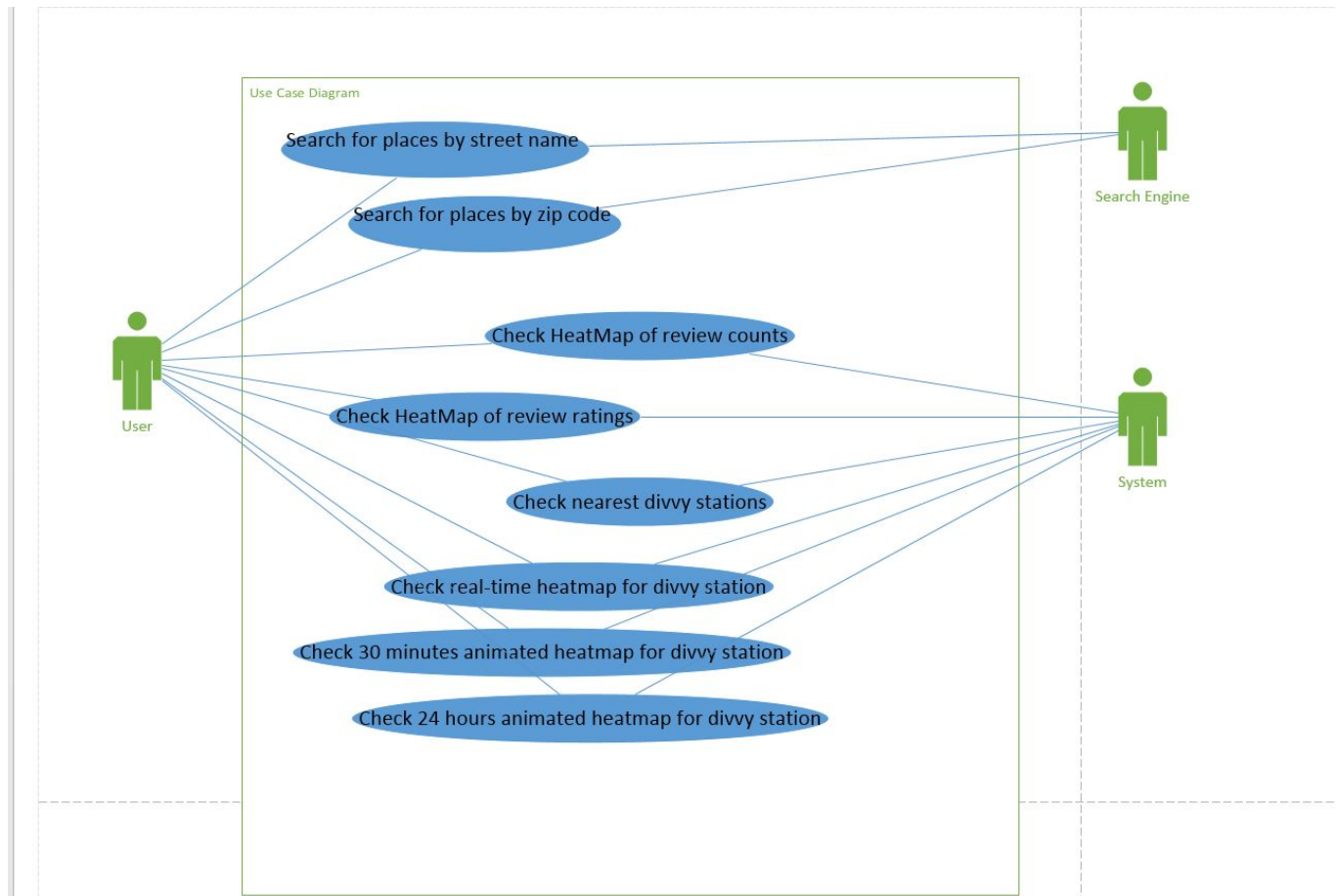
Check nearest divvy stations for a selected place

Check real-time HeatMap of divvy stations in a selected place,
updates automatically each 2 minutes

Check animated HeatMap of divvy stations in a selected place for last
30 minutes

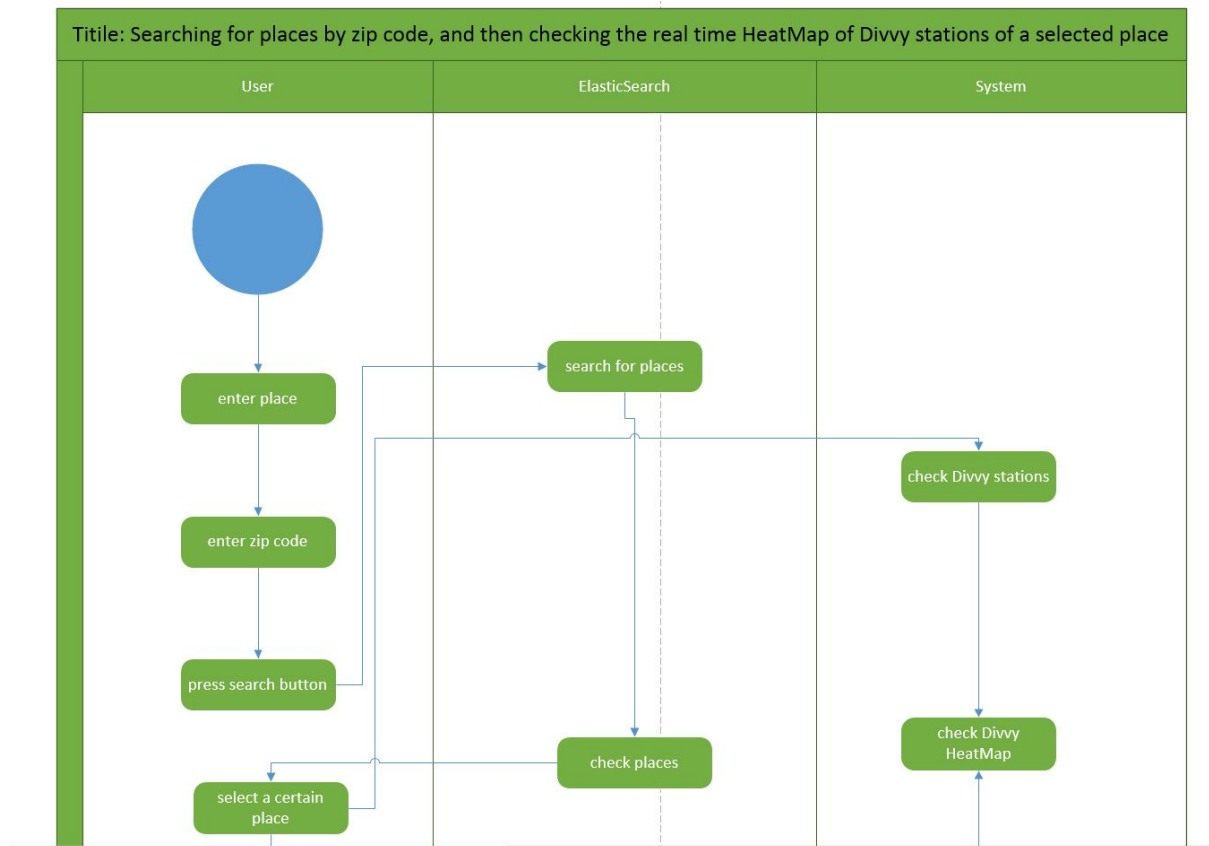
Check animated HeatMap of divvy stations in a selected place for last
24 hours

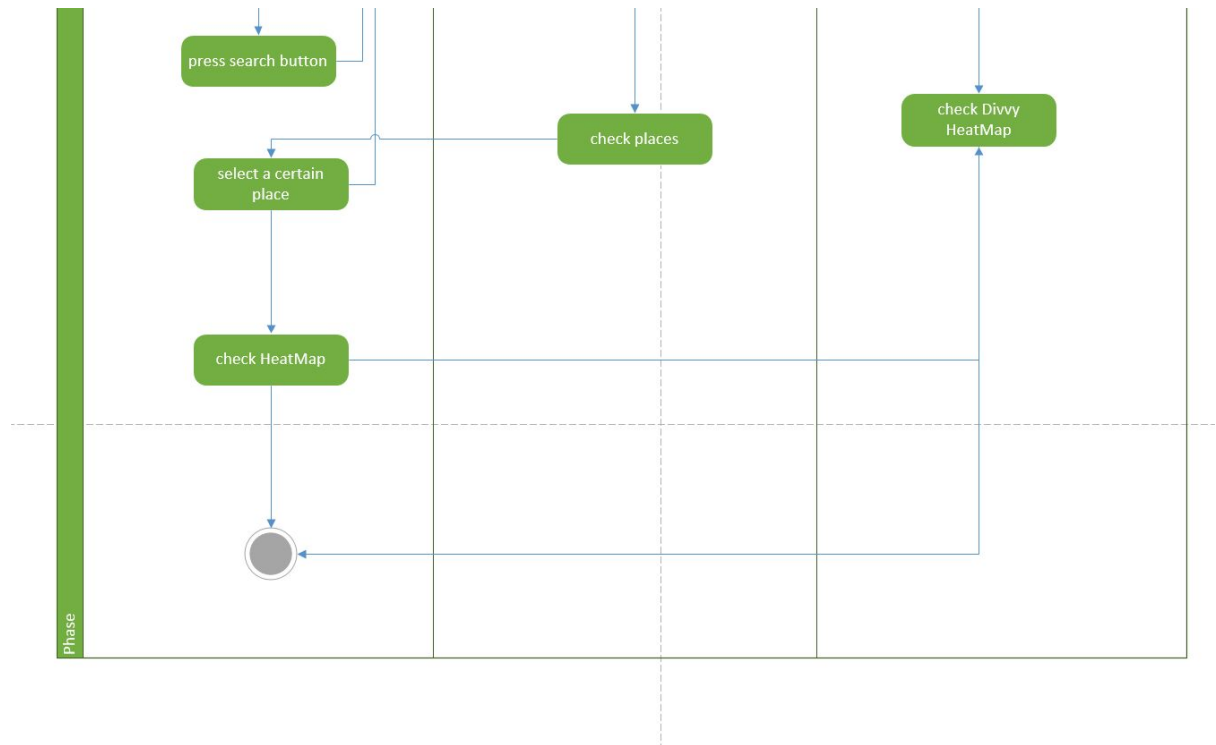
Use Case Diagram



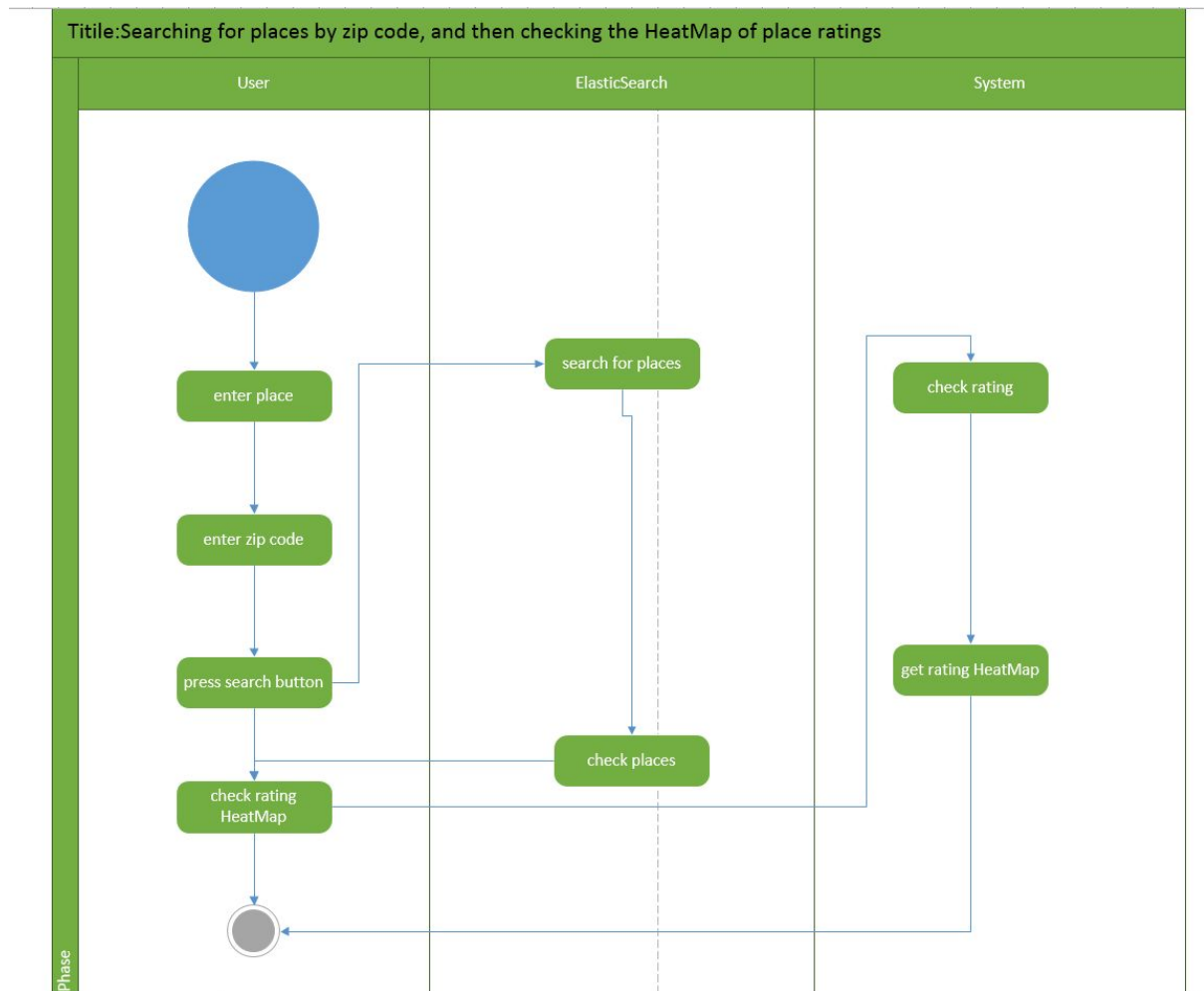
4. Activity Diagrams

Activity diagram1: searching for places by zip code, and then checking the real time HeatMap of Divvy stations of a selected place



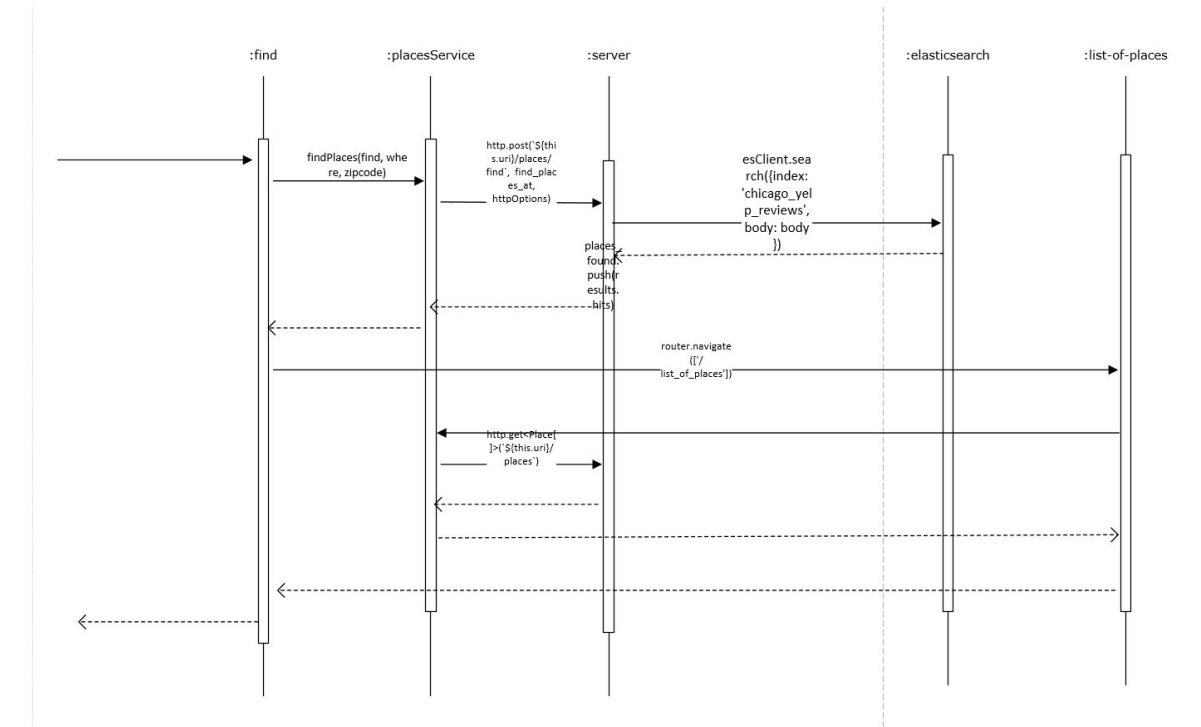


Activity diagram2: searching for places by zip code, and then checking the HeatMap of place ratings

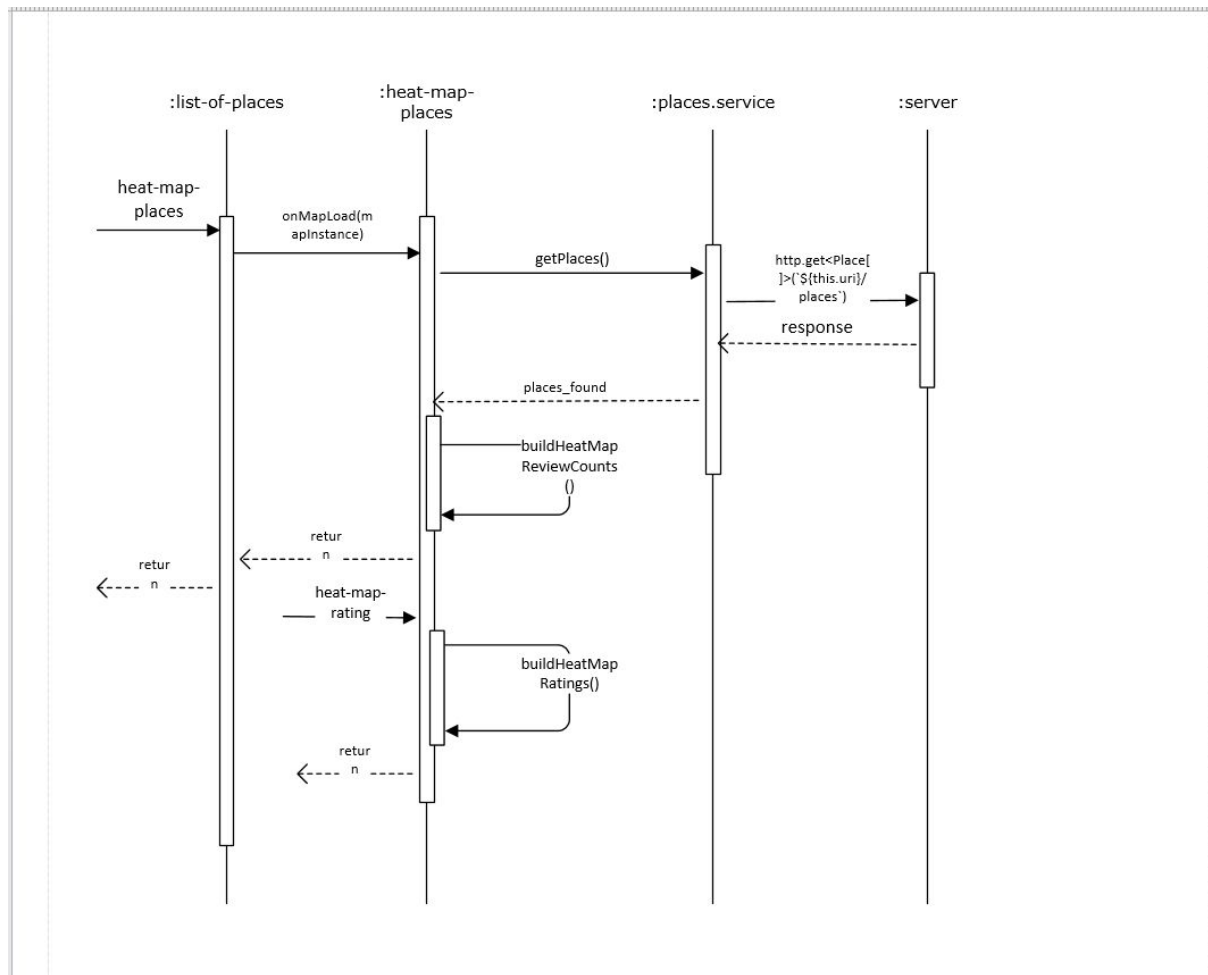


5. Sequence Diagrams

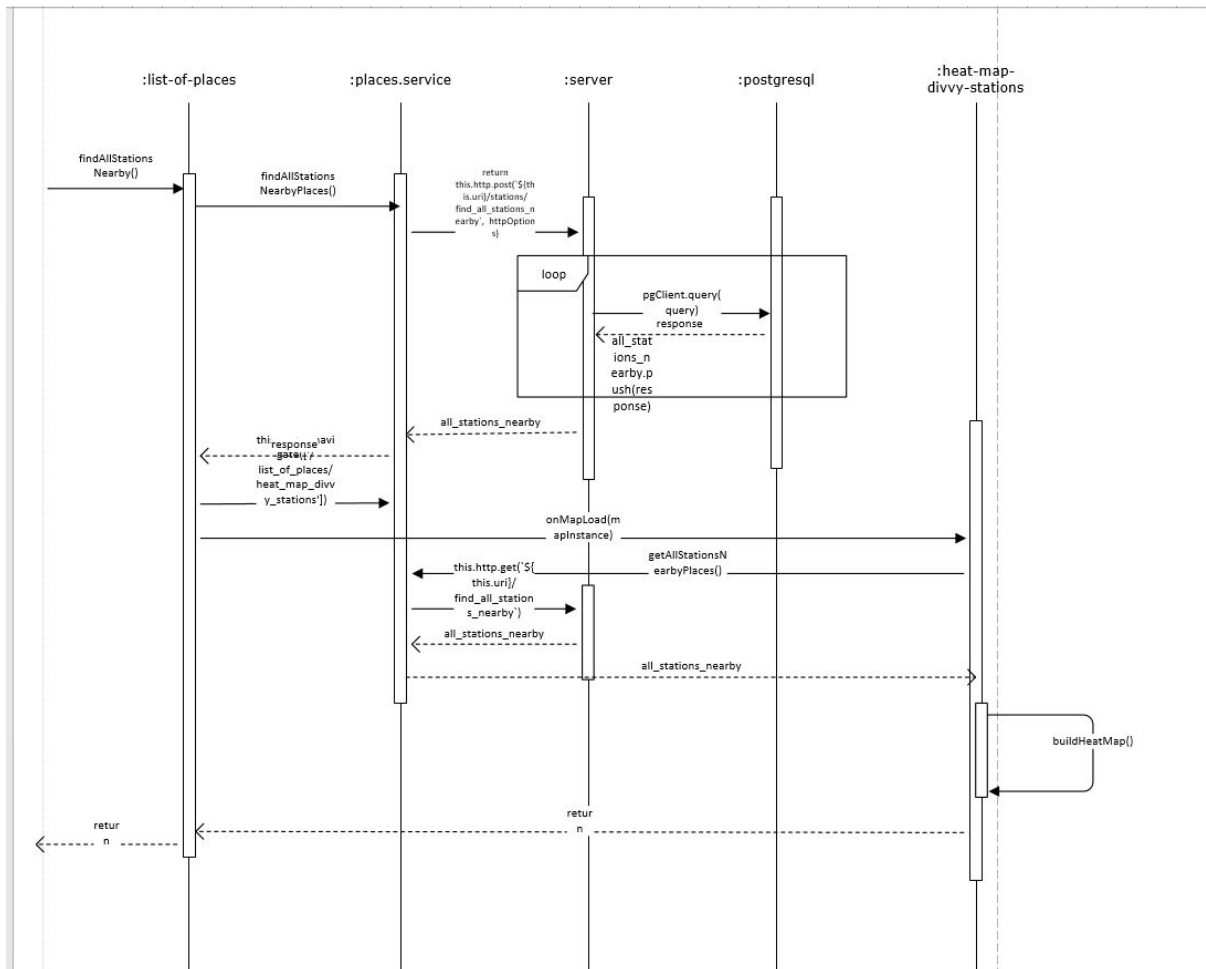
Sequence Diagram1: Search for place



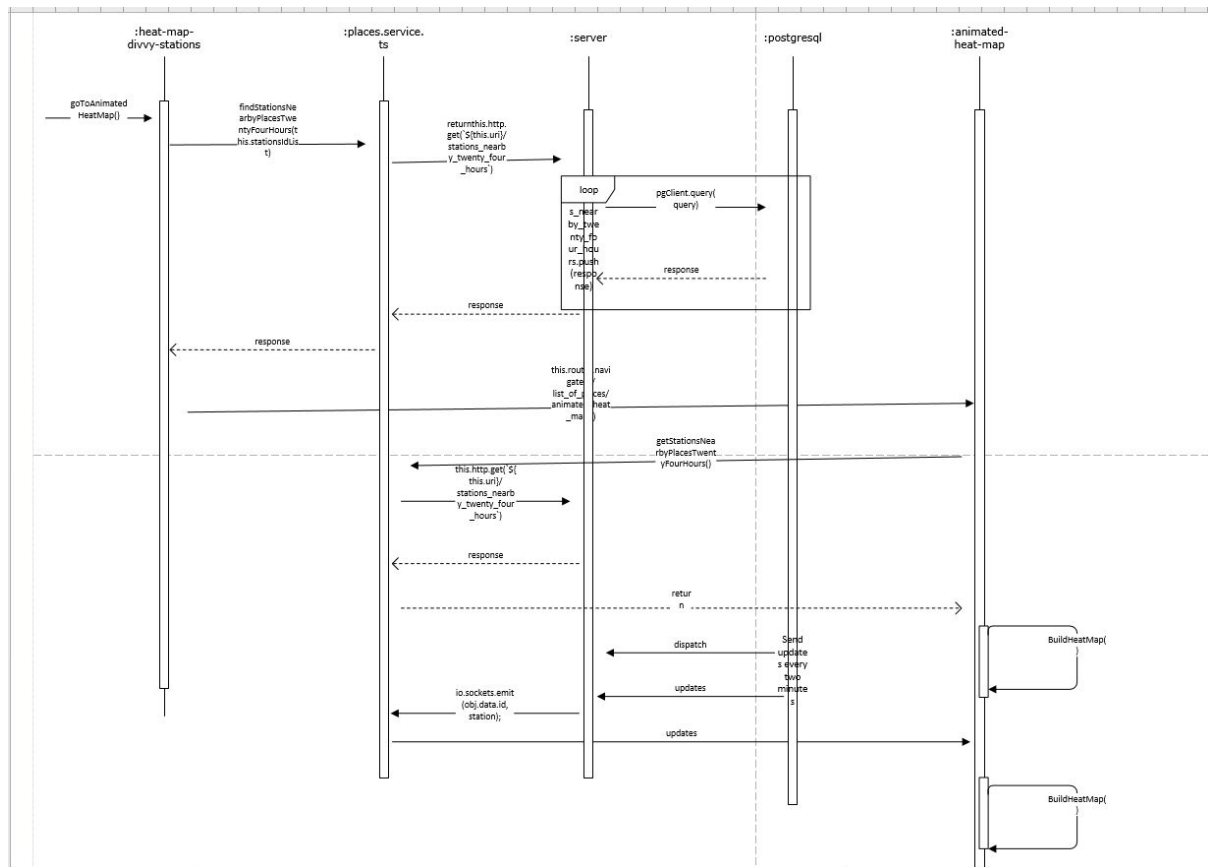
Sequence Diagram2: check HeatMap of review counts



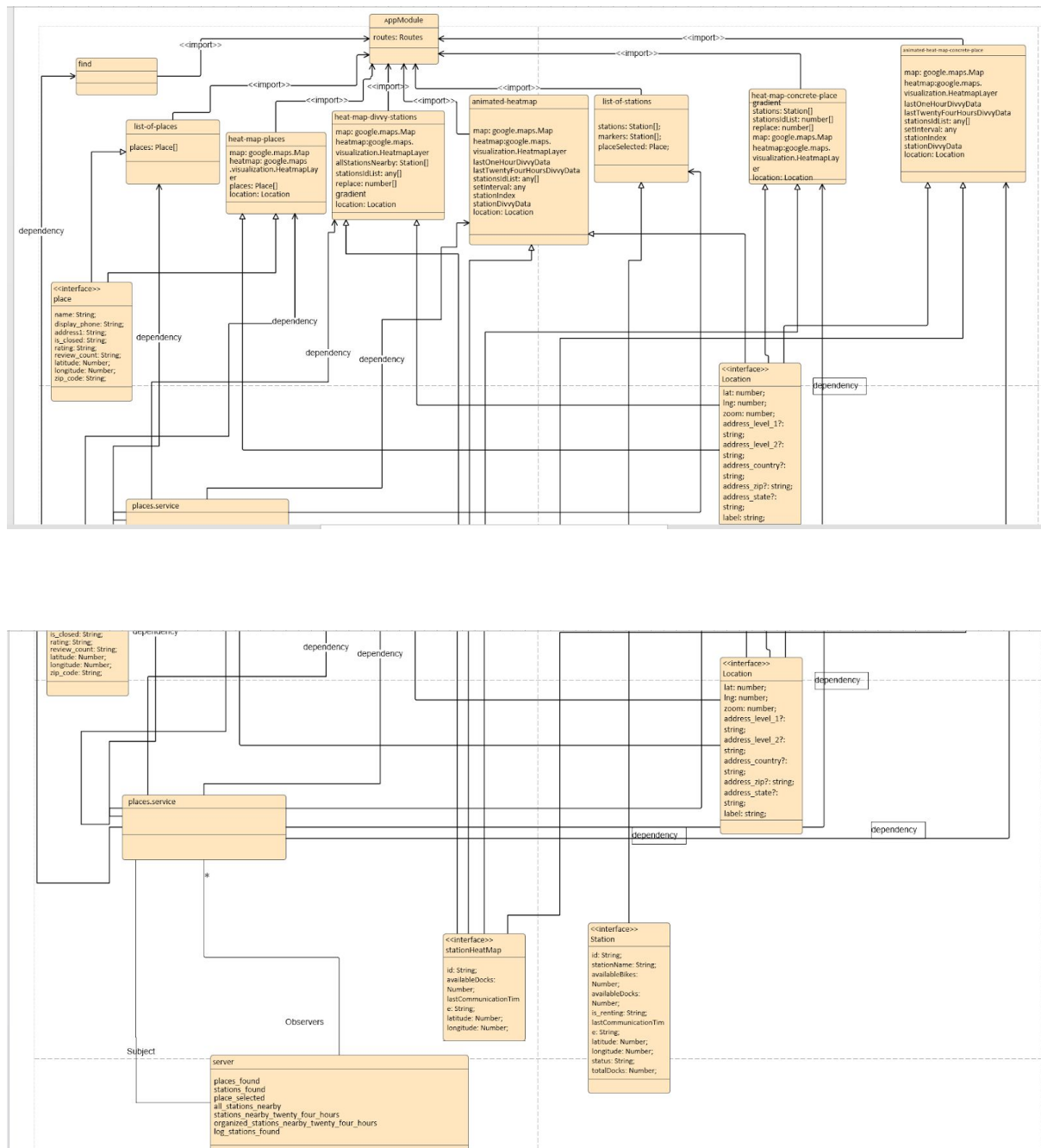
Sequence Diagram3: check HeatMap of Divvy Stations



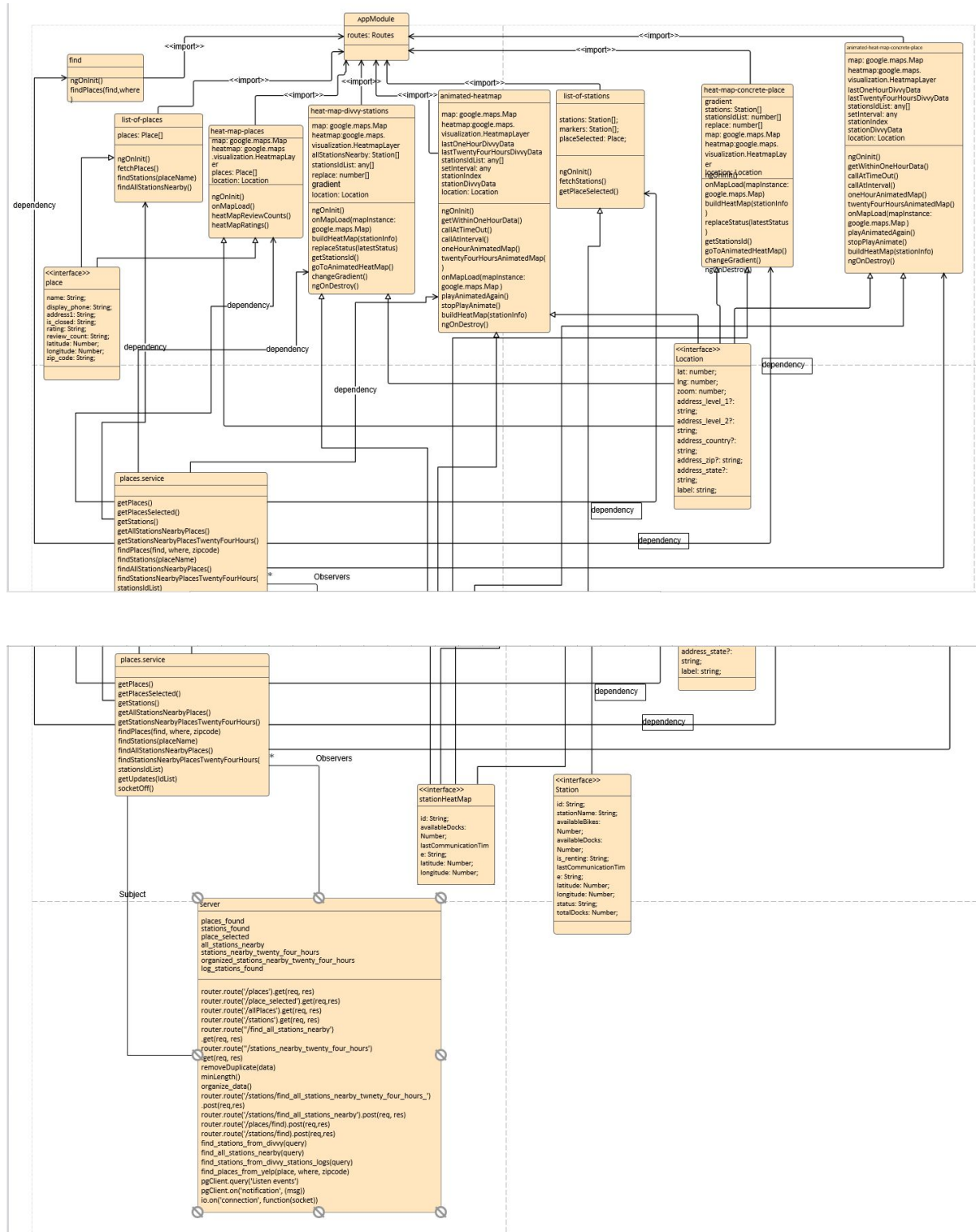
Sequence Diagram4: check HeatMap of 24 hours divvy stations



6. Domain Model Class Diagram



7. Design Model Class Diagram



8. Documentation and class diagrams for Design Patterns used

This project used component based MVC framework.

