1. **INTRODUCTION**
   1. **PURPOSE**

The purpose of the document is to build an online system to manage cabs and passengers to ease the cab management.

* 1. **INTENDED AUDIENCE AND READING SUGGESTIONS**

The project is a prototype for the cab management system. The System is useful for browsing, booking and paying the fares online. The project is useful for the cab owners, drivers and as well as the passengers.

* 1. **PROJECT SCOPE**

The purpose of the online cab management system is to ease cab booking and management. It creates a convenient and easy to use application for the passengers, as well as drivers. The system provides the data on the available cab based on the requirements of the passenger and allows them to connect with the driver, allowing a better cab booking and transportation experience. As well as better job opportunities and profits for the cab drivers. Along with a comfortable user experience for both kind of users.

1. **OVERALL DESCRIPTION**
   1. **PRODUCT PERSPECTIVE**

The cab management system stores the following information.

* + - Cab Description

The details on the vehicle, which includes its location, current status (running or resting), vehicle condition, type of vehicle (the brand, model, year of manufacture etc.).

* + - Driver Description

The details of the driver, his/her name, age, contact info, rating, location, current working status (on duty or not).

* + - Passenger Description

The name of the passenger, his/her age, contact number, address, travel status, location, previous travel pattern.

* + - Booking Description

The booking details including the pickup and drop off point, time.

* 1. **USER CLASS AND CHARACTERISTICS**

Users of the system should be able to retrieve cab information between two given points with the given date/time of travel. The system will support two types of user privileges, Customer and Driver. Customers will have access to customer functions, and the driver will have access to driver functions.

CUSTOMER FUNCTIONS

* + - * Make new booking
      * Cancel an existing booking
      * View and edit profile
      * Rate and review drivers

DRIVER FUNCTIONS

* Can select their area of working like a city or a whole district (Should use their current location to determine the city or district), they can also get long distance routes.
* Driver can change the status like they are available or not available.
* The booking amount that customers pay should be credited to their bank account after taking a 10% commission.
* Alert the driver in SMS and email if there is a booking.
* They can see their rating and reviews.

ADMINISTRATIVE FUNCTIONS

* Can block/unblock the customers and drivers.
* They can view the driver's details and verify it.
* They can view the rating and reviews of drivers.
* They should set the price per kilometer based on the type of car (the available types should be shown as drop-down list and price should not be more than the current market price)
* They can monitor all the payments and there should be an option to generate report monthly or weekly showing the
* Total amount
* Total commission
* No of journeys completed
* Total kilometers
* No of customers
* No of drivers
* No of cancellations

1. **SYSTEM FEATURES**

3.1 LOGIN

A registered user can login to the system using his email or phone no and with the given password. A new user can be diverted into the registration page. Include password recovery also (customer can recover the password by OTP verification sent to his email or phone no).

* 1. CUSTOMER SIGN UP

 A customer can sign up by giving his

* first name (should not contain number or a special character)
* last name (should not contain a number or a special character)
* email Id (Should be in proper email format and Unique)
* Phone No (Should be in proper format and unique)
* Password (the password must be min 8 characters and should contain an uppercase letter and a special character). The email and Phone no should be verified with OTP.

3.3 DRIVER SIGN UP

A driver can sign up by giving his

* first name (should not contain number or a special character)
* last name (should not contain a number or a special character)
* email Id (Should be in proper email format and Unique)
* Phone No (Should be in proper format and unique)
* Password (the password must be min 8 characters and should contain an uppercase letter and a special character).

After login driver should update the following details

* License No (Should be in proper license format)
* Registration No (Should be in proper Registration No format)
* Car type (Provide a drop-down list with all the type of cars)
* Address details (validate details like)

The driver can only use the web app after verifying all the details by the admin. After verification he should have access to his profile page so that the driver can update personal details, email id, phone number, etc. Also, they must update their bank account details like

* Bank name (provide search and choose option)
* Acc number (Should check the format is in the required way)
* IFSC code (Branch should automatically be shown after typing the IFSC code) also there should be an option to search the bank branch.

**Cab Services Management**– SRS

User or Customer

1. **Authentication Page,** for Customers to provide login credentials and move on to the home page or to navigate to registration or password recovery page.
   1. For sign in, the username and password are required entries. The username should be unique. The password is supposed to be different from username and should contain a minimum of 8 characters and among that there should be at least one Uppercase, one Lowercase, a special character and a number. Entering the valid credentials and clicking on the login allows the user to navigate to the home page of the software, once the captcha is entered correctly.
   2. New users should be navigated to the registration page, once the "New User" button is pressed.
   3. When "Forget Password?" is clicked, the user is navigated to the password recovery page.

1. **Registration Page,** for collecting the user details (like name, phone number, mail id, permission for accessing location and accepting the terms and conditions).
   1. The name is entered, both the first and last name.
   2. Phone number and Mail Id is entered which is verified via OTP. These details should also be unique and should not been entered in the software earlier.
   3. Date of birth in the format DDMMYYYY.
   4. A password is entered, by following the requirements i.e., min number of 8 characters which consist of uppercase, lower case, special character and a number. The same password is entered again for confirmation.
   5. Option to select the user is a driver or a ride-taker. Ride-taker option is selected to register as a customer.
   6. And on clicking register, a pop-up stating the terms and conditions and asking the permission to access the location, notification, message and phone is asked. Then the page is forwarded back to the sign-in page, for logging in.
2. **Password Recovery page** consist of different options to recover password. The option to recover password using username and phone number or username and mail id.
   1. When chosen to recover password using phone number, the username and phone number, which is valid, and that is present in the database, is asked to enter in a dialog box, after which an OTP is shared to the entered valid phone number. The pop-up asking the OTP is shown, where there are options to enter the OTP, and an option to resend the OTP, after a few seconds countdown. Entering the OTP, leads to a page to enter the new password, twice to confirm the password. And the password entered is to be following the requirements i.e., it should contain min number of 8 characters which consist of uppercase, lower case, special character and a number. Once the new password is entered and is valid the page is forwarded to back to the login page.
   2. When chosen to recover password using email id, the username and email id, which is valid, and that is present in the database, is asked to enter in a dialog box, after which an OTP is shared to the entered valid email id. The pop-up asking the OTP is shown, where there are options to enter the OTP, and an option to resend the OTP, after a few seconds countdown. Entering the OTP, leads to a page to enter the new password, twice to confirm the password. And the password entered is to be following the requirements i.e., it should contain min number of 8 characters which consist of uppercase, lower case, special character and a number. Once the new password is entered and is valid the page is forwarded to back to the login page.
3. **Home Page** consist of the option for User profile, cab search, CAB service advertisements and cab details (active only after a cab is booked).
   1. User Profile can be clicked to move to a new page for viewing and editing the user details, like home and office address of the user, pick-up and drop-off for recurring frequent trips and also preferences on the type of cab required (Sedan, Hatchback, SUV). Also, option to add alternate phone number, mail id and profile photo.
   2. Cab search option is there on the home page for searching and booking the preferred cab. The search option should contain options for selecting the pick-up point, drop-off point, cab type, cab service type (i.e., shared cab or the other one) the customer review and rating on the cab and driver. Entering these options should show a filtered result on the available cabs around the pick-up location. There is also option for sorting result based on distance of cab from the pick-up point, the rating, the price. On selecting the preferred cab, the user is navigated to the booking page.
   3. Cab service advertisement area shows the details of the cab service, the contact info of the company, link that takes to company site, any offers or promocodes available at the time.
   4. Cab details tab, which shows the details of the cab and the ride that is booked, this tab will only be accessible after a cab is booked. The tab consists of options for ride cancelation, cab location tracking, cab and driver rating.
   5. There is a settings tab with option to deactivate the account, sign out from the account, change the language.
4. **Booking Page** shows the details of the cab that is selected on the previous page, i.e., the cab search page, for confirmation purposes. From the booking page, there are two options, either confirm and move to the payment page or can cancel and go back to the cab search page. Also changes like changing the option to shared cab or vice versa, changing pick-up point can be done. While changing the selected option, if there is any change for the price, then it is reflected on the page.
5. **Payment Page,** after booking confirmation the payment page is opened, which contains the option for various payment options, any one among the payment option is selected, and if there is any extra handling charge for the selected option, it is reflected in the total amount and also shown as a breakdown of total fare along with the options.
   1. Card payment, after entering the card details, the permission for saving the card is asked, accepting the permission leads to saving the card details. Declining details leads to one-time usage of the card details. Specific time is given for the completion of payment.
   2. UPI payment can be done after verifying the UPI ID, by entering and clicking on the verify option, once verified the message request for payment is sent to the given UPI ID. Specific time is given for the completion of payment.

If the payment is successful, then the pop-up showing the payment successful message is shown and closing shows the booking details with payment transaction id and OTP generated for the cab ride. And If failed then the pop-up shows the message that the payment is failed and shows the option for retry, which diverts back to the booking page.

1. **Ride Cancellation** (located in the cab details in the home page) is a cancellation option that will be active only for two minutes. Which will also charge a minimum fee and process the remaining fare into the original payment source.
2. **Cab Location Status,** the location of Cab can be tracked live, in the Cab details tab in the home page. Which can be shared also.
3. **Check in and Check out,** The OTP generated after the payment confirmation is used to check in the CAB
4. **Feedback and review,** After the ride the option for rating the ride, cab and driver will be shown. All the ratings can be done on a maximum scale of 5 and reviews can be written to a maximum of 500 words. The page can be either submitted after filling out or can be skipped.

Driver

1. **Authentication Page -** for Driver to provide login credentials and move on to the home page or to navigate to registration or password recovery page.
   1. For sign in, the username and password are required entries. The username should be unique. The password is supposed to be different from username and should contain a minimum of 8 characters and among that there should be at least one Uppercase, one Lowercase, a special character and a number. Entering the valid credentials and clicking on the login allows the user to navigate to the home page of the software, once the captcha is entered correctly.
   2. New users should be navigated to the registration page, once the "New? Register here." button is pressed.
   3. When "Forget Password?" is clicked, the user is navigated to the password recovery page.
2. **Registration Page,** for collecting the user details (like name, phone number, mail id, permission for accessing location and accepting the terms and conditions).
   1. The name is entered, both the first and last name.
   2. Phone number and Mail Id is entered which is verified via OTP. These details should also be unique and should not be entered in the software earlier.
   3. Date of birth in the format DDMMYYYY
   4. A password is entered, by following the requirements i.e., min number of 8 characters which consist of uppercase, lower case, special character and a number. The same password is entered again for confirmation.
   5. Option to select the user is a driver or a ride-taker. Driver option is selected to register as a driver.
   6. And on clicking register, a pop-up stating the terms and conditions and asking the permission to access the location, notification, message and phone is asked. Then the page is forwarded back to the sign-in page, for logging in.
3. **The Password Recovery page** consists of different options to recover passwords. The option to recover password using username and phone number or username and mail id.
   1. When chosen to recover the password using a phone number, the username and phone number, which is valid, and that is present in the database, is asked to enter in a dialog box, after which an OTP is shared to the entered valid phone number. The pop-up asking the OTP is shown, where there are options to enter the OTP, and an option to resend the OTP, after a few seconds countdown. Entering the OTP, leads to a page to enter the new password, twice to confirm the password. And the password entered is to be following the requirements i.e., it should contain a min number of 8 characters which consist of uppercase, lower case, special character and a number. Once the new password is entered and is valid the page is forwarded back to the login page.
   2. When chosen to recover password using email id, the username and email id, which is valid, and that is present in the database, is asked to enter in a dialog box, after which an OTP is shared to the entered valid email id. The pop-up asking the OTP is shown, where there are options to enter the OTP, and an option to resend the OTP, after a few seconds countdown. Entering the OTP, leads to a page to enter the new password, twice to confirm the password. And the password entered is to be following the requirements i.e., it should contain a min number of 8 characters which consist of uppercase, lower case, special character and a number. Once the new password is entered and is valid the page is forwarded back to the login page.
4. **Home Page** consists of the option for Driver profile, Vehicle details, company helpline details, bank account details. For new users all these details need to be added. And along with these tabs there is also option to show the availability status of the driver and notification tab and transaction status tab for new ride request from customers
   1. Driver profile consist of the option to enter or edit
      1. Driver’s First Name

The name should contain only alphabets, without any space.

* + 1. Driver’s Last Name

The name should contain only alphabets, without any space.

* + 1. Driver’s Phone Number

The number must be valid and existing. The number is validated through an OTP.

* + 1. Driver’s Licence Number

The Licence number must be valid. And in the format XX/XXXX/XXXX

* + 1. Driver’s Licence Photo

The photo size should not exceed 5mb. And should be in JPEG format.

* + 1. Driver’s Photo

The photo size should not exceed 5mb. And should be in JPEG format.

* 1. Vehicle details tab include option to add
     1. Vehicle Registration Number

The number should be valid and, in the format, KL32AA2467

* + 1. Vehicle Type

Like SUV, Sedan, MPV, Hatchback, Coupe.

* + 1. Vehicle Name

A drop-down menu with the Brand name options and the vehicle name option to be selected

* + 1. Vehicle’s photo

The photo size should not exceed 5mb. And should be in JPEG format.

* 1. Company details, including the office contact details and helpline number.
  2. Bank Details tab, to enter the bank details of the driver. The tab consists of the option to enter the account number, IFSC number, Branch Details. All these details need to be verified by the user or driver, manually. So, after entering a confirmation pop-up is shown.
  3. There is an option to turn on and off the availability status of the driver.
  4. A notification tab for the notification of a ride call by the customer.
  5. The transaction status tab is there for viewing the fare transfer status after the ride.
  6. There is a settings tab with options to deactivate the account, sign out from the account, change the language.

Admin

1. **Authentication Page,** for admin to provide login credentials and move on to the admin home page. The company provided
2. **Home Page,** the admiration home page oversees the whole operation of the application. And it holds the options to
   1. Delete or Deactivate any account.
   2. View the Income and expense.
   3. The total number of active users.
   4. The whole feedback and reviews given to the software and the cab or driver.
   5. The details of all customers, drivers, vehicles, bookings.
   6. Real time location of the cabs.
   7. Previous booking details.
   8. Admin account password change.
   9. Account log out.