TRIP PLANNING APPLICATION

Team #3 :

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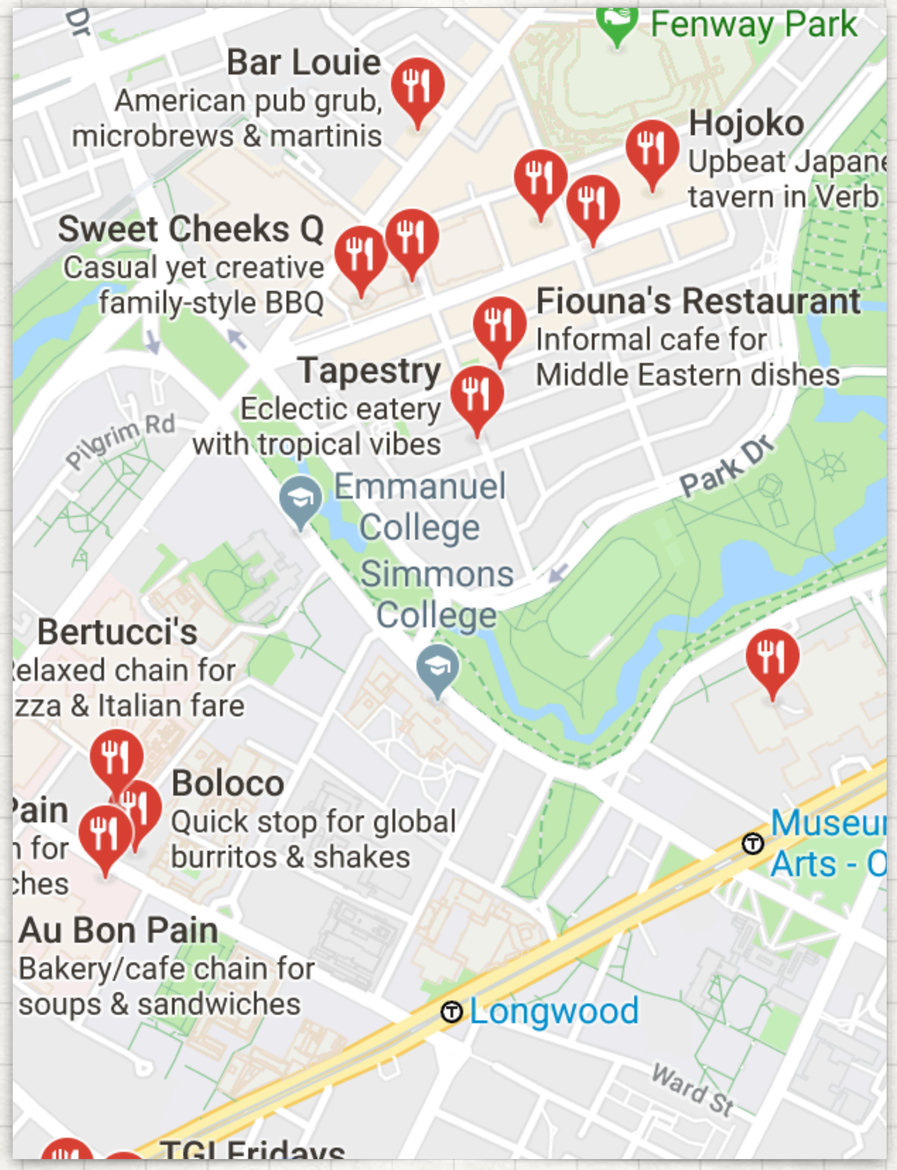
GitHub: https://github.com/chesszhou/CSYE7200-Project-Team-3

INTRODUCTION

- Web app based on Play framework with Scala
- Trip planning advisor



USE CASES/USER STORIES

TO BE SATISFIED

- Case 1: **As a user, I want** to input a keyword that I want to go with a time slot and transport, **so that** I can know what are the specific destinations I can get by various modes of transport within various time periods
- Case 2: **As a user, I want** to input a specific destination/ address **so that** I can know how long will it take from a given place to a destination via various modes of transport

METHODOLOGY

- Get data with JSON/xml format through Google API
  - Distance Matrix API
  - Directions API
  - Google Places API JavaScript Library
    - Place search
    - Place details
    - Place autocomplete
- Reformat & Analyze raw data, extract essential information based on specific user scenarios & parameters
- Build a visualization user interface via Play

DATA SOURCES

- Remote data from Google map API in JSON/xml format
  - Distance Matrix API
  - Directions API
  - Google Places API JavaScript Library

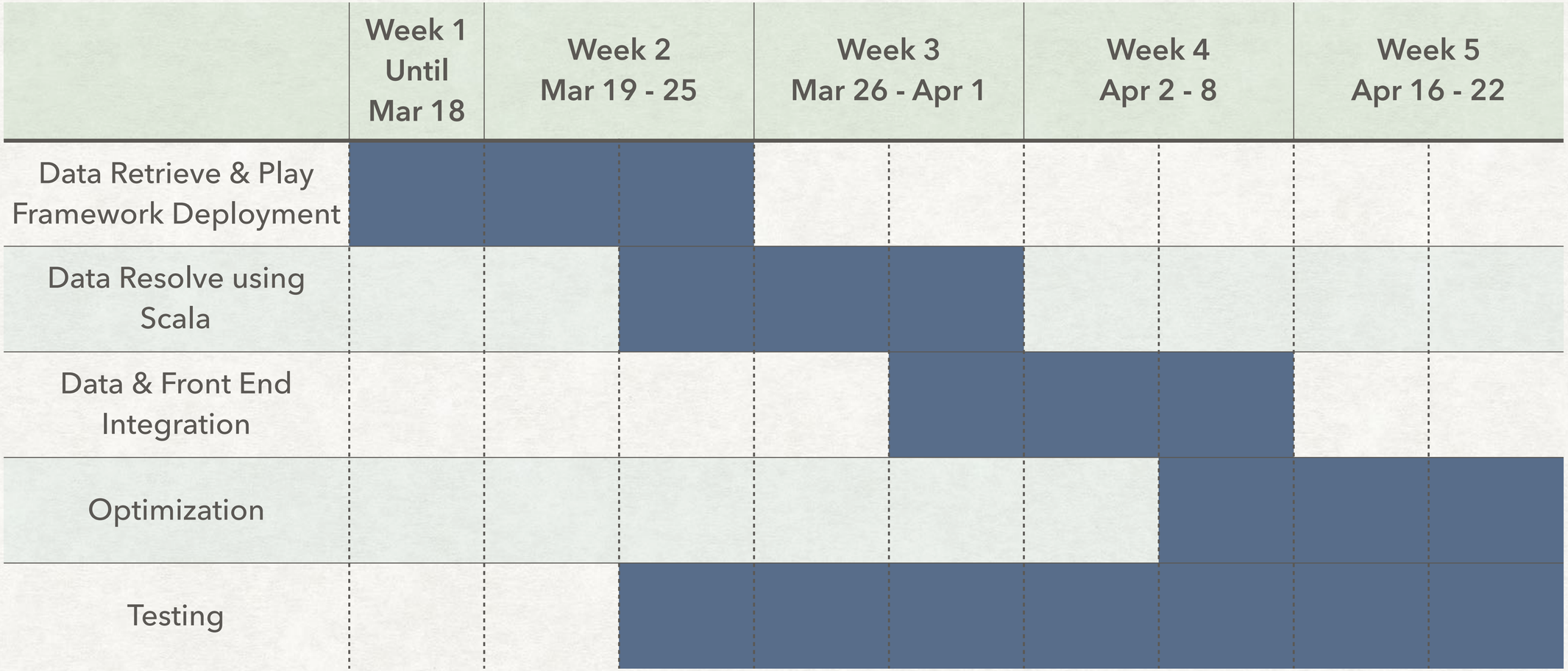
DRIVING TRANSIT TRAVEL TIME

Request
origins: Vancouver+BC|Seattle
destinations: San+Francisco|Victoria+BC
mode: driving
key: API_KEY

URL
https://maps.googleapis.com/maps/api/distancematrix/json?origins=Vancouver+BC|Seattle&destinations=San+Francisco|Victoria+BC&key=YOUR_API_KEY


```
{
   "destination_addresses" : [ "San Francisco, CA, USA", "Victoria, BC, Canada" ],
   "origin_addresses" : [ "Vancouver, BC, Canada", "Seattle, WA, USA" ],
   "rows" : [
      {
         "elements" : [
            {
               "distance" : {
                  "text" : "1,529 km",
                  "value" : 1528699
               },
               "duration" : {
                  "text" : "14 hours 56 mins",
                  "value" : 53778
               },
               "status" : "OK"
            },
            {
```

MILESTONES


Week 1
Until
Mar 18
Week 2
Mar 19 - 25
Week 3
Mar 26 - Apr 1
Week 4
Apr 2 - 8
Week 5
Apr 16 - 22
Data Retrieve & Play Framework Deployment
Data Resolve using Scala
Data & Front End Integration
Optimization
Testing

IMPLEMENTATIONS WITH SCALA

- Data resolve
  - JSON/xml file: required time/distance upon selected parameters
  - Result list: return of request upon Place library
- Request upon user scenarios
  - Eg: User inputs a restaurant, getting the nearby restaurant list via place library API, user inputs required time/mode, using Distance Matrix API to get each required trip time of the list, returning satisfying results
- Play framework & Front End with Scala.js

ACCEPTANCE CRITERIA

- 90% of the elements will be executed and finished within 10 seconds
- The return results based on user request and application’s filters will present 5 best results (if exists)

GOALS OF THE PROJECT

- Well designed User Interface with clear organization
- Implement multiple choices of transports, time slots and destinations
- (Optional) User request history with database

Thank you