



# **FabCab (Cab Booking System)**

## **Software Requirement Specification Document**

**Version 1.1**

**Project Supervisor: Dr. Fakhar Lodhi**

### **Group Members**

Haseeb Ahmed	15140059
Rabia Anwar	15140099
Sana Saleem	15140103
Hamza Asif	15140061

**Supervisor Approval:** \_\_\_\_\_

## Document Information

Category	Information
Customer	GIFT University
Project	FabCab
Document	Requirement Specifications
Document Version	1.1
Identifier	SRS - CBS
Status	Completed
Author(s)	Sana Saleem, Hamza Asif, Rabia Anwar, Haseeb Ahmad
Approver(s)	Dr. Fakhar-ul-Islam Lodhi
Issue Date	
Document Location	SE-Lab
Distribution	

## Definition of Terms, Acronyms and Abbreviations

Term	Description
API	Application Program Interface
CBS	Cab Booking System
BR	Business Requirements
UR	User Requirements
FR	Functional Requirements
US	Usability Requirements
PER	Performance Requirements
US	Use Case
Captain	Vehicle Driver

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## 1. Introduction

### 1.1. Purpose`

This is a detailed document of the software requirements to develop an application named as “**FabCab**”. The document includes functional and non-functional requirements of the application. These requirements will serve as the starting point for development by the project team who will implement and verify the correct functioning of the system. In short, the purpose of this document is to provide a detailed overview of our software product, its Scope and Behavior.

### 1.2. Scope`

Cab booking system will permit the rider to book a ride for regular use (to go school, colleges, universities and workplaces) for a specific duration. User can book a private ride for one time usage. User can share a ride with an ongoing ride on its route to save his money. Main features of our system are:

1. User account
2. Vehicle tracking
3. Preferred captain (Male/Female)
4. Book single ride(Private)
5. Book shared ride
6. Book vehicle for monthly service
7. Notification

Implementation of user Account module is necessary to implement our project. Therefore, we shall assume that it is authenticated. As our main focus is on new introducing features. Moreover, some features that we can add later depends upon the availability of time or in future.

1. Manage Registration Request by Admin
2. Create own calendar for schedule ride
3. Ride history
4. User wallet
5. Payment gateways

A detail of functional requirements is included in this document [3].

### 1.3. References

、 Cab Booking System Project Proposal Document, CBS/Proposal.docx

## 2. Project Stakeholders

Following are those users who will directly interact with system.

1. Riders
2. Captains

### **3. Specific Requirements:**

#### **3.1 Business Requirements [BR]**

**BR-1:** An application that shall allow the rider to book private ride to travel from one place to another.

**BR-2:** Develop an application that will allow the rider to share his ride for reducing ride cost.

**BR-3:** Implement a system that shall help the rider to book a ride for specific duration to ensure the availability of vehicle and to save his time in dealing manually.

**BR-4:** An application that shall allow the female riders to travel with female captains for their security and comfort.

#### **3.2 User Requirements [UR]**

##### **3.2.1 Rider**

###### **3.2.1.1 User Account**

**UR-01:** User shall be able to sign up.

**UR-02:** User shall be able to sign in.

**UR-03:** User shall be able to sign out.

###### **3.2.1.2 Single Ride Booking**

**UR-04:** User shall be able to view estimated fare for private ride.

**UR-05:** User shall be able to book a private ride by sending request.

**UR-06:** User shall be able to track vehicle location.

**UR-07:** User shall be able to cancel the ride.

**UR-08:** User shall be able to view notification about captain arrival at pickup location.

###### **3.2.2.3 Share Ride**

**UR-09:** User shall be able to request for shared ride.

**UR-10:** User shall be able to view notification about arrival of captain at pickup location.

**UR-11:** User shall be able to cancel shared ride.

**UR-12:** User shall be able to track his booked vehicle.

###### **3.2.2.4 Female Captain**

**UR-13:** User shall be able to request for male or female captain for ride.

###### **3.2.1.5 Monthly Service**

**UR-14:** User shall be able to manage gig to avail monthly service.

**UR-15:** User shall be able to view captains' bids on his gig.

**UR-16:** User shall be able to accept any captains' bid on his gig.

**UR-17:** User shall be able to notify captain about ride cancellation (temporary or permanently).

### **3.2.2 Captain**

#### **3.2.2.1 User Account**

**UR-18:** User shall be able to sign up.

**UR-19:** User shall be able to sign in.

**UR-20:** User shall be able to mark his vehicle online.

**UR-21:** User shall be able to mark his vehicle offline.

**UR-22:** User shall be able to sign out.

#### **3.2.2.2 Single Ride Booking**

**UR-23:** User shall be able to view ride request.

**UR-24:** User shall be able to accept ride request.

**UR-25:** User shall be able to notify rider about his arrival at pickup location.

**UR-26:** User shall be able to start ride after the arrival of rider.

**UR-27:** User shall be able to end ride at drop off location.

**UR-28:** User shall be able to view fare of ride.

#### **3.2.2.3 Share Ride**

**UR-29:** User shall be able to accept shared ride request.

**UR-30:** User shall be able to reject shared ride request.

**UR-31:** User shall be able to view current shared Riders detail.

**UR-32:** User shall be able to track rider to reach his pickup location.

**UR-33:** User shall be able to notify rider about arrival at pickup location.

**UR-34:** User shall be able to start ride.

**UR-35:** User shall be able to end ride of particular rider.

#### **3.2.2.4 Monthly Service**

**UR-36:** User shall be able to view riders' gig.

**UR-37:** User shall be able to send bid on riders' gig.

**UR-38:** User shall be able to view notification when rider accepts his bid.

**UR-39:** User shall be able to view notification about cancel ride service (temporary or permanently).

**UR-40:** User shall be able to view current monthly riders' detail.

### **3.3 Functional Requirements [FR]**

#### **3.3.1 Rider**

##### **3.3.1.1 User Account**

**FR-1:** System shall allow the user to sign up.

**FR-2:** System shall allow the user to sign in.

**FR-3:** System shall allow the user to sign out.

##### **3.3.1.2 Single Ride Booking**

**FR-4:** System shall allow the user to view estimated fare for private ride.

**FR-5:** System shall allow the user to book a private ride by sending request.

**FR-6:** System shall allow the user to track booked vehicle.

**FR-7:** System shall allow the user to cancel the ride.

**FR-8:** System shall allow the user to view notification about captain arrival at pickup location.

##### **3.3.1.3 Share Ride**

**FR-9:** System shall allow the user to request for shared ride.

**FR-10:** System shall allow the user to view notification about arrival of captain at pickup location.

**FR-11:** System shall allow the user to cancel shared ride.

**FR-12:** System shall allow the user to track his booked vehicle.

##### **3.3.1.4 Female Captain**

**FR-13:** System shall allow the user to select for male or female captain for ride.

##### **3.3.1.5 Monthly Service**

**FR-14:** System shall allow the user to create gig to avail monthly service.

**FR-15:** System shall allow the user to view gig of requested monthly service.

**FR-16:** System shall allow the user to update gig of requested monthly service.

**FR-17:** System shall allow the user to delete gig of requested monthly service.

**FR-18:** System shall allow the user to view captains' bids on his gig.

**FR-19:** System shall allow the user to accept any captains' bid on his gig.



**FR-20:** System shall allow the user\_about ride cancellation (temporary or permanently).

### **3.3.2 Captain**

#### **3.3.2.1 User Account**

**FR-21:** System shall allow the user to sign up into the system.

**FR-22:** System shall allow the user to sign in.

**FR-23:** System shall allow the user to mark his vehicle online.

**FR-24:** System shall allow the user to mark his vehicle offline.

**FR-25:** System shall allow the user to sign out.

#### **3.3.2.2 Single Ride Booking**

**FR-26:** System shall allow the user to view ride request.

**FR-27:** System shall allow the user to accept ride request.

**FR-28:** System shall allow the user to notify rider about his arrival at pickup location.

**FR-29:** System shall allow the user to start ride after the arrival of rider.

**FR-30:** System shall allow the user to end ride at drop off location.

**FR-31:** System shall allow the user to view fare of ride.

#### **3.3.2.3 Share Ride**

**FR-32:** System shall allow the user to accept shared ride request.

**FR-33:** System shall allow the user to reject shared ride request.

**FR-34:** System shall allow the user to view current shared Riders detail.

**FR-35:** System shall allow the user track rider to reach his pickup location.

**FR-36:** System shall allow the user to notify rider about arrival at pickup location.

**FR-37:** System shall allow the user to start ride.

**FR-38:** System shall allow the user to end ride of particular rider.

#### **3.3.2.4 Monthly Service**

**FR-39:** System shall allow the user to view riders' gig.

**FR-40:** System shall allow the user to send bid on riders' gig.

**FR-41:** System shall allow the user to view notification when rider accepts his bid.

**FR-42:** System shall allow the user\_view notification about cancel ride service (temporary or permanently).

**FR-43:** System shall allow the user to view current monthly riders' detail.

### 3.4 Traceability Matrix

Business Requirement No.	User Requirement No.	Functional Requirement No.
BR-1	UR-01	FR-1
	UR-02	FR-2
	UR-03	FR-3
	UR-04	FR-4
	UR-05	FR-5
	UR-06	FR-6
	UR-07	FR-7
	UR-08	FR-8
	UR-18	FR-21
	UR-19	FR-22
	UR-20	FR-23
	UR-21	FR-24
	UR-22	FR-25
	UR-23	FR-26
	UR-24	FR-27
	UR-25	FR-28
	UR-26	FR-29
	UR-27	FR-30
UR-28	FR-31	
BR-2	UR-09	FR-09
	UR-10	FR-10
	UR-11	FR-11
	UR-12	FR-12
	UR-29	FR-32
	UR-30	FR-33
	UR-31	FR-34
	UR-32	FR-35
	UR-33	FR-36
	UR-34	FR-37
	UR-35	FR-38
BR-3	UR-14	FR-14
		FR-15
		FR-16
		FR-17
	UR-15	FR-18
	UR-16	FR-19
	UR-17	FR-20
	UR-36	FR-39
	UR-37	FR-40
UR-38	FR-41	
UR-39	FR-42	

	<b>UR-40</b>	<b>FR-43</b>
<b>BR-4</b>	<b>UR-13</b>	<b>FR-13</b>

### **3.4 Usability:**

**US-1:** Novice users shall perform a specific task within 2 minutes while expert user shall reduce that time to 30 secs.

**US-2:** 95% of novice users shall be able to book a ride successfully without errors on their first try.

### **3.5 Performance**

**PER-1:** The system shall display confirmation messages to users within an average of 3 seconds and a maximum of 5 seconds after the user submits information to the system.

**PER-2:** The System shall respond against a user click within an average of 3 seconds.

## **4. Learning Outcomes:**

By working on this project, we shall learn that how to work in a team and how to manage project when you have limited resources and time. Following are some tools and technical skills that will be learning outcomes of our project.

1. Android app development
2. Firebase
3. API's integration
4. MS Project
5. Visio
6. Draw.io

## **5. Practical Application:**

In perspective of practical usage of this system it has a huge demand of citizens of any country to book a ride smartly without any difficulty to travel from one place to another place. This System can be used by any organization or individual who want to start or extend their transportation business. Our system will increase his profit by increasing their riders as in today's busy life everyone wants to save his time.

In practical world, we have planned to sell the extended version to already working organizations.

## **6. Supporting Information:**

### **What is Firebase?**

Firebase allows you to build apps, which need authentication, database, file storage, analytics and server side functionality without having to own and manage infrastructure and software required for server side support.