GoCabs– MOBILE APPLICATION

A Project

Presented to the faculty of the DES101

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Presented by

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Abstract
of
GoCabs- MOBILE APPLICATION
By
Group 2_7

In the early days, local Taxi started providing services with small fleets of cars and providing basic taxi cab services, but gone are those days when The "taxiwala" would pull down the meter and off you go to your destination!
In 2010 came the revolution in the taxi service industry by the entry of "ola" in the arena, Ola entered the scene with its fleet aggregation model. The lean business design and increasing customer services is what swayed the market in their favour. Uber arrived on Indian coasts a couple of years later. The mobile revolution in India led to the outburst in the growth of these applications. Riders could simply pull out their smartphones, enter the app and book a taxi with minimal efforts.
But as the great quote states, with good things come their ill-consequences,so did with this revolution.it resulted in too many options and applications with varying design and features,hence making it hard to compare for the user.Also,different cost for the same service,varying waiting time and many other problems are faced by the masses.

In this project, the GoCabs Android application helps people avoid getting confused and frustrated by : (1)allowing them to compare different platforms at one place (2) give easy option to choose between self drive car or rental cab (3)allowing users to get real time comparison of the prices available on the different applications(4) easily accessible payment options for no payment related issues. GoCabs also shows the users the waiting time and the distance of different cabs available nearby in a visualized manner by an interactive map view. Moreover, the application allows users to choose between local taxi services available in the area too.

ACKNOWLEDGEMENTS

It is with our immense gratitude that we acknowledge the support and help of our Professor, Dr. Rajiv Ratn Shah, who gave us this opportunity to express ourselves through this project. Without his continuous guidance and help, this project would not have been a success for us. I want to thank our teaching assistants Ms.Harshita and Ms.Asra for their contribution in completion of this project. I am grateful to the Indraprastha Institute of Information Technology, Delhi and the department of design without which this project would have not been an achievement.

1. INTRODUCTION

1.1 **Motivation**

Traveling is often a challenging task when you don't own a vehicle as it comes with a vast set of possibilities while searching for a car. Dozens of online cab booking and renting platforms are available these days, with a wide range of choices and offers. Everyone wishes to get the best deal as per their priority and convenience. The inspiration for this project came to us when one of our group members was booking a cab online and faced the hardships that many of us face nowadays. While searching for a taxi online on one of the cab booking apps, he couldn't find any car available in his locality, so he decided to wait for some time but still couldn't find any cab. He had to install several apps to search for the cab, and he had to sign up every time he installed a new app. Also, different companies were charging surged prices for the same cars, so it took a lot of time to get a good deal. Relying on a single cab booking platform doesn't guarantee that we will instantly get service. After going through different apps, we decided to develop a solution for the most common problems faced while booking or Renting a cab online.

1.2 **Problem and Solution**

There are a variety of Cab booking and self-drive rental apps present in the market. They offer the same services but there is variation in prices , offers ,discounts, availability and arrival time etc. So the user needs to download all such apps and manually compare all the factors. Which often leads to massive confusion frustrating the user as he needs to go through different interfaces and login into all the apps. As all the apps can't fit into a single device so the reach of users gets limited to 2-3 apps missing some of the better deals and wasting much time in comparison because of not having a unified platform for apps providing such services.

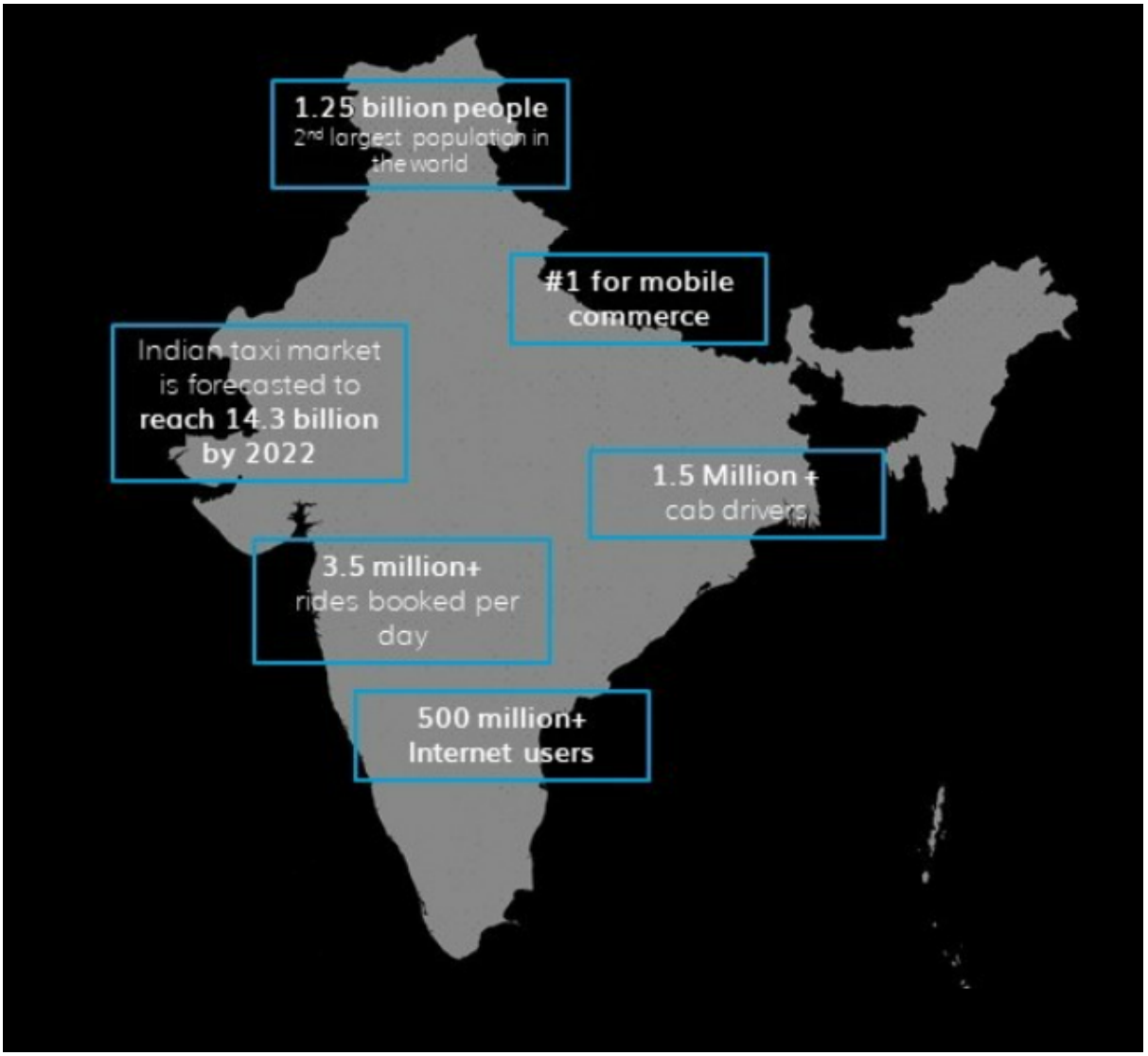
People who don't own vehicles or like to sit back and relax while commuting or traveling and own a smartphone with an internet connection opt for cabs and self-driven cars as they offer more privacy and minor disturbance, unlike other public transports and these people are the targeted user for our app which counts in millions.

Unifying different platforms wasn’t an easy task. There were several challenges existing which needed to be overcome. The various apps had different UI and methods for booking a car. Some of them used to connect the user through a call to confirm the booking, which where the user couldn’t check availability etc., few apps showed the availability of cars. Still, the user was not able to view the detailed features like expected fare, ride time. Also, the cabs were available in an area, but those could be booked through only that app to which it was registered, so such cabs were not accessible by people who didn’t have that app. The most common factor that affected the users was the price. Price comparison among the different apps was very frustrating as the user had to go through all the apps individually to compare the costs. For that, data had to be entered repeatedly and was annoying and time-consuming. So the user had to compromise his needs, limiting the possibilities which were available to him.

At present, there are many apps that tried to work on the stated problems but could resolve them partially. Some of them had an abysmal interface that could not attract the user. Few apps couldn’t manage the data correctly as they provided either too little or too much information, which often increased the app's complications, reducing the user base. Many apps just seemed to be of no use as they displayed too many advertisements on the screen or after every step in which they may not be interested at all and might wish to quit using that app because of it. These apps were still not able to connect with all the service providers, and most of them compared only the companies with higher brand value like OLA, UBER. So the existing system needed to be modified or replaced with a better one.

To overcome the existing challenge and flaws in the current systems, we proposed an app named “GoCabs” . The app had a basic aim to unite all the similar service platforms. We also decided to keep the UI simple and similar to other common apps to make it more comfortable for the user to interact. Since we were merging two different types of platforms giving the user a choice between self-driven cars and online cabs, so we decided to let the first opt for these choices at the beginning and separating them into two different sections making it more clear to the user. Then we just asked the user about their choices and general required input like location. As our app was designed to be connected to multiple providers so the system searched for the cars among different systems and

then sorted them according to the user preference and displayed the available choices to the user, highlighting the best deal for him and asking for confirmation to select and book the preferred one. After the booking has been confirmed by the user, confirmation is sent to the user which he wants to see. The next action which the user might wish to perform is to track where his cab is or cancel the booking, so to make these essential factors more visible to the user, the app uses big font text and specific colors to highlight these features. “GoCabs” tries to reduce the frustration faced by the user by saving their time and money.



2.METHODOLOGY

Problem statement

Problem:

cab booking and self drive rental applications are too time consuming as users have to manually compare everything from the expected time of arrival to the cost. Another issue is that of dying local taxi services due to the absence of digital platforms for them.

Background:

Surveys shown in the article of medium.com about “taxis in india” suggests that there are more than 3.5million+ rides booked in india in a single day.the most popular solution for a cab booking are the indigenous application “ola” and the america-based company “uber”.

Another research shows that indian taxi market is forecasted to reach 14.3 billion+ by 2022.all these statistics showcase that it is a booming business in our country with many multinational companies investing in the market.

Relevance:

In india there exists more than 10 bigshots in this arena with their own pros and cons but there is no unified solution available for the users.users are forced to download all the available applications in their mobiles then do the manual labour of comparing the various aspects like the cost,discounts etc. this lead to wastage of time effort and money.the other big issue with this digitalisation of this arena of taxi services has lead the local service providers to suffer.gone are the days when the people used to go to taxi stands and get a cab.now with more than 500million internet users in our country everything is just few clicks away.

Objectives:

The purpose of this project is to provide an unified solution “Gocabs” application which integrates the existing applications and provides a detailed comparison between the various options.thus enabling the user’s control over his/her decision rather than the

service provider’s.also it iterates the option of self drive and rental cabs in a single platform hence, making it easier for the users to make a choice in a single click.it will also empower the traditional service providers by digitalising their business through our application.

3.Gathering requirements

So for the next step in our project we had to gather user requirements and get the exact details of what problems the users of such services face on a day to day basis.
For the collection of data we used two methods

1**.online survey**

In the hard times of COVID-19 the best way to get to know user requirements and needs was a digital platform where people can give constructive ideas and help us formulate and assess our problem statement.

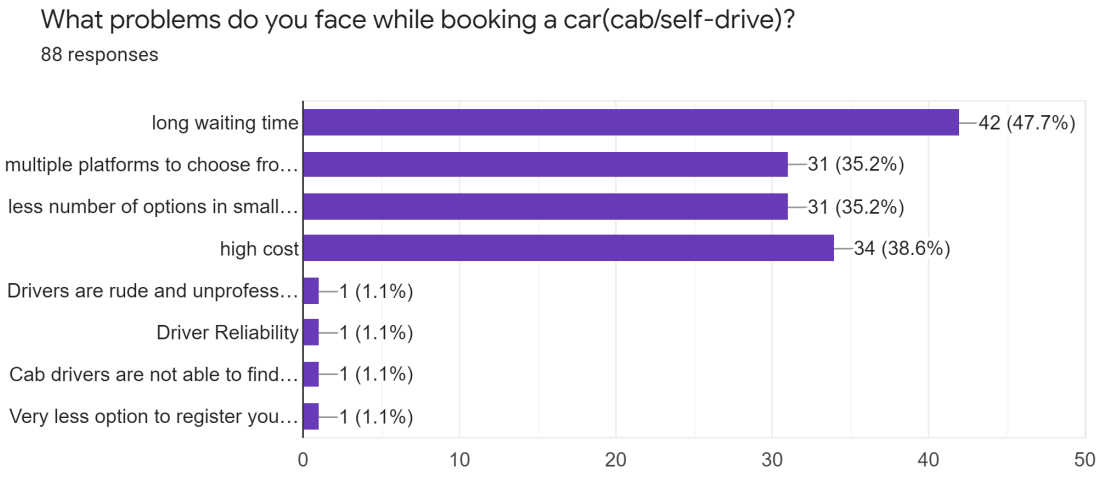
The survey we conducted contained 7 precise questions asking these :

- What all problems are faced while booking a cab?
- Do people actually prefer local taxi services ?
- What are the priorities of users while booking ?
- What all features do the users want ?

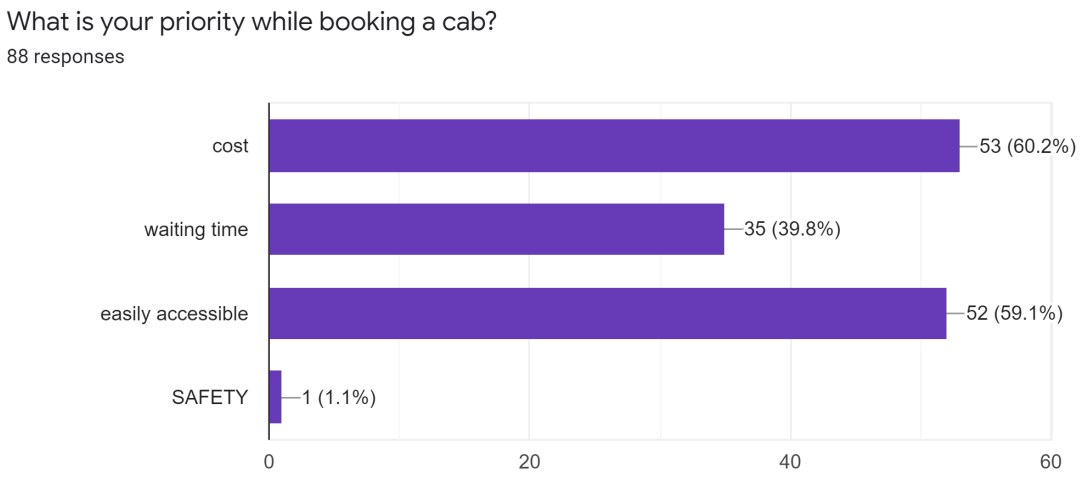
And giving them a basic idea as to whether they would

- Like an application that allows them to choose between different options all at one place ?

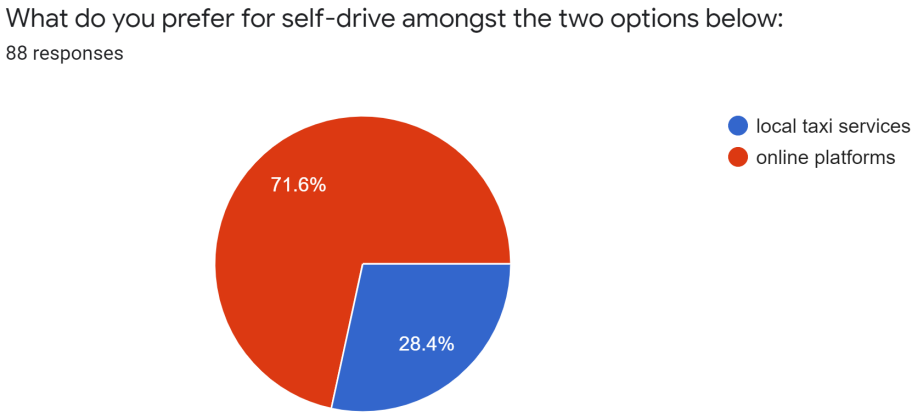
The data gathered is represented as follows {total= 89 persons}:



The biggest problems faced by the users are long waiting time,multiple platforms with varying options hence difficult to select and less number of options available in small cities and towns.



The above graph shows that most of the users prioritize easy accessibility of cabs and the cost.



This pie chart clearly depicts that the users did actually prefer online platforms over the traditional system of local taxi services available as of now.one of the reasons for such a response is the ease of booking and several options available in the hand.

2.**oral interviews**

Although it was a tough task to conduct interviews with proper settings in this tough time of covid-19,our group members tried the best of conducting a few informal interviews within their families and friends.the general consensus of all such informal interviews{10 of them} was that the cab options available as of now are confusing and do make it a tedious task for the user to book a cab. Although many offers are provided by the applications but most of them are missed as the user isn't always aware of the application offering the best deal.the second issue that was prevalent across all interviews data was that the self drive options are disoriented and can’t be accessed easily by all. Many of the candidates in the interviews were not aware of the many applications available in the domain. Also it was a general belief that local service providers are more reliable.

4.Ideation

After getting validation from the data that we acquired from the users
The next step was to brainstorm on the ideas and think of the probable solutions
The solutions that we came up with were :
1.A brand new company that provides all the services be it rentals or cabs
This solution did not seem to be feasible as there already exist many bigshots in the arena and it would require a lot of time and money to build up an entire new firm. Also another challenge in this solution was the resources i.e.from where will the cars for cab services come from ?
2.another innovative solution was to use the unused cars available in our society.
This solution was rejected because it was not fulfilling all the user needs and it also required a lot of strict policies in the process of transactions.
Finally the solution used in designing the application ”Gocabs” fitted well in all parameters of design principles.

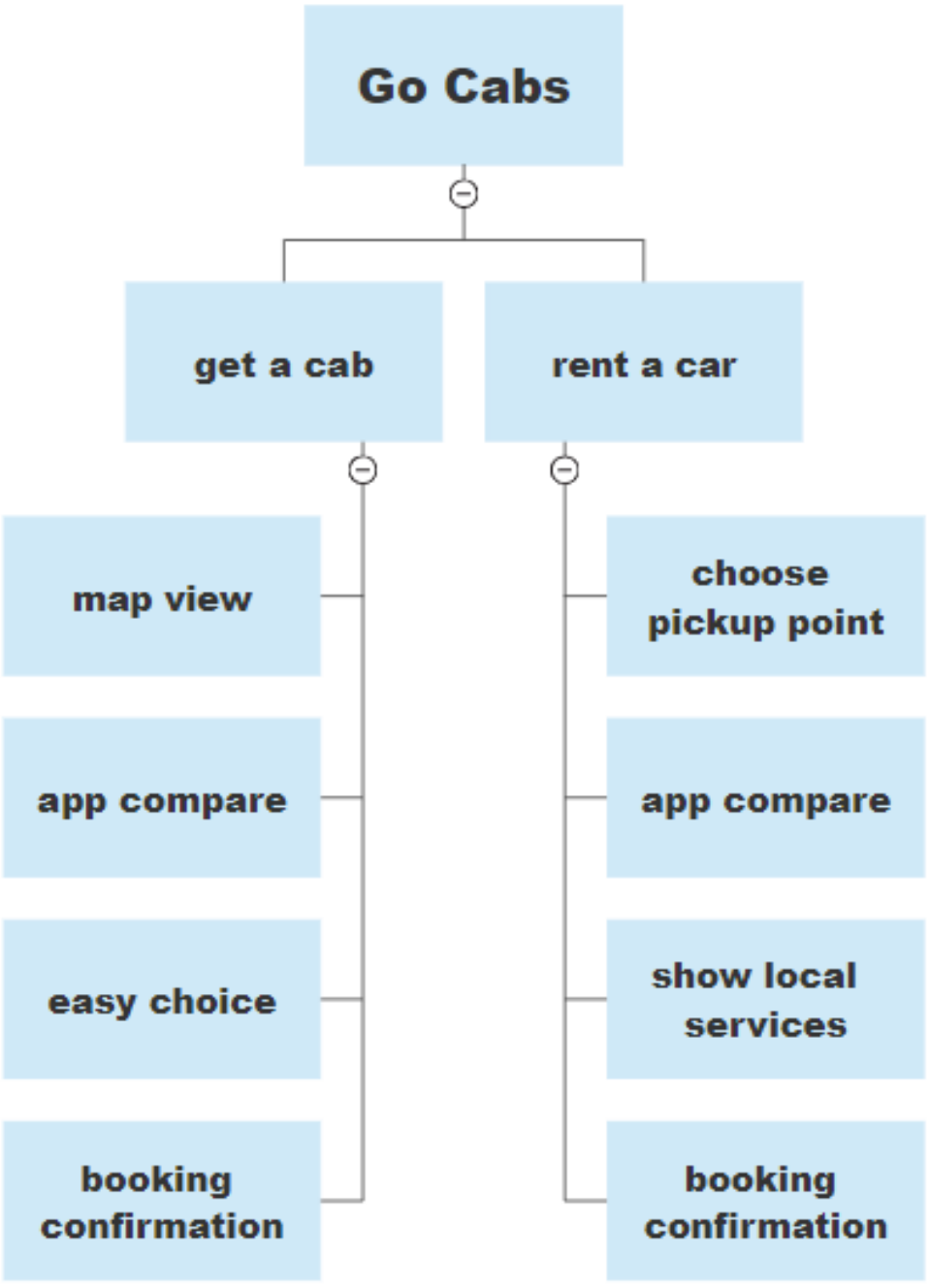
The idea behind this solution was to iterate all the present applications in a single application. This had many benefits:

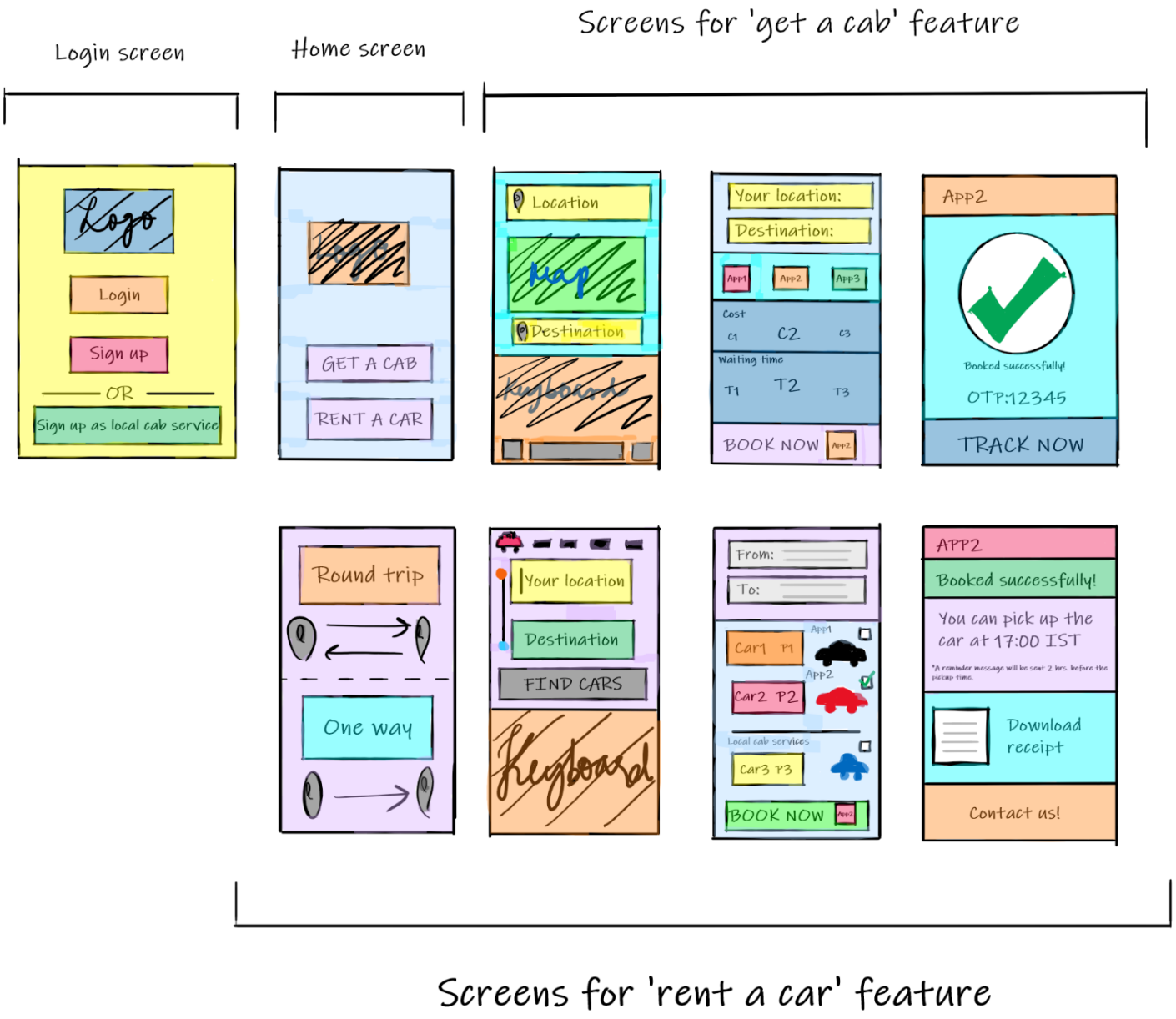
- One app for both self drive rental and cab booking
- Be it for a shorter distance or for a long journey it was just one-tap away
- Easy comparison of cost for the same service
- Comparison of waiting time as well
- Redirection to the original application leads into no confusion

The other main goal behind the solution was to give a platform to the local taxi services available this had several advantages :

- Helped the poor traditional taxi drivers and service companies
- Increased options for the customers
- More reliable and personal comfort for customers
- Increases the reach of digital platform for services in small cities and towns
- An application that can be used all over the country unlike ola and uber.

5.Low-fi prototype

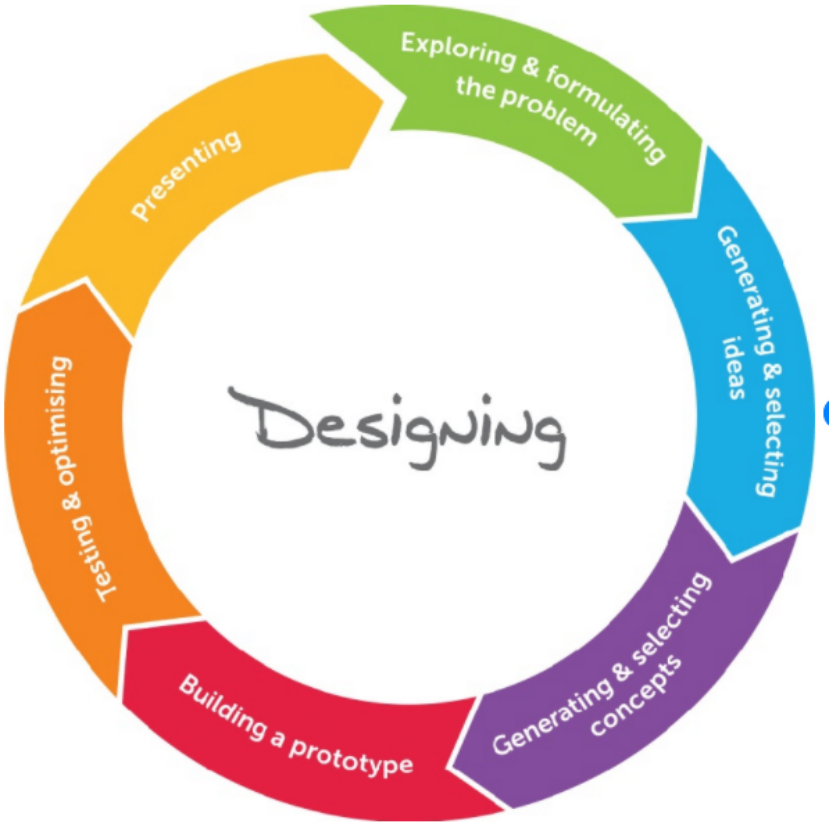




The above low fidelity prototypes were done while ideation of the application. The fig{1} Depicts the flow of the app in the two different options that are available in our application. In fig{2} the rough sketches of the apps interface are shown, the different options,buttons,menus and other such details can be seen.

6.Hi-fi prototype

The high fidelity prototype was finally designed on the software “figma”.the main idea behind the designing of the prototype was to follow the design cycle which is as follows:



The hi-fi prototype :

https://www.figma.com/proto/JTOVKftw5Qz7iIE69IhaLI/PROJECT-Copy?node-id=144%3A4&scaling=scale-down&page-id=0%3A1

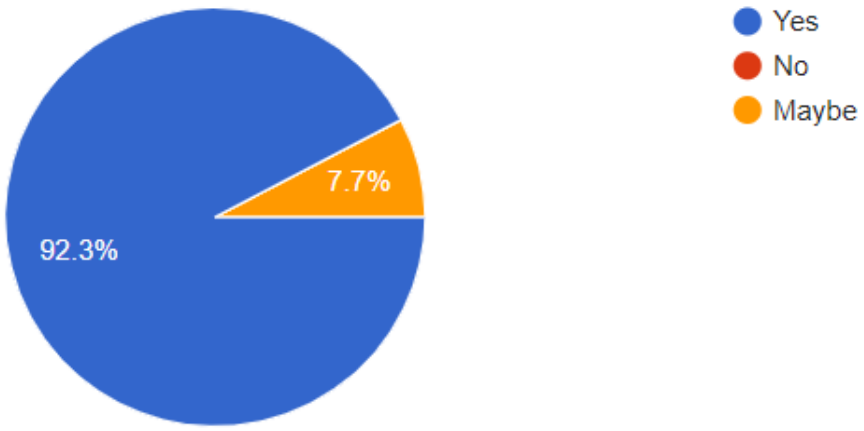
7.Evaluation

One of the most important aspects of any design cycle is testing,feedback and evaluation of the prototype.
We conducted an elaborative evaluation process by three methods:

- Google form for random anonymous feedback

A google form for the constructive feedback on our prototype was floated for a period of 48 hours which yielded in an overall positive feedback :

Did you find the application useful?



One of the feedback was about our application's logo :

Make logo a little bit attractive

NA

So originally we had finalised this logo :

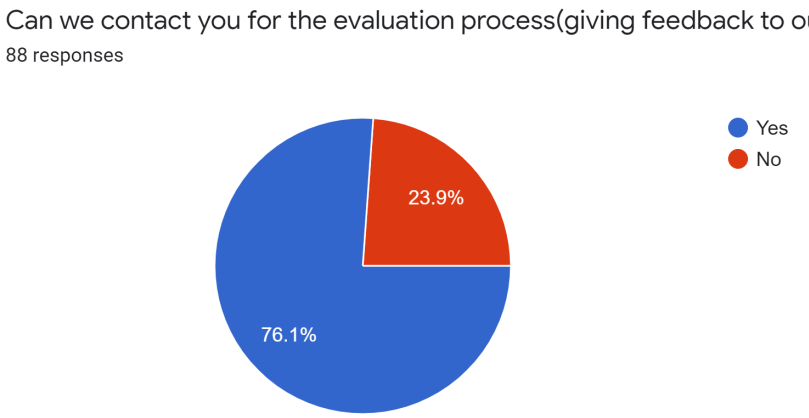
which was then changed to the existing logo with a bright and attractive orange colour which gives a feel good vibe to the application and hence grabs attention of the users. Detailing was also dome on the logo which represents a cab type structure in the background and a meter pointing towards right hence giving a positive appeal.

The other type of feedback and evaluation was done by :

- One to one interactions with the candidates who had given their consent to participate in our evaluation process.

Several meeting were done with the willing candidates over google meet at various steps of the overall process.

Luckily we got an overwhelming response of candidates



The interactions with the users directly resulted in clearing up the small ideation issues and prototype faults done by us for examples,
In one of the meetings one of the users suggested adding the feature of a filter for the preference of time or cost for the book a cab mode.
Which was added to the final high fidelity prototype.

The third type of evaluation was done by :

- Giving a hands-on experience to the high fidelity prototype

The group members gave their family members and friends hands-on experience of the final product to get feedback on the application's interface.
The helpful point that popped out because of this was that some of the elderly people were not able to read it properly as the font was not big enough for them.
This problem was corrected in the final prototype by making the font easy to read and hence better accessibility of the application.

8.Analysis and future work

After the completion of all the steps of the design cycle and doing a deep analysis of our project we see that there is still scope of improvement as it was not the final work and just a high fidelity prototype. The problem concept behind the whole project is a genuine problem that we all have experienced once in our lifetimes.thus in future we hope we are able to constructively design this application and put it into actual working some day for it to achieve its actual goals.

The future work can include the can option of providing discounts and coupons for increasing the usability and accessibility of our application.

For example, special coupon codes for women to encourage the safeness in taxi rides.

Also an automated chat bot to guide the users through all the different aspects of the application can be included.

Another addition in future works can be addition of shuttle buses in the applications

This would increase the target user base and hence will be helpful to many more people.

CONCLUSION

As a group, we feel that our project was pretty successful since we managed to find out a suitable solution for the given problem. There surely were difficulties in the process, but most of them were overcome by brainstorming and with the help of our TAs.

One of the major faults in our prototype was the confusing interface since we were trying to solve more than one problem with our app which did not work in our favour. This was pointed out by our TA and we tried to solve it by removing one of the redundant features of our app(login option for local drivers) since it was not included in our original problem statement and made the interface messy.

Overall we were satisfied with the outcome of our project report and also glad since we managed to complete it within the time given. We will be open to further queries, suggestions, and feedback and also hope that we are able to take the idea of our app, GoCabs forward and do some valuable work in the future.

Project Contributions:

This group project was successfully completed by three members of Group 2_7 (Diya Ahuja, Pulkit Bazard, Karan Prasad Gupta). We discussed and shared the project details by conducting several meets and over WhatsApp chats, divided our work accordingly, and reviewed our work after completion of each step. All the members of our group have put their best efforts towards this project and have made equal contributions to this project.

Thank you.

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- https://app.clipchamp.com/
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