



MindSpark'17: Hackathon 2.0

MIT-Pune

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Problem Statement

- Localities from CoEP need pick-ups to get to college .Hectic Pune traffic takes a heavy toll on students. Find a way for students in a particular locality to come to college together without having hassle. Consider all possible factors.

Our Solution

- Back End: Python (for data manipulation and result making .)
- Database and Result format : JSON .
- Front End: Android.

Front END:

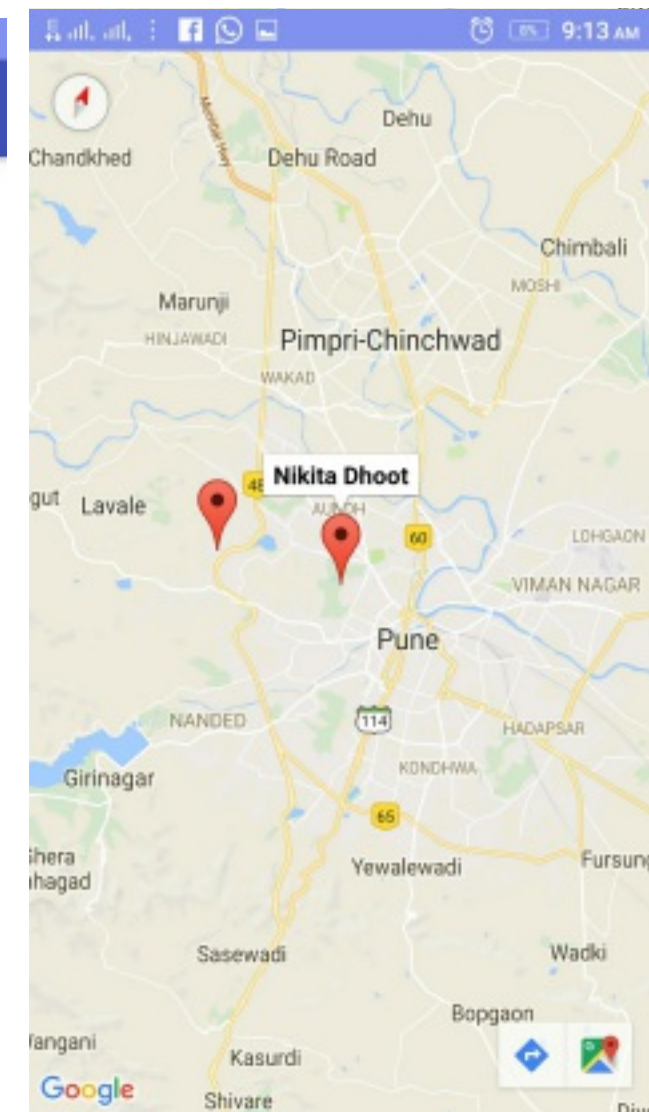
- Use android APP to interact with user .
- For New user: user inputs name , address and mode of transport and email.
- Then he receives User id on his mail.
- User with ID: logs in by entering the user id.
- Application checks if ID exists on the online database. If ID exists it displays the group information and optimized mode of transport with accurate time to reach (Calculated at backEND.)
- Then user can get other group members location and track realtime journey of the group through the android app(Used Google's MAP API.)

Grouping

- Take Input in JSON format . Apply Algorithm and calculate distance and time .
- Input: username , address , mode of transport.
- Step1: find accurate latitude ,longitude , distance from college and time to reach.
- Step2: group the students based on distance from college.
- Step3: then divide this groups further based on direction .
- Step4: apply algorithm to optimize mode of transport and give group id and final mode.
- Give group information and time as output in json file on URL to be accesed in the android app.

Result: Route and Time

- User gets his Info and time .
- Other group members and route on google map's API with real time tracking.
- Get member location and real time route



Real Time Application

- Real time replanning and re-scheduling. User is able to modify or search for other route options in case of failure.(e.g. puncture of vehicle.)
- Mode switch.
- Encouraging sharing and public transport and Integration of Public transport.
- Generic database.
- Chat function for group members.
- Journey planner for trips and other purposes.