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# A Practical Approach: TSHAN Cab Booking System

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**Abstract**— Safe cab android project is one such project which will responsible to provide taxis during your journey time. When you are in need to hire taxis for travelling purpose use this app and based on the information received from this app, taxi driver will able to get your location and available to provide you the service. This system uses the feature of GPS using which the taxi driver will locate you using its google map and with the help of GPS compass.

**Keywords**— Customer Experience, Android Application, EDA, Safe Travel, Supervised Ferry, Google Maps

## I. INTRODUCTION

This app is really helpful in metro city where there are more traffic problems and you have to wait in line to take token from taxi stand. It's truly said, whenever we are in hurry, we will not able to get things as per our requirements. Same thing happens when we are in need of taxi's to reach at time to our destination. Sometimes we are at place where there is no facility of any taxis and other travelling sources, so we have to be the sufferer or we have to pay more to take this service. Even when we don't have extra cash money, we cannot able to hire taxis. Sometimes we are at place where there is no facility of any taxis and other travelling sources, so we have to be the sufferer or we have to pay more to take this service. This project focuses on the problems still faced by many people who are using cab services to commute daily in urban places. The main problem faced by people is that they have to wait for a long time to get their cab. This app focuses on those problems and provides a better service than the other cab services present at the market today. This project provides a safe way for its users to commute daily without waiting for too long. It hopes to provide a good supervision on the cab drivers so that our customers get a easy and comfortable ride without too much of a hassle. Availability of cabs is a big problem for many people living in a city. It would help riders with daily and easy commute from their office to home cheaper, faster and at any time of the day. Riders would have a relaxing journey without worrying about missing their bus or metro.

### 1.1 Existing System

At present there are many ways that are available for people to use cabs and taxis to commute which are; Uber, Ola, private taxi services and autos. They are most popular in these times. There are many similarities between this application and Uber/Ola. Our System is based on these applications but it tries to further improve these applications.

### 1.2 Proposed System

Using this safe cab android project, you can travel safely and without any worry. Using this app, you just have to click on service demand and the nearest taxi driver travelling under particular location will locate you, by which you can travel easily and at affordable price. To make payment process easier, no need of cash is required. You can make payment by using your debit and credit card and the confirmation of your payment will be transferred to your email and to your mobile number. You will also able to get details of vehicle and the driver who will provide you the service and response time of this system will be given within three minutes

### 1.3 Comparison of Traditional Methods and Modern Method.

The practice in most cities where they have TSHAN shows that TSHAN is cheaper than the taxi service. In the future TSHAN plans to introduce the TSHANPOOL service to lower the trip costs even more. At the moment you can only share a ride with a person that is standing next to you – you input his or her e-mail address in the application and the price will be split.

### 1.4 Working Procedure of Proposed System

To order a ride it is necessary to own a smartphone and to register within the mobile application by entering a name, an e-mail address, a cell phone number and a credit card number that is to be billed automatically at the end of the ride. Global positioning system in the smartphone is used to determine the location so the passenger does not have to know the exact pickup address. Booking a ride in advance is not possible. Before confirming the order, the passenger can enter a pick-up and a drop-off address and get a price estimate. Once completed, the ride order appears on the nearest driver's smartphone where he or she can accept or reject it. It is possible to keep track of the vehicle that has accepted the ride. Driver's and passenger's contact information is also shown so they can contact each other if needed. The ride can be cancelled free of charge within five minutes, after that a fixed fee is charged to the passenger's account. An automated message is sent by the application upon the car's arrival. The driver starts the ride on the application and the passenger is shown the route and the estimated time of arrival. After the ride, the credit card specified in the app is automatically charged and the bill is sent via e-mail. The application allows bill sharing with other passengers. The driver and passenger can rate each other in application with a score from one to five stars.

TSHAN charges a base fare, the distance and the time spent driving regardless of whether the vehicle is moving or not. Prices vary from city to city but each one has a fixed minimum fare to be paid if the fare is lower. TSHAN uses an algorithm that increases the cost in time of increased demand, such as rush hour or a city-wide emergency. It is called "surge pricing", a method of pricing in the free market that involves the raising or lowering of prices depending on supply (how many cars are available) and demand (how many passengers want to ride in them). Sometimes prices for TSHAN services, depending on the intensity of demand, are increased by a certain percentage, and at other times they could even be doubled or tripled, and these fare hikes take effect during periods of high demand for cars (e.g. rush hours, dates of concert events, and during rain and snow storms or public transport strikes). Depending on supply and demand, the fare may be increased tenfold. However, the potential passenger is always shown this information before confirming the ride.

### Figures and Tables

FIG.1 Use Case Diagram; it represents the whole sequence of steps of the whole project. It is mainly divided into two parts "Driver" Sequence and "Rider" Sequence.

These are the following steps of "Driver" Sequence:

1. Can view list of all nearby passenger requests
2. Driver can accept passenger's request
3. Status of driver is set to busy
4. Rider is picked up and dropped at location
5. Payment is received by the driver
6. Status of driver is set to available

These are the following steps of "Rider" Sequence:

1. Rider registers details in the cloud server
2. Rider enters card details and is authenticated
3. If authentication fails he is redirected to the step 1
4. If the step 3 is successful rider logs in the app
5. Rider enter the pickup location using GPS
6. Destination is provided by rider
7. Choose the type of ride and request ride
8. Request is added to passenger request list
9. Driver arrives at the requested destination
10. Rider is dropped and payment is sent by the rider

TABLE 1: It analyses the difference between the traditional methods and modern method of travelling in TSHAN Cab System.

1. Availability of Cabs
2. Cost
3. Mode of Payment

FIGURE 1: USE CASE DIAGRAM

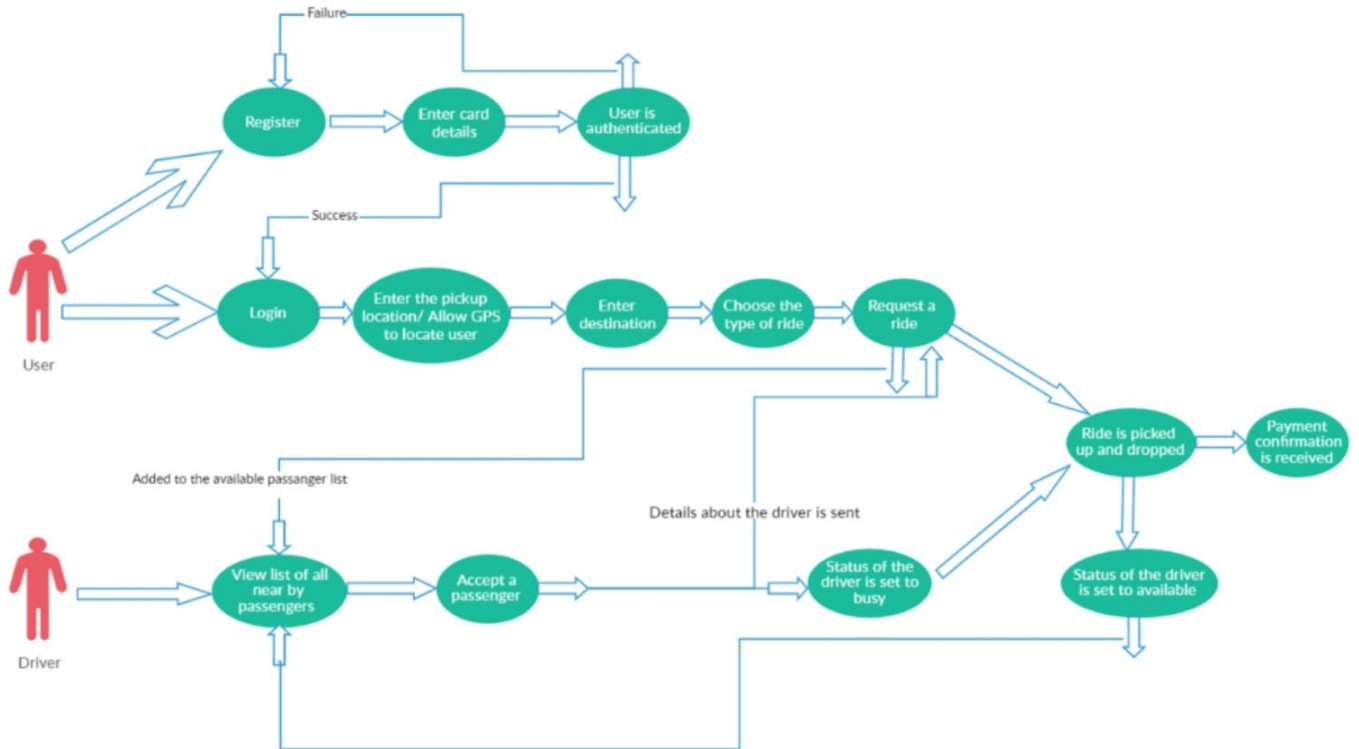


TABLE 1: COMPARISON BETWEEN TRADITIONAL METHOD AND MODERN SOLUTION

	CONVENTIONAL METHOD	TSHAN CAB BOOKING SYSTEM
<b>AVAILABILITY OF CABS</b>	IT IS ON PURE LUCK IF YOU WILL FIND YOUR TAXI NEAR YOUR LOCATION	IT PROVIDES THE LOCATION OF THE RIDER TO THE DRIVER USING GPS. SO THE DRIVER GETS TO YOUR LOCATION.
<b>COST</b>	THE FARE IS NOT FIXED, IT DEPENDS ON THE DRIVER OF THE TAXI	IT IS CHEAPER AND TELLS THE RIDER THE FARE OF THE RIDE BEFORE BOOKING OF THE CAB
<b>MODE OF PAYMENT</b>	PAYMENT HAS TO BE CASH OR GIVEN TO THE DRIVER'S PERSONAL ACCOUNT	THE PAYMENT IS MADE THROUGH THE APP. THEREFORE, MORE SAFETY OF THE RIDER.

## CONCLUSION

TSHAN is software that will ease the travel of its users with availability of cabs 24/7, it is a cheaper alternative and accepts payment in credit/debit card as well.

This app is really helpful in metro city where there is more traffic problems and you have to wait in-line to take token from taxi stand. It has a huge scope when considering its market in metropolitan cities and user friendly interface. New features like food delivery system, car rental option, can be added in the future.

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