TROTROAPP DESIGN DOCUMENT

“Trotro” is the main means of transportation for majority of Ghanaians. But whenever there is an increase or decrease in petroleum prices, the fares tend to change. People find it difficult knowing these new fares, which sometimes results in heated arguments between passengers and “trotro mates”. Also, foreigners, as well as individuals from other regions in the country, face the challenge of knowing both “trotro” fares and bus stops in between the stations that these “trotro” plies. Due to such problems, the Wawa community has proposed to build a web application that will provide reliable, authentic and easily-accessible transportation information to “trotro” patronising individuals.

Web applications require a backend database and server system, a user interactive frontend and a prompt dynamism. In order to honour these requirements, the web application will be developed with a django framework and hosted by Heroku hosting system.

Models in django are like tables that contain rows of element. The design of the trotroapp will house four related models. Below is a depiction of the structure of these models.

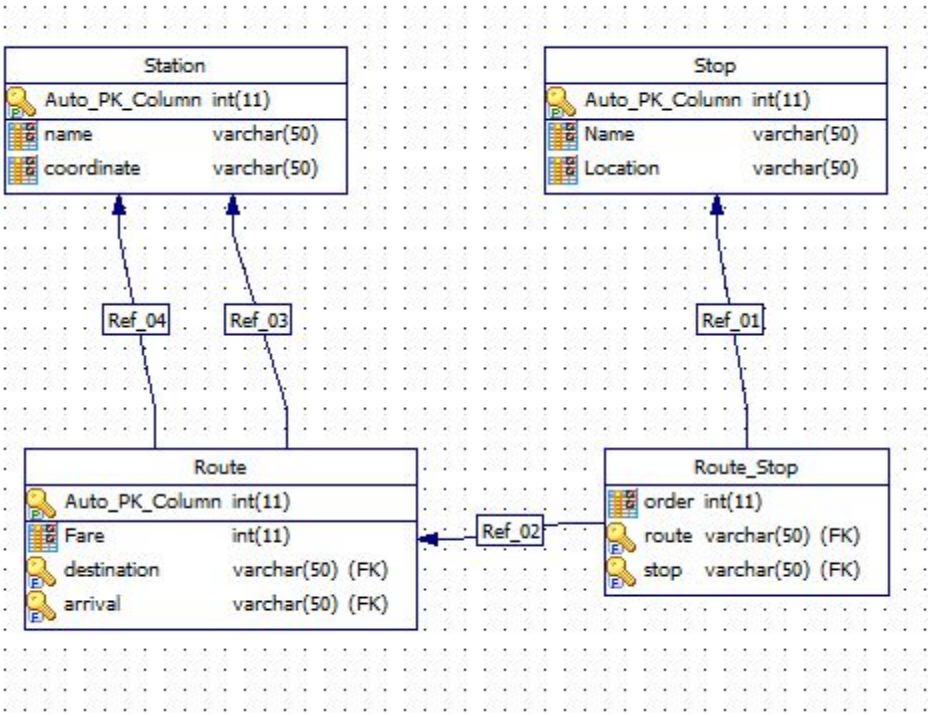
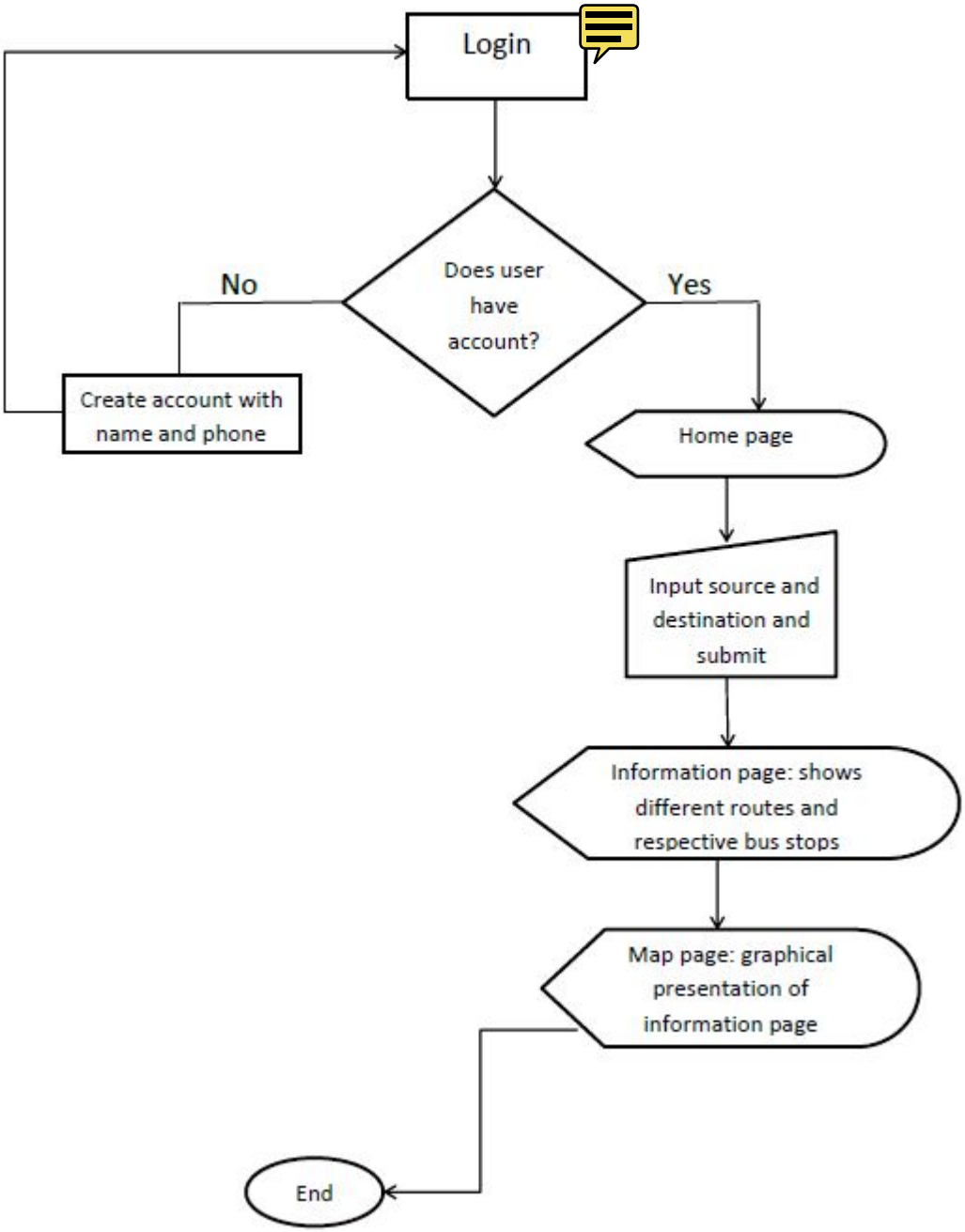


Figure trotroapp.1


Login
Does user have account?
No
Yes
Create account with name and phone
Home page
Input source and destination and submit
Information page: shows different routes and respective bus stops
Map page: graphical presentation of information page
End

Users have to signup to TrotroApp with their names and phone numbers as username and password respectively,after which they can log in and access the service.

TrotroApp will be powered by three web pages; a home, information and map pages. The homepage will have the screenshot below :

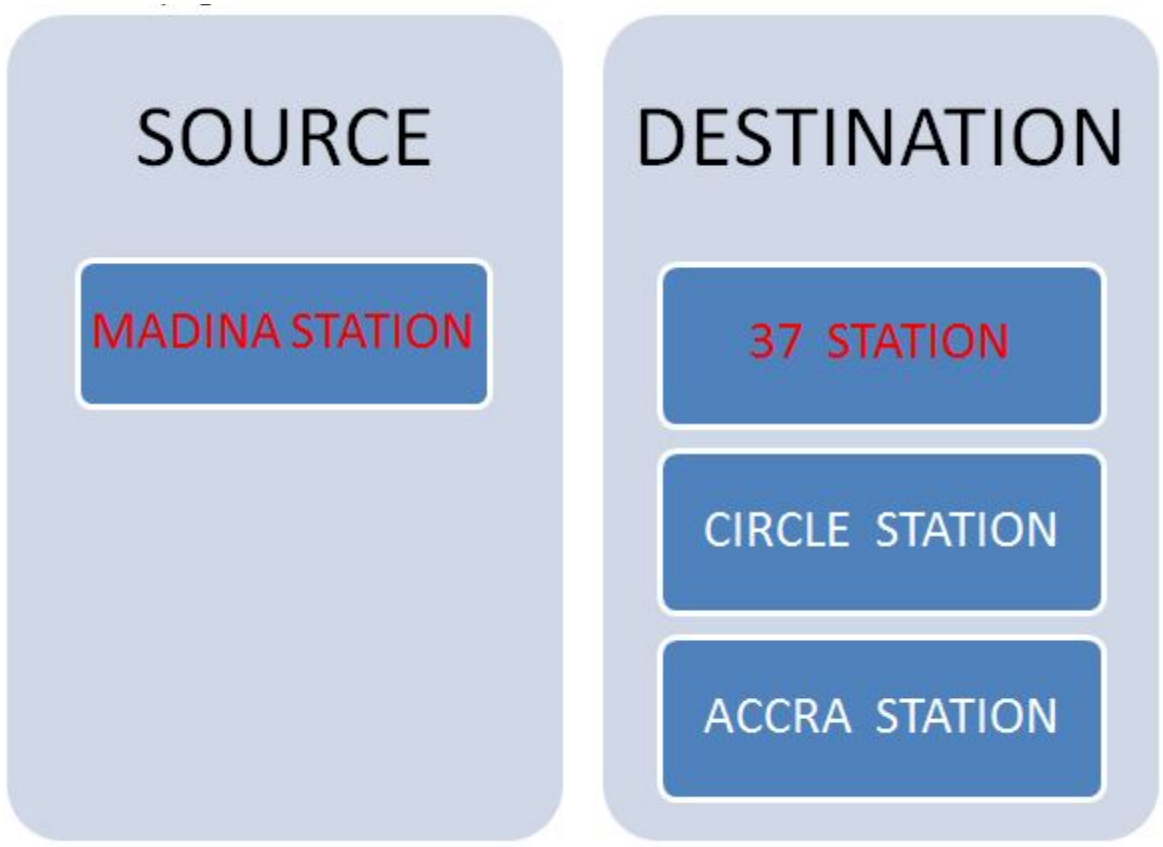


Figure trotroapp.2

Here users have the option of selecting destination and arrival stations and click the submit button to submit their query, a new page[information page] will load showing the routes between these stations as well as the stops on each route.Also, there will be a search section where users can type a particular bus stop and get the respective route(s) that the bus stop is located.

The information page will be generated based on the destination and arrival inputs made at the home page.Here, all the different routes and their bus stops will be provided as well as the standard fare from one station to the other.Below is a pictorial view of the information page.

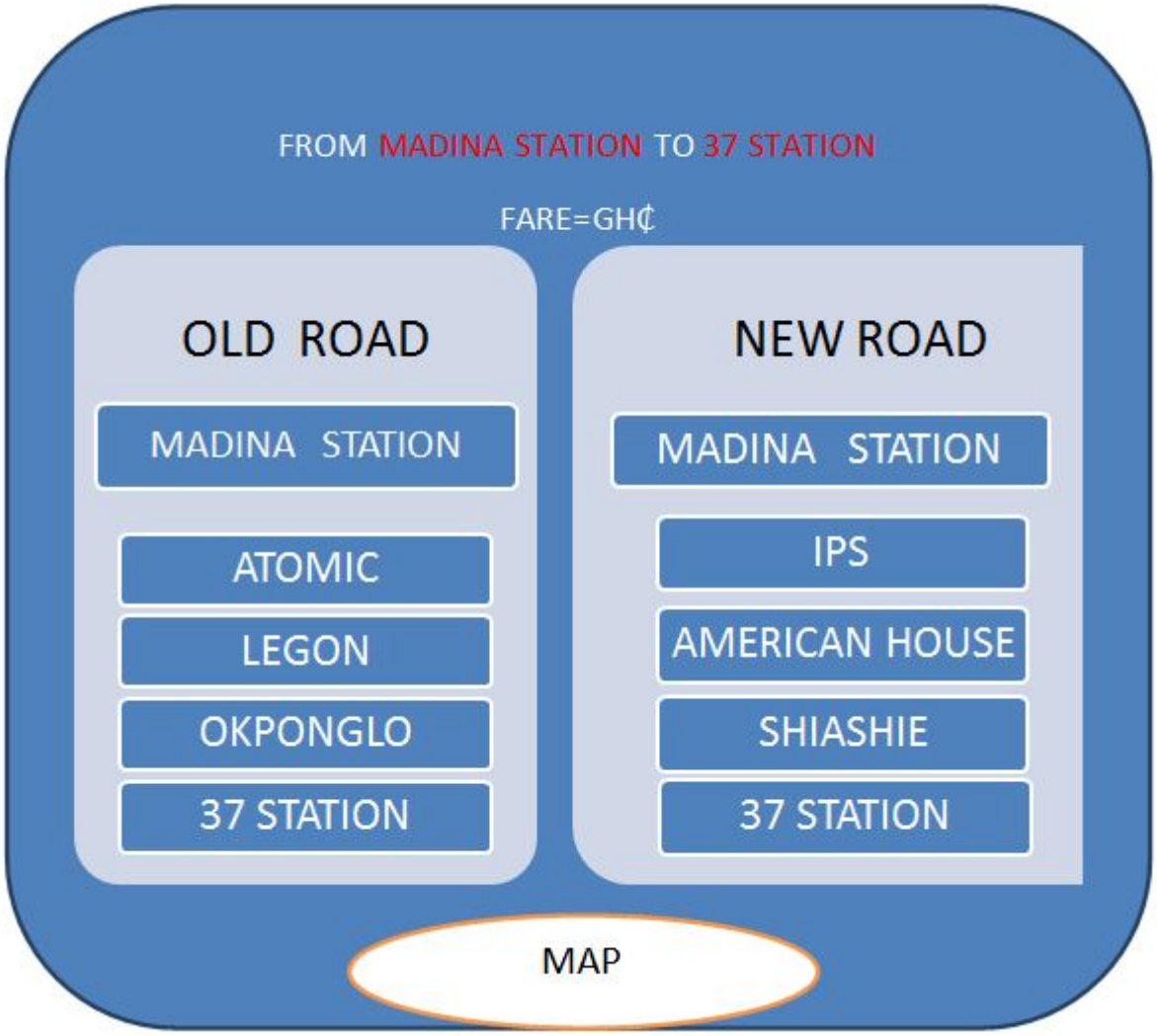


Figure trotroapp.3

Figure troroapp.4

The search implementation on the site will be for both bus stops and stations. Upon entering the name of a stop or a station into the search field, the location of the station will be produced with it station to station route. In the case of a stop, the routes on which the stop is located will be given.

The map on the site will display the route between stations as well as the stops along the route. Users can browse for the shortest path between stations and stops on the map. The map will be implemented with either Google maps or Geographic Information Systems (GIS).

The Engineer of the Wawa community will be responsible for the backend coding and algorithm design while the other members in the community will help in the frontend design of the trotroApp