TEAM - HACKOVER

Objective: To develop a Web app for making the public transport system more convenient and accessible for everyone.

Implementation Details: Our implementation details include to develop a WebApp which would include the following features. The features are listed below:

Tech Stack Used: HTML, CSS, JavaScript, ReactJS, Django, Node.

Step 1: User registration through app.

a) Ask for all the necessary details of the users and verify user through Aadhar card.

b) For first time users, provide 50% off on first 5 rides, so that they get attracted and travel and get to understand the difference between existing previous public transport and the new one.

Step 2: Ask user for pick up and Drop location, also special option for non-stop service. When users books a service shows the users the following details of the means of public transport they are taking :

a) Show bus no. of all the buses travelling through that route + their live location + their reaching time to pick up location + Final time to reach at destination using live traffic. Also, show complete route so that users in case needs a drop in between he can take.

b) In case of metro/local trains show their time at pick up location, also their time at destination.

c) Show vacant seats in the buses travelling through that pathway.

d) Show priority in booking like window seat (first time visitor) etc., according to user preference.

e)Keep some non-stop (No halt) service buses for some frequently used destinations like to railway station or airports for quick arrival without wastage of time.

Step 3: Show the total cost and the credits earned. Credits are earned by the users for as for each 3km they would earn 1 credits. (2credits = 1Rs). These credits can be used by the users for the next ride or transfer amount to their bank account. Also show the following details at the end of the trip:

a) Show public transport cost and comparison stats with ola, uber etc. Also, show comparative time analysis which is just same as private ones.

b) Total money saved.

Step 4: Show various offers, coupons available

a) Show off due to festive seasons etc.

b) Show offers in circular trip this will be beneficial for society aunts, office persons etc.

c) Offers for family booking, booking more than one seat at a time (Cost around .80 times of total cost)

d) Offers for monthly users/ passes.

Step 5: Payment portal

a) One payment portal/Smart Card for all public transport payments. That can get recharged online or at fixed stations like Metros.

b) Pay for entire trip at one time even if there are breaks in between. Like after drop from bus travelling through government E-rickshaw for door to door dropping, cost is also included in that payment.

Step 6: Extra Functionalities

a) Pre-booking some days before option. Show notification in case bus is late + show alternative options (alternate buses if seats available) with real time bus details.

b) Provide small offers if public services used frequently.

c) Add option for chat/help in case of any query/conflicts.

d) Driver Feedback.

e) Driver rating.

f) Option for refund in case of any problem like bus is late by more than 1hr and user is not looking for alternative (Add this like vikalp in Trains) or in case due to some reason user cancels journey, deduct some amount of money only.

g) Credits to driver based on his rating and time and km he driven.

Expenses: Camera + GPS device (Total cost is around 1200-1500), this amount is even less than profit earned per day by any public transport so net no expense is required, only some part of profit of a day is exploited.

Problems in public transportation ans their solution that we would provide through use of WebApp:

a) Security: Private transport has a risk of security as you are travelling with unknown driver(ola, uber) in case you don't have your own vehicle. Here, we are providing camera with real time monitoring, so in case of any problem, user can press emergency button in the app and

recordings in the camera can be seen by nearest police station and other members thus enhanced security.

b) Door to door service : Public transport lacks feature of door to door service, this facility can be added by providing E-rickshaw at such points. If someone is having good he prefers private vehicle , but E-rickshaw connecting doors to main tracks solves this issue. Payment is done through portal only at one time. Show vacant seats in these small vehicles also while you are in bus. No pollution, also less traffic caused.

Features that public transport was lacking in comparison to private transport + some some new features :

a) Live seat display, time to reach destination, next pick up time, alternatives available to travel with corresponding time, use of live traffic.

b) Live seat booking with preferences like window seat for first time visitors in the city based of their location detection or allotting to users who selected window seat as preference.

c) Cancellation in case bus is late with full refund + other case in which you miss the bus with some deduction in money.

d) Current booking like nowadays in trains current option opens after chart is prepared, thus if seat is vacant, or some cancels in the end or no boards in the bus that will be in current booking.

e) Seat reservation in case you are women, senior citizen, emergency quota or front seats in case you suffer from vomiting and other such health issues.

f) Relatively very cheap to travel- around (1/10)th of cost with private mode.

g) Speed Display : Live speed display, thus in case driver crossing limits, you can draft complain.

h) Route display : Display routes in the app that bus will follow + stick the route such that if someone wants to have a drop in between he/she can take.

I) Ride Credits/ Festive Credit: Those who travel more give them credit monthly basis, also over every ride. Even provide Credits to users during festivals.

j) One Payment Mode : for all kind of transportation- metro, buses, E-rickshaws, one mode of payment through portal/smart card. No separate payment even for door to door services. Provide offers while recharging.

Optional features that can be added to WebApp:

a) Exploiting private vehicles to make them public : Allow people to add their vehicles as public transport by registering through this app, now areas in which only few people travel like 5-7 at a time these vehicles can be used , also they can earn money easily.

b)For non-halt fast services these small vehicles with 5-7 person at a time can be used.

c) While going to office owner can take other persons thus earn money easily, dropping those who has destinations in between thus less traffic, less pollution, least use of cars, No late to office.

d) Some Unauthorized owners have hundreds of buses/cars and they pay very less to drivers, thus we can give rough estimate to drivers along with incentives + Credits for every ride and with some fixed kms.

Thus, situation can be controlled and we can get experienced drivers easily.

e) Add comfortable seats in buses + One TV for entertainment, also reduce prices of AC buses with more no. of AC buses on the road.

f) Make offers at early credits and thus the use the interest of stored amount for better facilities in public means.

Application: This WebApp can be used by every users to have convenient and comfortable ride while they are taking the public transport services. This would help users for last mile communication through this WebApp the users can get the live location of each of the public transport services.