

CSE 308 Project Documentation

Route Optimization

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1 Why the Number of Road Situations Shown is Small?

We used google API classes and google play services in our project. We also used firebase database system. Before connecting with the database, there were several requests sent to google services from our app. But as our app developed further the number of requests increased drastically. But we did not know that a certain network can send limited number of request (free version). We did not use the paid version of the service. So we exhausted through our requests quickly. It took us a long time to figure out this problem. There was not much help on the Internet. When we connected our device to another network it worked for a while but again exhausted through the requests for that network quickly. To solve this problem we decreased the number of road informations stored in database so that the number of request sent to draw lines on the map are less.

2 Features

2.1 Main Features

- Current situation of traffic jam of Dhaka city(selected areas).
- Search box to navigate.
- Different colors to show severity. (Red = High, Yellow = Medium, Green = Low)
- Current location shown initially.

2.2 Extra Features

- Firebase (Database)
- Splash screen on app start-up.
- SignIn or Register page implemented with database.
- Home page.
- Traffic Update (Admin Version).
- Proper error messages in most cases.

3 Backend Language

- Java (IDE: Android Studio)
- SDK version : Android 4.4(KitKat) and above.

4 Framework Used

MVC: It's not clear in an Android project. But in this case the layout xml files can be thought of as **View** classes, Activity classes as **Controller Classes** and AndroidManifest.xml file as the **Model Class**.

5 Database

Firebase: A cloud, runtime and dynamic database provided by google. Used for storing user and traffic information.

6 Front End

Implemented by Android Studio. Map activity, LogIn activity and other activities for Home page, Update and Register.

7 Other Technologies

- Google API classes
- Firebase provided classes.