CSC 491 Assignment 2	Author: Krishnan Mahadevan
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1. Project Title

Assignment 2

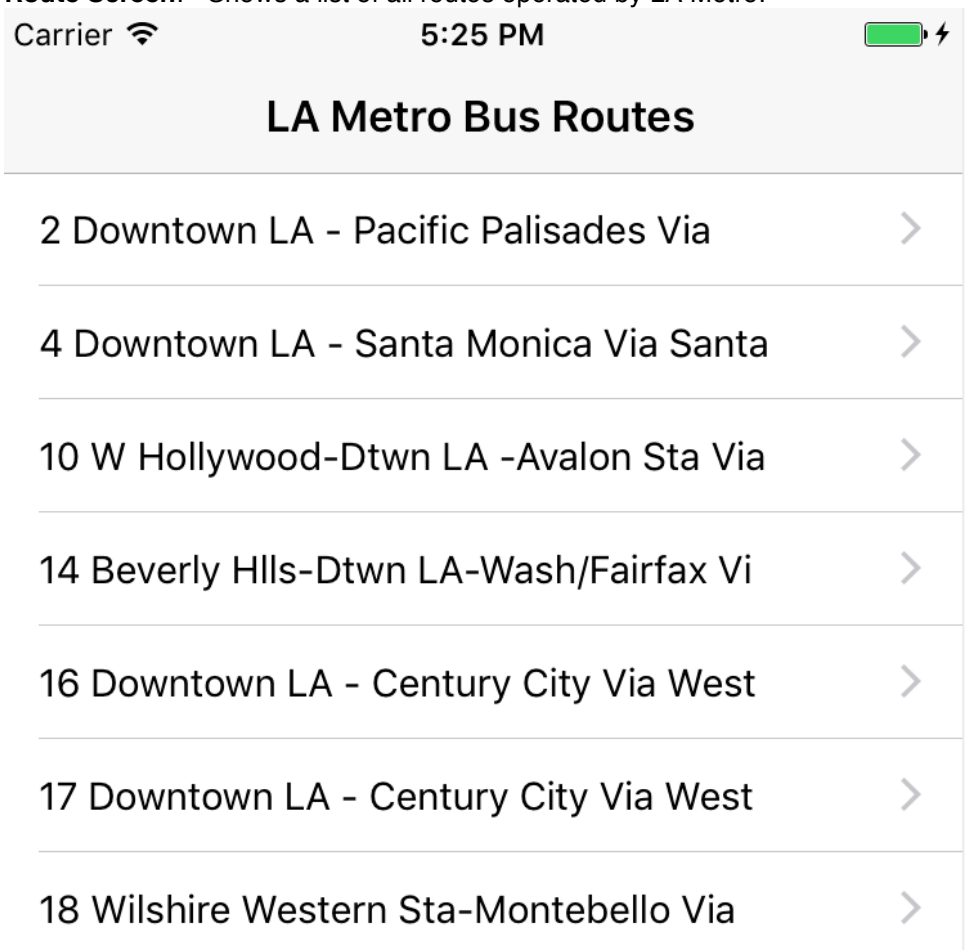
2. Developer Name(s)

Krishnan Mahadevan

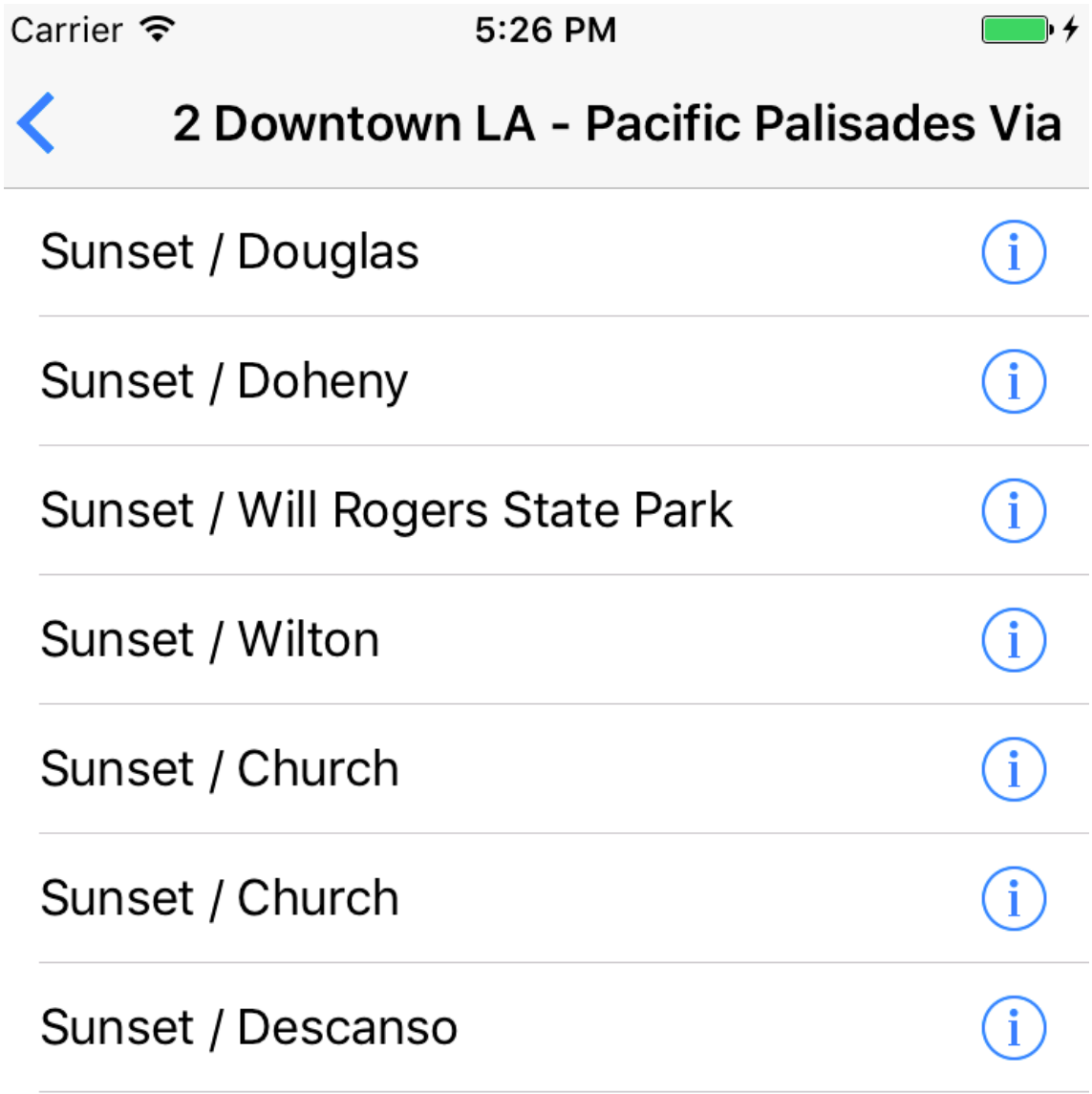
3. Project Description

For assignment 2, I am accessing LA Metro Bus schedules from LA metro API developer website and formatting the data before displaying them on the screen.
The app consists of 3 screens

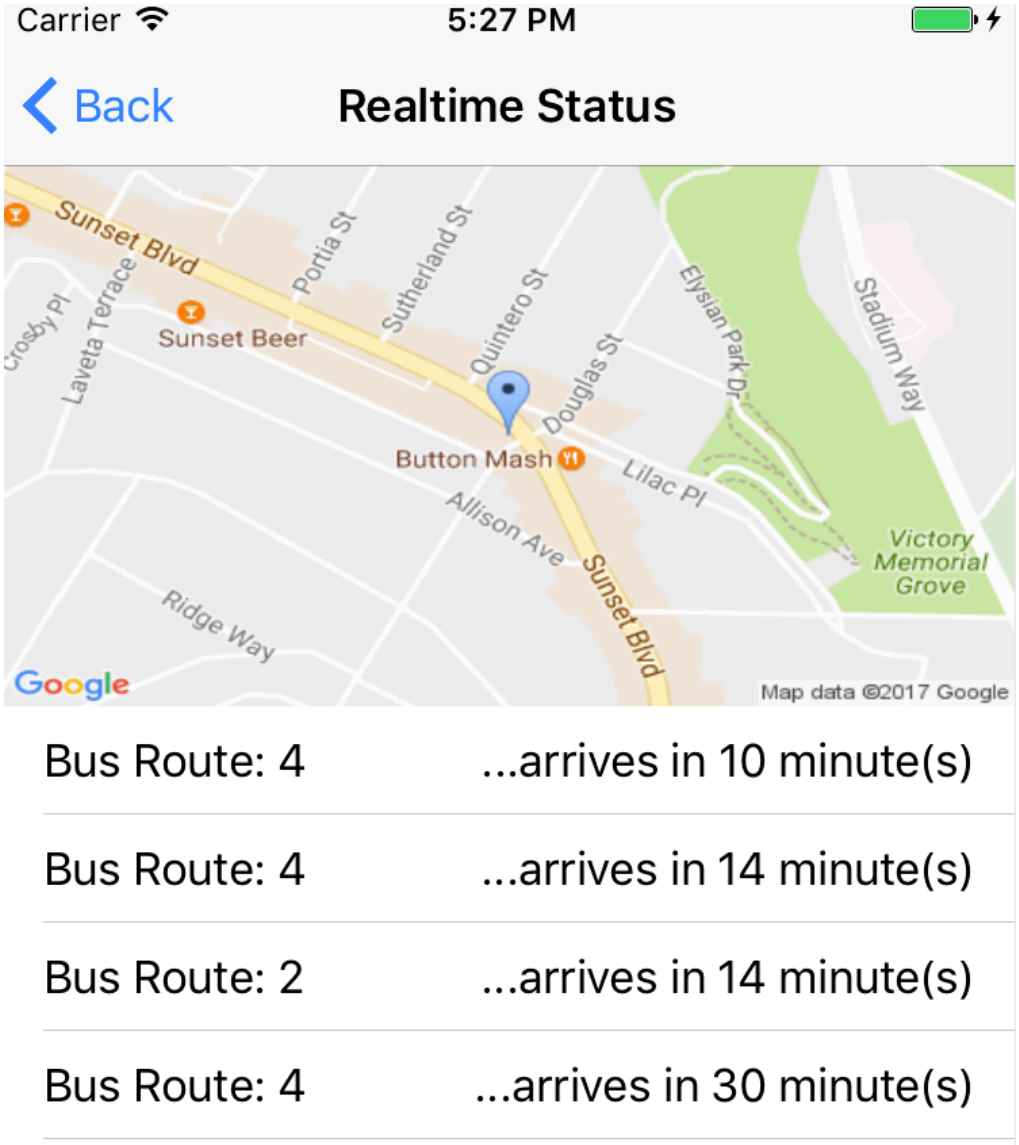
1. **Route Screen**: - Shows a list of all routes operated by LA Metro.



2. **Stop Screen**: - Selecting the Route Screen takes us to the Stops Screen. This shows all the stops in sequence on the Route.



3. **Stop Real-time Status Screen**: - Clicking on any stop takes us the stop real-time status screen.
    a. This screen has a static map image generated by Google Static map API. For this, I pass the latitude, longitude of the bus stop to Google Map Service and it returns me an image of the map with the marker at the bus stop.
    b. This screen also shows real time status of all the buses, scheduled to arrive at this bus stop. The screen refreshes in every 30 seconds to fetch bus status from LA Metro API website



4. External API used

1. LA Metro API
2. Google Static Map API

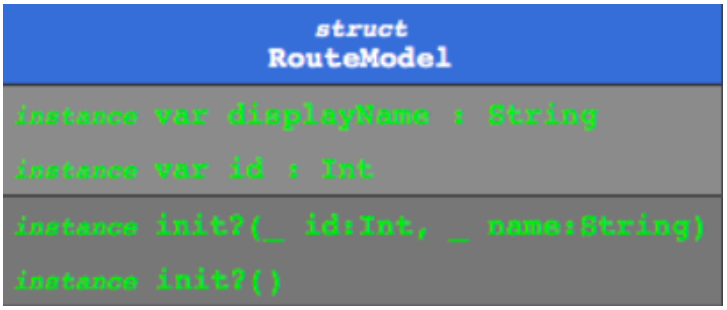
5. Technical Architecture

The app is segregated in three categories of Class to follow a SOA pattern.

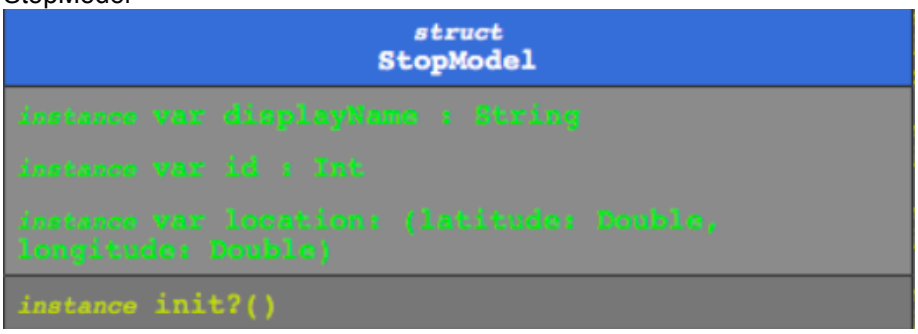
1. Service Class
2. Models
3. Controllers
4. Views

The app is driven by 3 Model Classes (Structs). The structs are POCO's that store data returned by the API Services

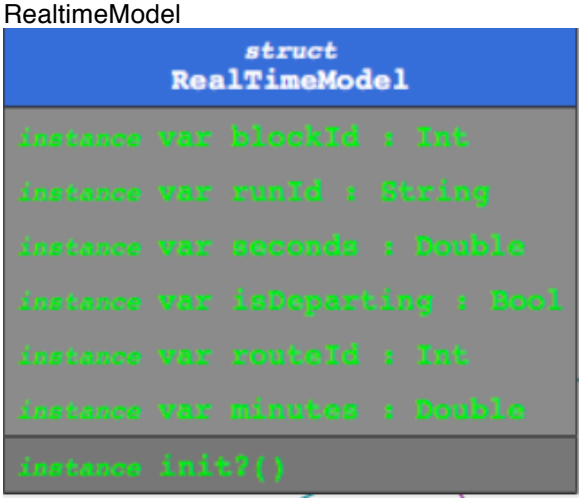
a. RouteModel



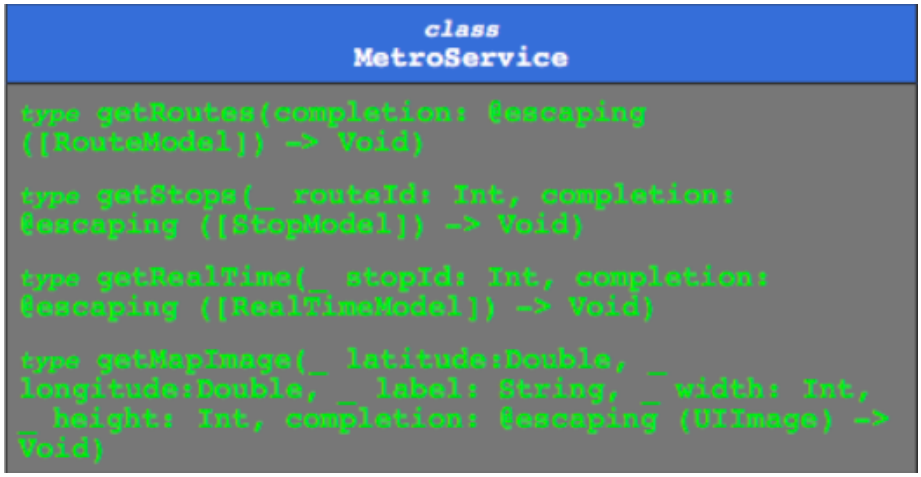
b. StopModel



c. RealtimeModel



All External API calls are encapsulated within the MetroService Class. The methods within the MetroService Class accesses LA Metro and Google Mapping API services to populate and return the model to the UI Controllers.



The UI part of the app is managed by RoutesViewController, StopsViewController and RealTimeViewController.