Software Requirements Specification (SRS) Document

Project Name: Gas Booking App
Team Name: Team 47 Project 10
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Brief problem statement

Customers of a LPG Gas Booking agency need to book cylinders for delivery at their homes/places of work. The problem is to create an android application that lets users input addresses,aadhaar and other details into it and make gas cylinder bookings on their mobile devices.The problem with the previous version of booking is with phone calls they may miss some orders while the delivery agents are driving etc..

System requirements

User System Requirements: An Android phone with internet connectivity.
Solution System Requirements: Flutter frontend with a Firebase backend, written in the Dart programming language.

Users profile

Users
Users use the application to book the cylinder(s) and view their previous bookings and view and update their profile. They will view the app through mobile devices.

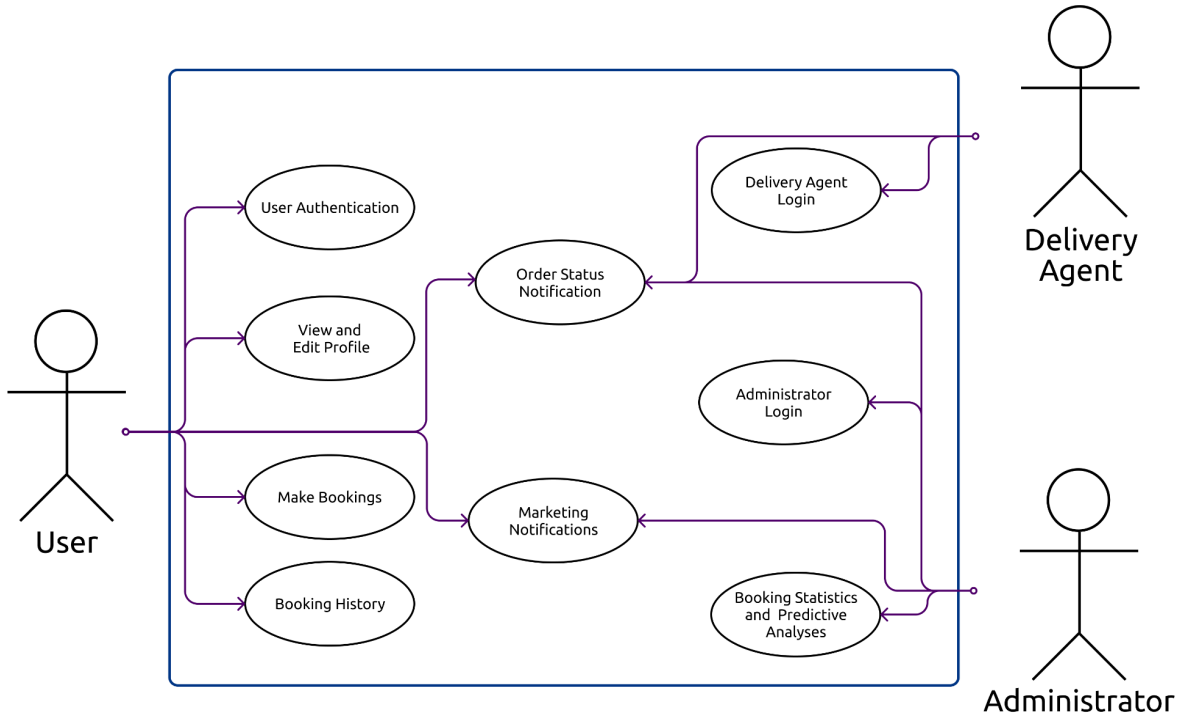
Delivery Agents
Delivery agents are tech competent workers of the gas agency that will be tasked with delivering the cylinders to the users' addresses. They will view the app through mobile devices with a different frontend after logging in with their particular accounts.

Administration
The administrator should be able to see the statistics and the prediction of the booking based on the previous booking data of users.

Feature requirements (described using use cases)

No.	User Case Name	Description	Release
1.	User authentication	Users are authenticated with an OTP sent to their phone numbers	R1
2.	View and edit profile	Users can view and edit their phone number, full name, Aadhar number and saved addresses	R1
3.	Make bookings	With the click of a button, bookings can be made to the selected address	R1
4.	Order status notification	When orders are delivered, confirmed or cancelled the user receives notifications	R2
5.	Marketing notifications	As per the Administration, marketing notifications can be sent to users	R2
6.	Booking History	Users can view their past bookings in a separate page	R1
7.	Delivery Agent Login	Delivery agents are given the scheduling UI when logged in with their credentials.	R2
8.	Administrator Login	Administrator accounts have to login with their credentials after which they can add and remove delivery agents and other admin accounts.	R2
9.	Booking statistics and Predictive analyses	Administration can view the aggregate booking statistics and per-user booking histories. Predictive analyses are also available.	R2

Use case diagram



Use case description

UC-01

Use case name: user authentication
Overview: the user who want to book cylinder can log into his account using his phone number and OTP sent to the same number
Actors: only users
Precondition: the OTP entered by the user should be the same that is sent to his number
Flow: upon authentication the user will be directed to the main page of the application
Post condition: the user is logged into the application using his number and he can book the cylinder

UC-02

Use case name: view and edit profile
Overview: the user can view his profile details and edit them as required
Actors: user
Precondition: the user should be logged into the application using phone number
Flow: the user can see the details if he wants to edit he can edit and save them
Post condition: the profile details should be updated if he edited the profile details or else should remain the same

UC-03

Use case name: make bookings
Overview: the user can book the cylinder just by clicking the book cylinder button and the order is placed
Actors: user
Precondition: the user should have authenticated using his mobile number and should add his delivery address where the cylinder should be delivered
Flow: just clicking the button
Post condition: the order should be placed with users address as delivery address

UC-04

Use case name : Order status notification
Overview : Enable users to view the status of their orders through notifications, like Order Confirmed,Order cancelled,Order Successfully delivered.
Actors : User,Delivery Agent.
Pre condition : User should be logged in, an order should be successfully made.
Flow : If an order is made and Confirmed then a notification will be sent "Order Confirmed" and now if it is delivered Successfully then "Order delivered" or If It is cancelled "Order cancelled" notification will be sent.
Post Condition : Nothing changes in the UI of User.User will get a notification in the notification bar of the phone.

UC-05

Use case name : Marketing notifications
Overview : Administration can send the notifications to users for marketing purposes.
Actors : Admin,Users.
Pre condition : Admin login page
Flow : If the administrator writes a message and clicks the send button then it should be sent to all the users.
Post Condition : Nothing changes in the UI of User.User will get a notification in the notification bar of the phone.

UC-06

Use case name : Booking History
Overview : Users can view their previous booking history in a separate page.
Actors : User.
Pre condition : He should be able to login.
Flow :
1.click the button "history".
2.A page with all the previous bookings will show up.
Post Condition : By clicking the history button a page with all the bookings will show up.

UC-07

Use Case Name: Delivery Agent
Overview: Delivery agents are given the scheduling UI when logged in with their credentials.
Actors: Delivery Agent
Pre condition: Delivery agents must have their authentication details stored in the database to be logged in;Display sign-in page for the delivery agent with the scheduling UI after logging in successfully
Flow:

1. Clicks on the login page.
2. Enters login credentials(Email id and password) in the login page displayed
3. Submits details via the login button.
4. Verifies details against database and upon valid data, logs the user in
5. (Alternate flow on failure) Verifies details against database and upon invalid data, responds with a prompt saying “Invalid email id/password” and the user is left to try again at the same login page.

Post Condition: Upon entering valid data, the agent logs in and can access the rest of the scheduling UI right after login;Directs to the agent’s home page upon login.

UC-08

Use Case Name: Administrator Login
Overview: Administrator accounts have to login with their credentials after which they can add and remove delivery agents and other admin accounts.
Actors: Delivery Agent
Pre condition: Administrators must have their authentication details stored in the database to be logged in; Display sign-in page for the administrator with the managing users and analytics UI after logging in successfully
Flow:

1. Clicks on the login page.
2. Enters login credentials(Email id and password) in the login page displayed
3. Submits details via the login button.
4. Verifies details against database and upon valid data, logs the user in

5. (Alternate flow on failure) Verifies details against database and upon invalid data, responds with a prompt saying “Invalid email id/password” and the user is left to try again at the same login page.

Post Condition: Upon entering valid data, the admin logs in and access the rest of their account functionalities;Directs to the admin’s home page with access to statistics and account managing options.

UC-09

Use Case Name: Booking statistics and Predictive analyses
Overview: Administration can view the aggregate booking statistics and per-user booking histories. Predictive analyses are also available.
Actors: Administrators
Pre condition: Administrators must be logged in to view these details.Enough deliveries must have been made to analyse and predict accurately enough. Otherwise the page would be empty due to lack of data.
Flow:

1. Administrators can click on the statistics tab to view all past bookings - either all aggregated or on a per user basis.
2. They can click on predictive analysis to see the predicted bookings that may come in today based on the past trends of each user.

Post Condition: The administrator can decide how to market to users who are predicted as likely to place an order today from this page. They can also decide on what changes they might need looking at the statistics displayed here.