

Rajiv Gandhi University of Knowledge Technologies

(Catering the Educational Needs of Gifted Rural Youth of A.P)

R.K Valley, Y.S.R Kadapa (Dist)-516330

CAR RENTAL MANAGMENT SYSTEM

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This Project report has been submitted in fulfilment of the requirements for the Degree of Bachelor of Technology in Software Engineering.

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CERTIFICATE

This is to certify the report entitled “CAR RENTAL MANAGMENT SYSTEM” submitted by the members of Group-10 in partial fulfillment of the requirement for the award of Bachelor of Technology in Computer Science and Engineering is a bonafide work carried out here under my supervision and guidance.

The report hasn't been submitted previously in part or in full to this or any other university or institution for the award of any degree.

Project Guide

Coordinator

Head of the Dept

SATYANANDARAM

SATYANANDARAM

Project Internal Guide

Computer Science and Engineering,

RGUKT RK Valley

Software Requirements Specification

For

CAR RENTAL MANAGMENT SYSTEM

Table of Contents

1. Introduction

- 1.1 Purpose
- 1.2 Document Conventions
- 1.3 Intended Audience and Reading Suggestions
- 1.4 Product Scope
- 1.5 References
- 1.6 Definitions, Acronyms, and Abbreviations

2. Overall Description

- 2.1 Product Perspective
- 2.2 Product Functions
- 2.3 User Classes and Characteristics
- 2.4 Operating Environment
- 2.5 Design and Implementation Constraints
- 2.6 User Documentation
- 2.7 Assumptions and Dependencies

3. Specific Requirements

- 3.1 Functionality
 - 3.1.1 Log in with admin account
 - 3.1.2 Customer registration, skip if customer already registered
 - 3.1.3 Search for available vehicle
 - 3.1.4 View vehicle with details
 - 3.1.5 Calculate cost
 - 3.1.6 Reserve vehicle for renting
 - 3.1.8 Add new vehicle/ vehicle category
 - 3.1.9 Update vehicle details
 - 3.1.10 Change vehicle status
 - 3.1.11 Remove vehicle/ vehicle category

3.1.12 View reports

4. Other Nonfunctional Requirements

4.1 Performance & Security Requirements

4.2 Safety Requirements

4.3 Software Quality Attributes

5. UML DIAGRAMS

5.1 Context Diagram

5.2 DFD

5.3 Usecase Diagram

5.4 ERD

5.5 Activity Diagram

5.6 Sequence Diagram

1. Introduction

1.1 Purpose

This document consists of all the functional and nonfunctional and requirements of the Car Renting Management System and all the other requirements related details. This is the first version of the SRS document and this will be used as a reference and a guideline for design and development processes ahead. This document is recommended to be viewed by the development team, car renting company staff. This is used as a way of making sure all the stakeholders of the system will have a complete and clear understanding about the requirements of the system.

1.2 Document Conventions

In this document, I used bold letters to highlight headings and other things are in normal type.

1.3 Intended Audience and Reading Suggestions

Developers : 2 Members

Testers : 2 Members

Documentation writers : 1 Member

1.4 Product Scope

The system has one subpart according to the users of the system:

Business sub system

System consist of all the functionalities related to business end (Employees). This document covers entire system and its subpart. The functionalities of the system are clearly explained in simple and understandable way

1.5 References

1.6 Definitions Acronyms, and Abbreviations

CRMS – Car Renting Management System

SRS – Software Requirements Specification

System Admin – Car renting company staff member who is in charge of the system.

2. Overall Description

This purpose of this section is to give details about what user can expect from Car Rental Management. This will provide an overview of requirements gathered.

2.1 Product Perspective

CRMS will automate the manual car reservation process. It will be easy to admin for handling customer registrations, present the car details, handling reservations. The new system will consist as a business system. The system will handle all the functionalities related to the car renting company. It will be able to undergo evolution in a much simpler way and will be more adaptable to the changing systems. The upcoming changes in the future will be predicted and the system will be designed in a way to adapt to the changes that will occur over the years. We can develop the system for two subsystems as customer subsystem & business subsystem in the future.

2.2 Product Functions

The following are the high level functionalities of the product. These functions are carefully broken down into specific functions and explained in the 3.1 section of the document.

- Reservation of vehicle and related functions
- User feedback function

2.3 User Characteristics

There are two types of users in the system. But developers use the system for maintenance and develop as stake holders requirements.

Admin (direct uses) : Most probably new to the system.
Do not require any technical expertise.
They have to improve knowledge to use system.

Developers : High technical expertise.
Experience and domain knowledge.
Well aware of system functionalities.

2.4 Constraints

Time constraints

Since this is a module project the main constraint is Time.

The total time available for the system development is 1 Month.

2.5 Assumptions

The software tools required for the system development are available to the developers.

The requirements gathered are correct and achievable.

The final deliverable of the project can be hosted in a server.

3. Specific Requirements

3.1 Functionality

3.1.1 Log-in with admin account

Introduction

Admin of the system can log into the system using existing account.

Input

Admin user name and password.

Processing

Admin login details authenticating.

Output

Admin view of the system.

3.1.2 Customer registration, skip if customer already registered

If customer is new to the service;

Introduction

Admin of the system can register a customer.

Input

Insert name, contact number, mail address (can be null), address.

Processing

Customer registration details authenticating.

Output

Admin can view customer profile.

Else,

Introduction

Admin of the system can save customer activities.

Input

Keywords for searching: contact number

Processing

Customer profile details authenticating.

Output

Admin can view customer's history of activities.

3.1.3 Search for available vehicle;

Introduction

Admin will be able to search for vehicle as customer need.

Input

Keywords for searching: Vehicle name/Vehicle category

Processing

All the related vehicles will be searched from the database.

Output

All possible results will be shown to the customer.

3.1.4 View vehicle with details

Introduction

Admin can view the detail of the vehicle selected.

Input

Selection of the vehicle.

Processing

All the details of the selected vehicle will be fetched from the database.

Output

Details of the vehicle: Name and model with picture

Registration number

Fuel consumption

Insurance details

Cost
Availability
Previous feedbacks

3.1.5 Calculate cost

Introduction

Admin can calculate an approximate cost for the renting process after selecting a vehicle.

Input

Time duration (days), admin can input 'discount amount' by looking of customer's activity history.

Processing

The cost will be calculated using input and the cost information in the system.

Output

Calculated cost.

3.1.6 Reserve car for renting

Introduction

Admin can reserve the car after considering all the information by customer.

Input

Renting date and time Renting duration

Processing

The reservation information will be added to the database. The availability of the vehicle will be changed.

Output

An email will be sent to the customer confirming the reservation & another email to company daily report inbox.

3.1.7 Add new car/ car category

Introduction

Admin can add new car type or a new model to the system.

Input

Car details.

Processing

New car added to the database.

Output

Admin can view new car details.

3.1.8 Update vehicle details

Introduction

Details of existing cars can be changed by the admin.

Input

Changed details.

Processing

Previous details are replaced with the new details in the database.

Output

Admin can view updating details.

3.1.9 Change vehicle status

Introduction

Admin can change the car status to Available or Not Available.

Input

Change status request.

Processing

The status of the car changed to the given status.

Output

Admin can view updating details & share status by system to other admins also.

3.1.10 Remove car/ car category

Introduction

Admin can remove a car model or remove a whole type from the system.

Input

Car model/ type remove request.

Processing

Car model/ type removed from the database.

Output

Admin can't see these removed items in database so longer.

3.1.11 View reports

Introduction

Admin can view reports of the activities happened in the system. Reservation details of all the cars in a given time period.

Input

View reports selection.

Processing

Relevant fields from database tables are acquired with respect to given parameters.

Output

The requested report. System functionalities.

4. Other Nonfunctional Requirements

4.1 Performance & Security Requirements

Admin usability

Administrator of the system will be given a maximum 3 days training for the system. All the functionalities of the system should be clear.

Response Time

Response time of the system should be very low. Average response time: 3-6 seconds Maximum response time: 10-15 seconds.

Throughput

Throughput of the system should be considerably adequate to provide a continuous service for the customers.

5. UML DIAGRAMS

Capacity

The system should be able to accommodate up to 5000 users.

4.2 Safety Requirements

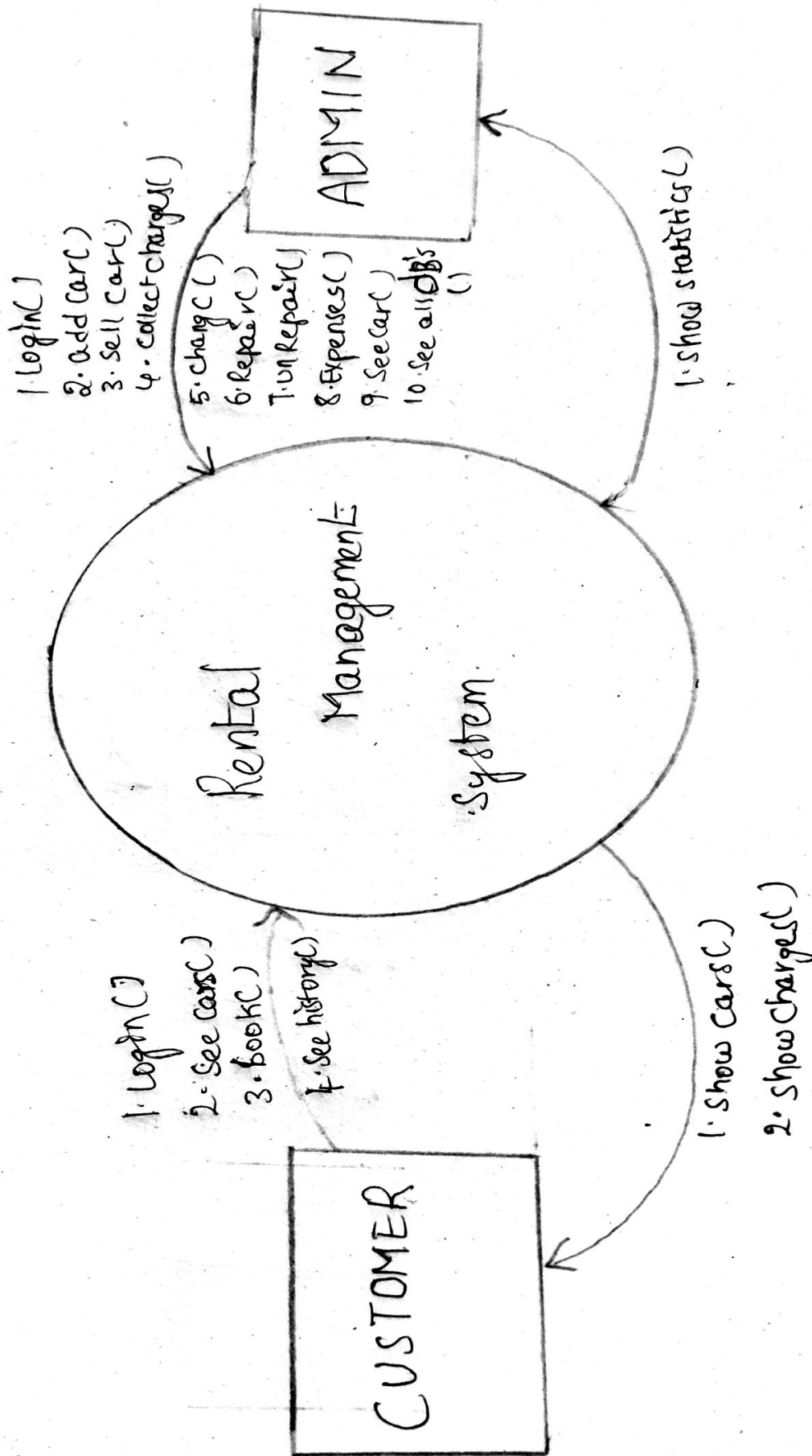
- Secure any transmissions of private information between the customer and the company.
- Prevent any potential threats such as SQL injections through the forms or search boxes.
- Prevent third party users at administration level.
- Verify website security certificates (that lock in the address bar).
- Prevent false information from being used as payment.
- Prevent false information gives from being used when registering.

4.3 Software Quality Attributes

- Maintain a user friendly environment that is visually appealing.
- Easy to see and use navigation.
- Maintain readable content. It's important to trainee workers.
- Searching cars should be accessible to workers who are and are not logged in.
- Selecting and making a payment should be available to worker who are and are not logged in.

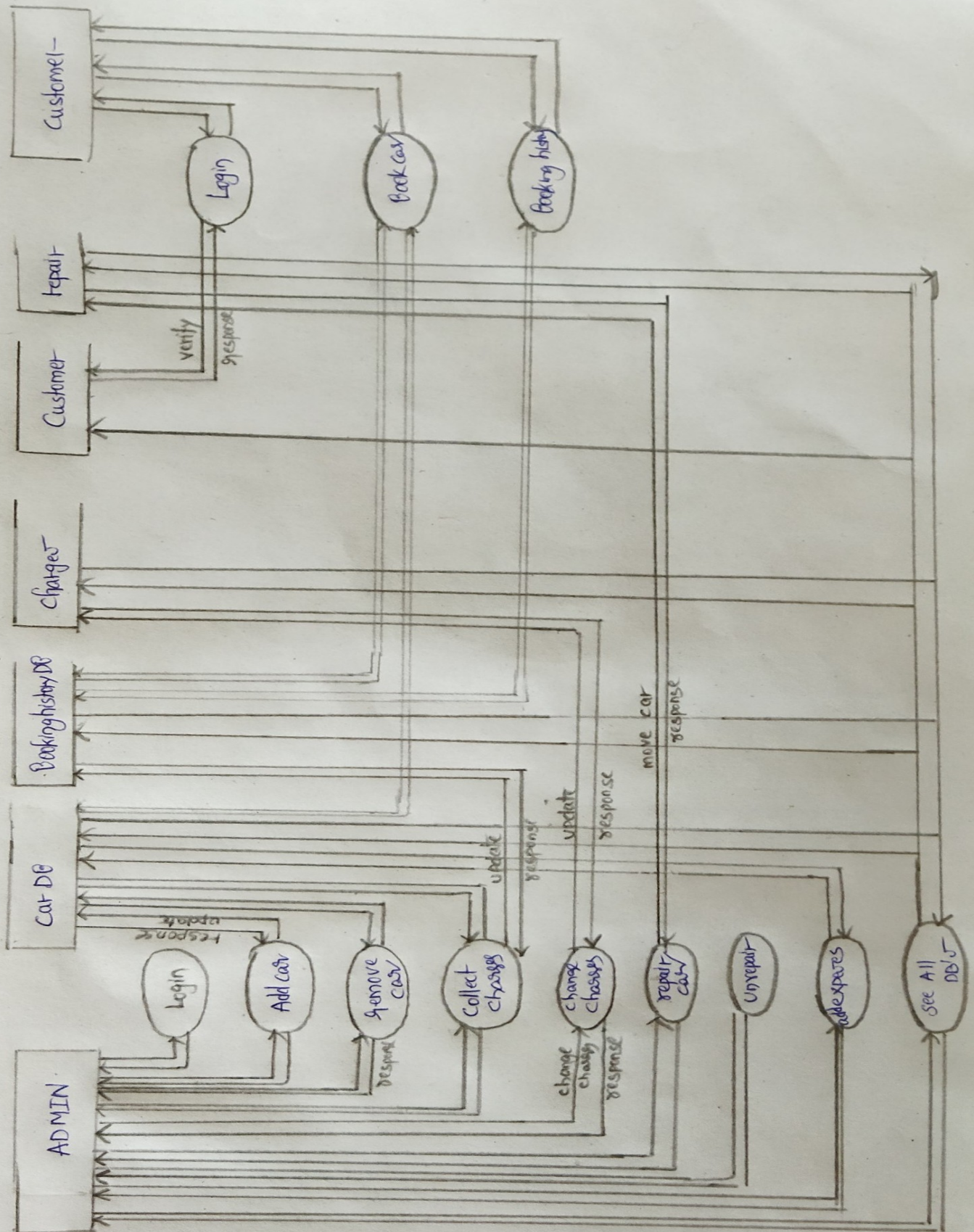
5. UML DIAGRAMS

5.1 Context Diagram

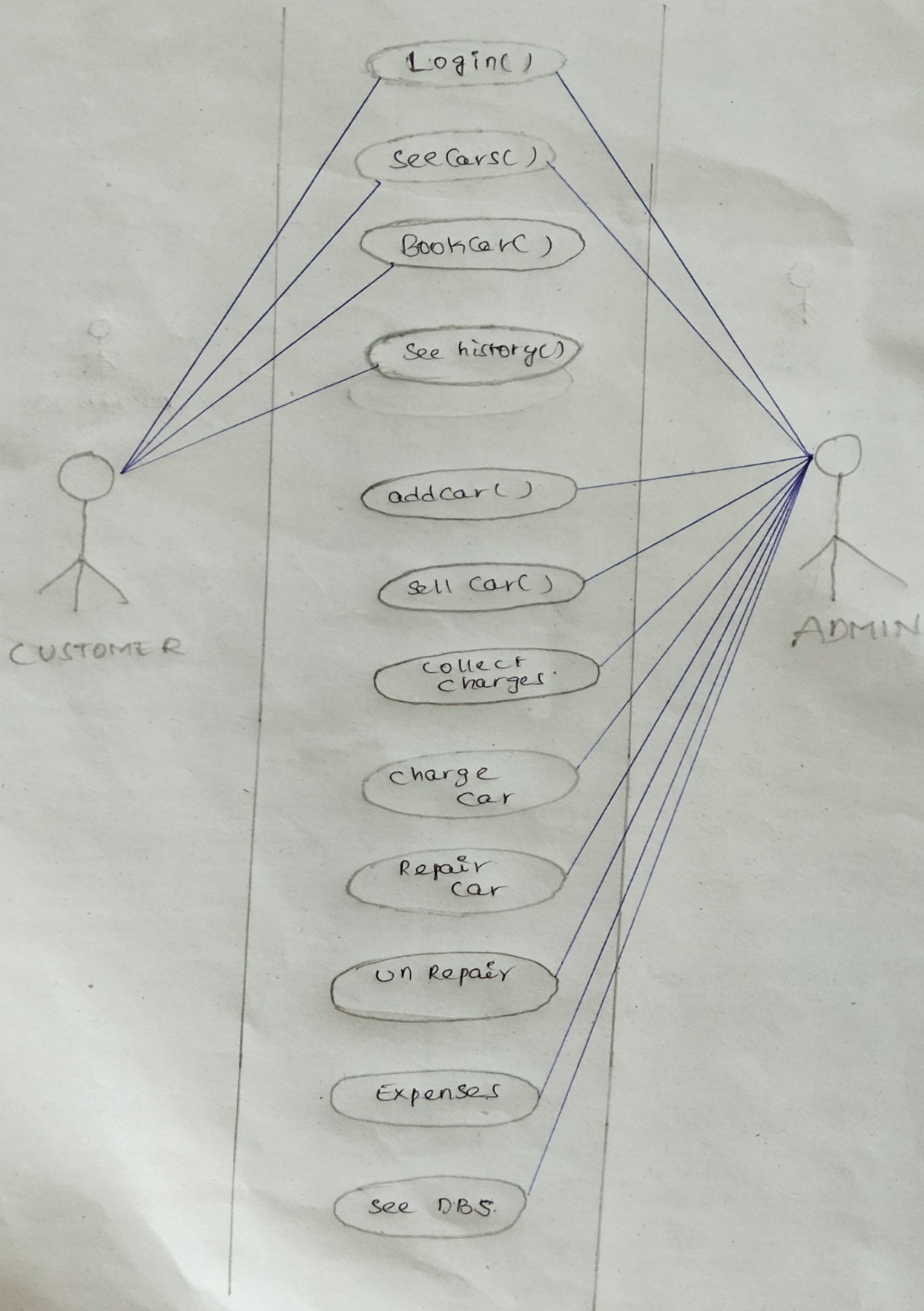


CONTEXT DIAGRAM

5.2 DFD

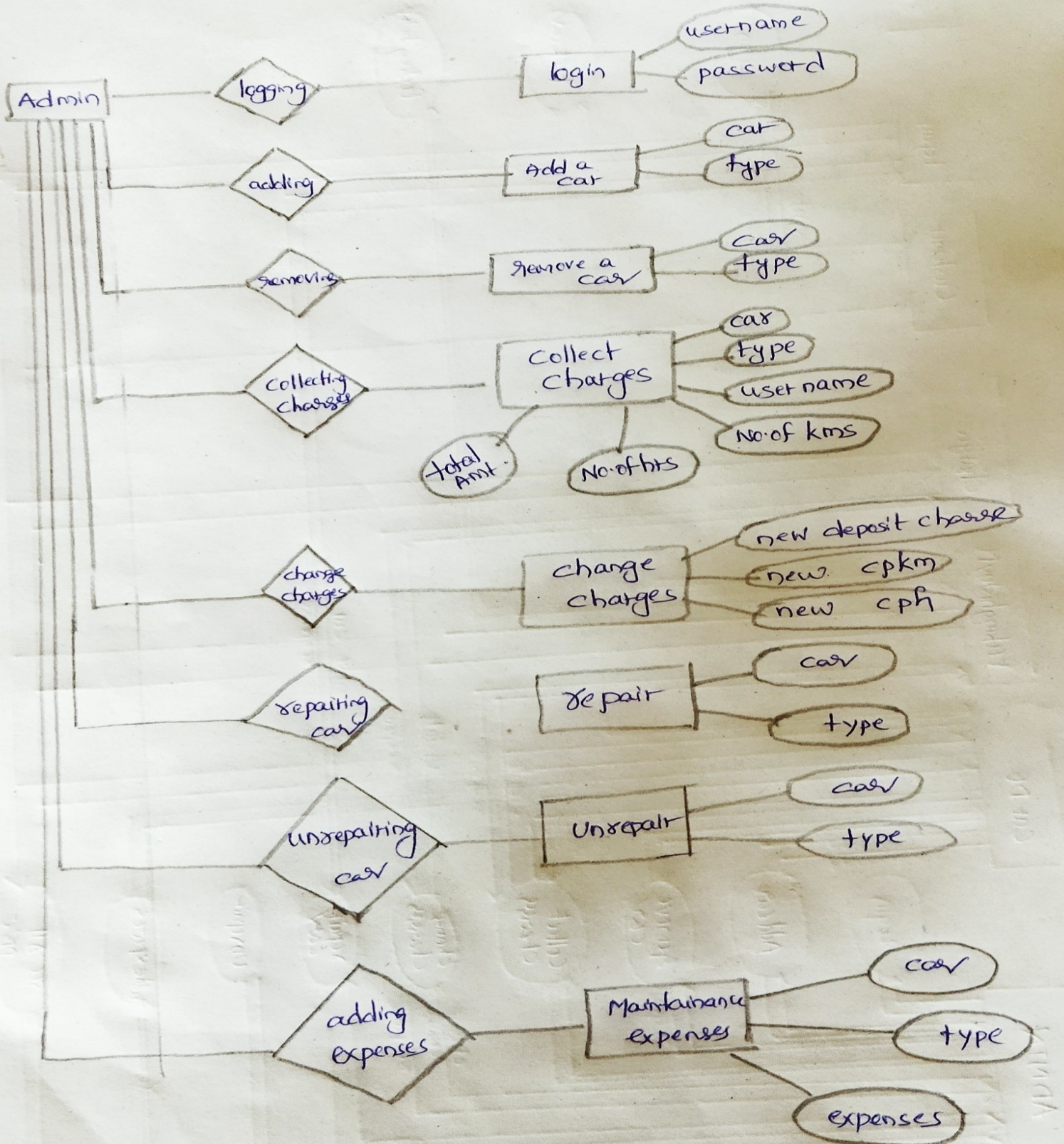


5.3 Usecase Diagram

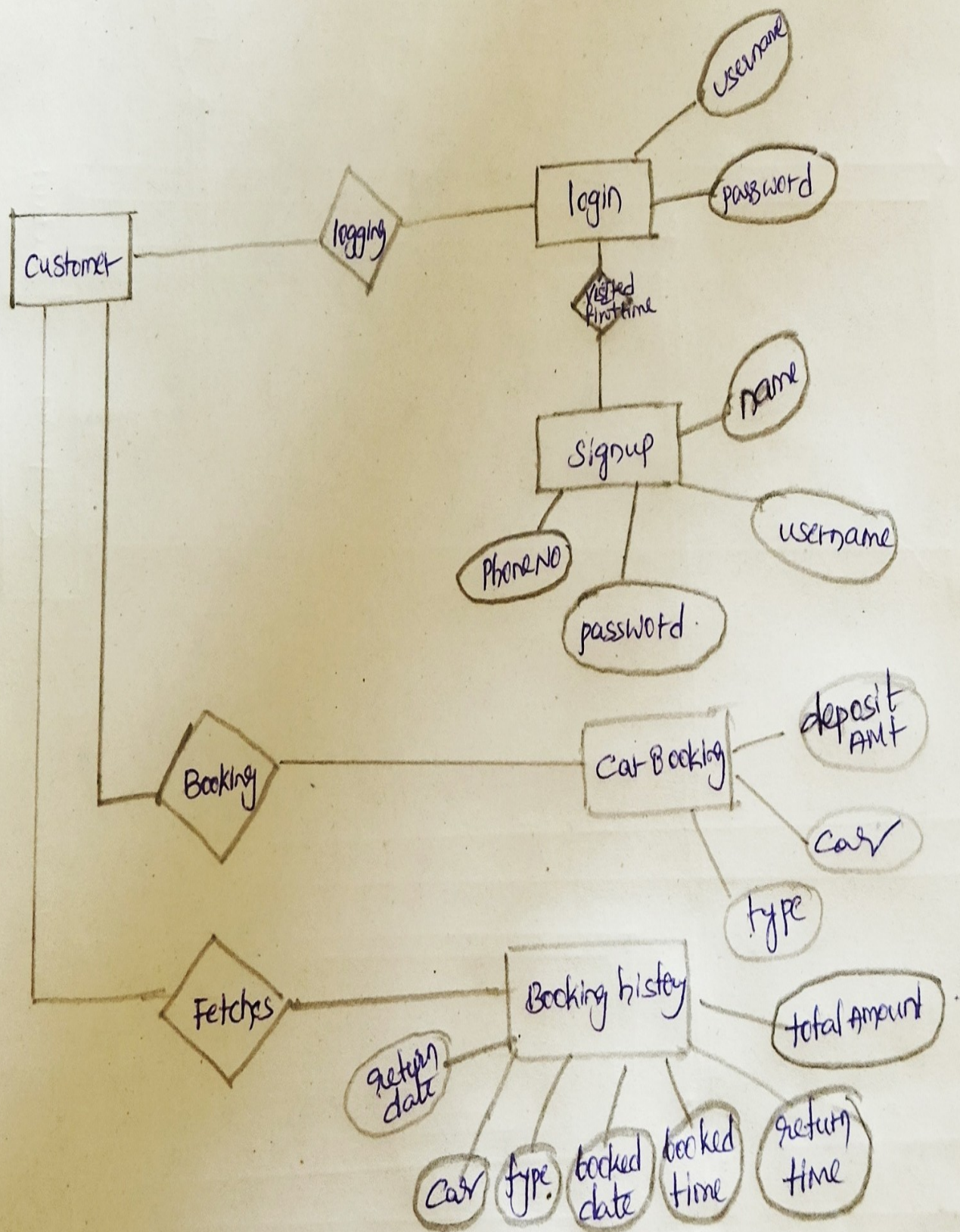


5.4 ERD

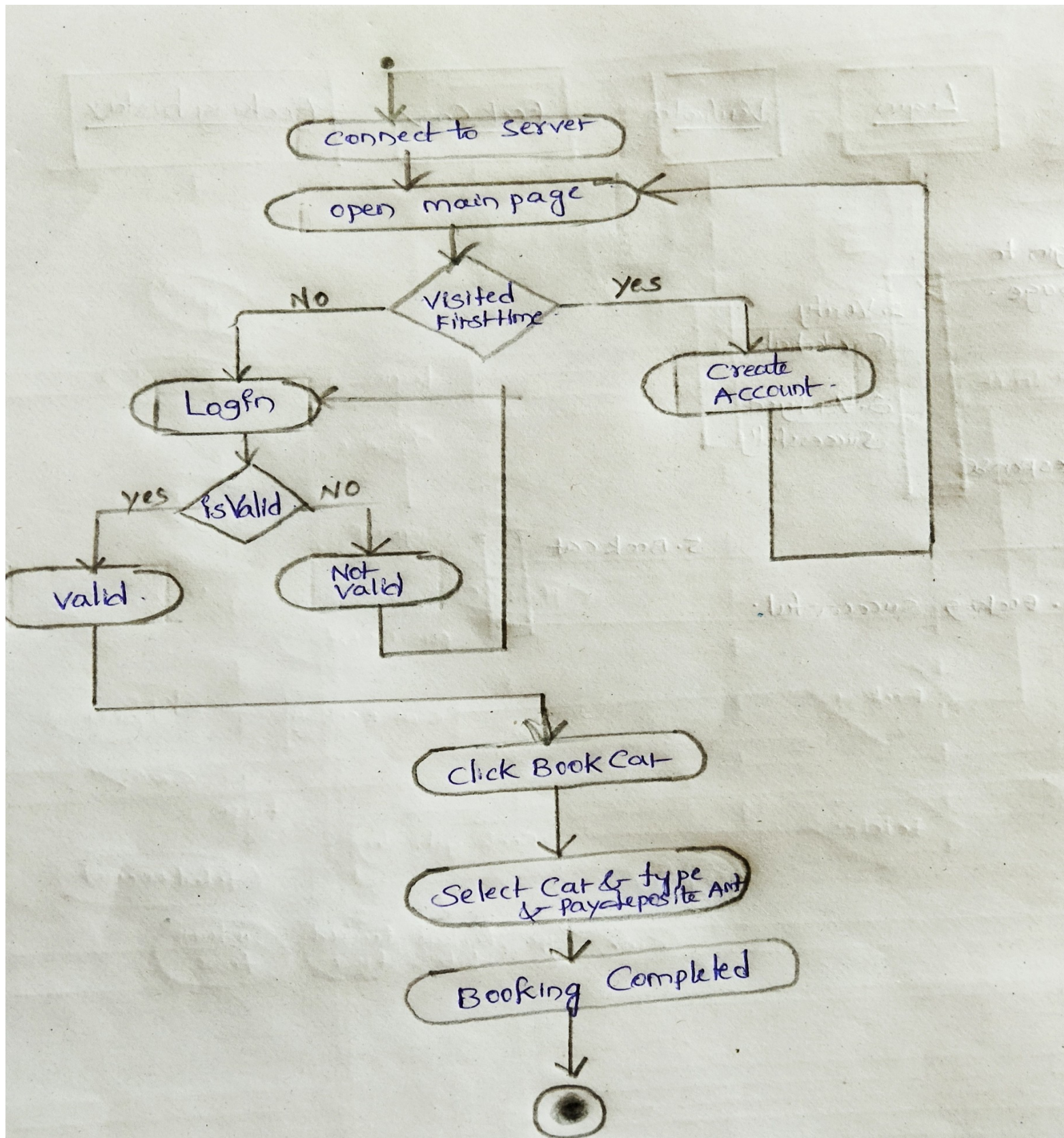
ERD for ADMIN



ERD FOR CUSTOMER.



5.5 Activity Diagram



5.6 Sequence Diagram

