

UNIVERSITY OF MAURITIUS

BSc (Hons) Software Engineering Level 1

Software Analysis & Modelling SIS1011Y

Title: Proposed solution for a traditional car rental
system

Date: 07th March 2022

Lecturer : Dr. Y Chuttur

Students:

Chumbit Khilesh	ID: 2117855
Veerapen Chetty Sarah	ID: 2116427
Beerachee Deesha	ID: 2117144
Peeharry Raksha	ID: 2116307
Bholah Mohammad Yassir	ID: 2114519

Table of Contents

1. Description of business problem:.....	2
2. Description of proposed solution:	2
3. Entity Relationship Diagram (ERD):	3
4. Flowchart:	5
5. Questionnaire:	8

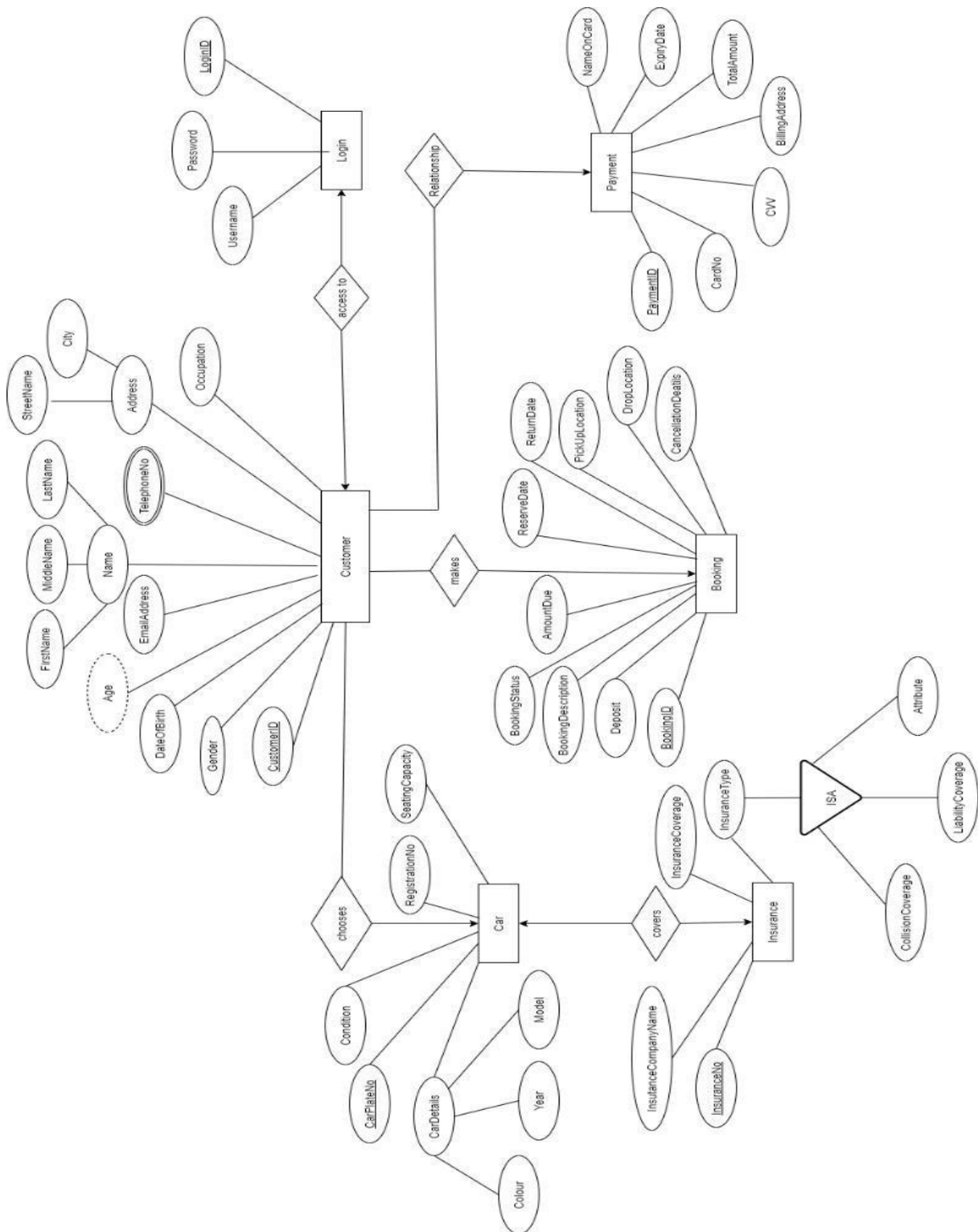
1. Description of business problem:

The car rental business was never a piece of cake. Keeping track of all information being processed on physical paper on a daily basis is a very laborious task. Evidently, most car rentals would find it very difficult to handle. Manual booking management is very tedious and cumbersome and not to forget the high likelihood of human errors. Simply put, quite a workload is involved. Additionally, to be able to keep one's clientele and possibly get referred more to other potential customers, a simple, user friendly and hassle-free booking experience is a must. Lastly, there is always the challenge of facing new competitors. Considerable amounts of newer companies are entering into the market with new and fresh ideas. Hence, it is the duty of a business to adapt to change and get onboard with the current trends in order to mitigate the gap between itself and the competitors.

2. Description of proposed solution:

The answer is none other than a car rental management software. The system is an online-based platform designed to manage users who sign-up for free profiles, online bookings, billings and more. Managers can access customer profiles, rental history, and contact information using the platform's built-in customer relationship management system. Users can view reservations details such as vehicle type, price, location, pickup/return date, and current status (available/not available) using the user interface embedded in the system. Features include easy bookings, secure online-payment, realtime tracking, recommendations, user feedback and an FAQ section. If implemented, a seamless booking experience is provided, daily car rental activities are automated and user interest is promoted.

3. Entity Relationship Diagram (ERD):

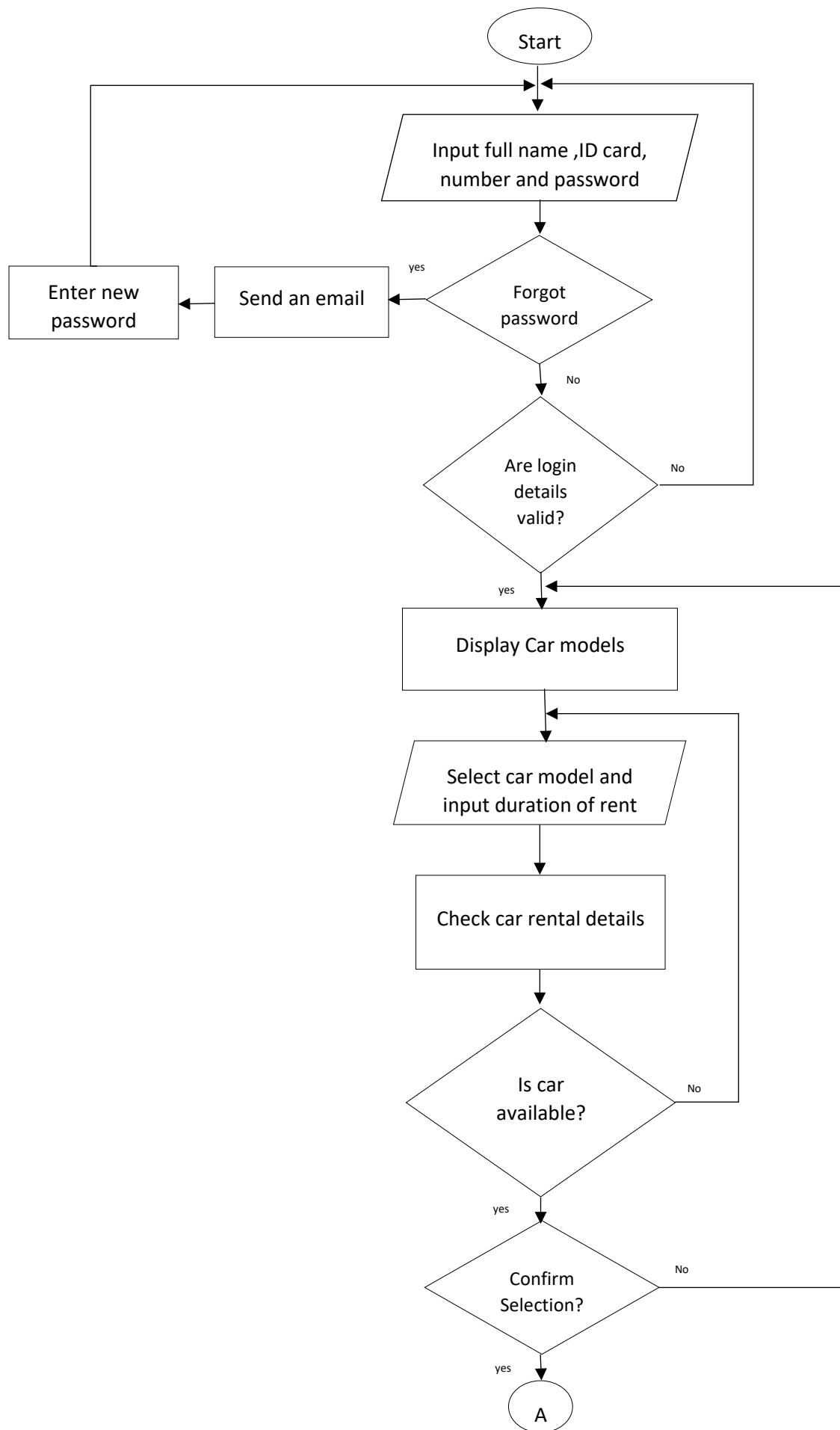


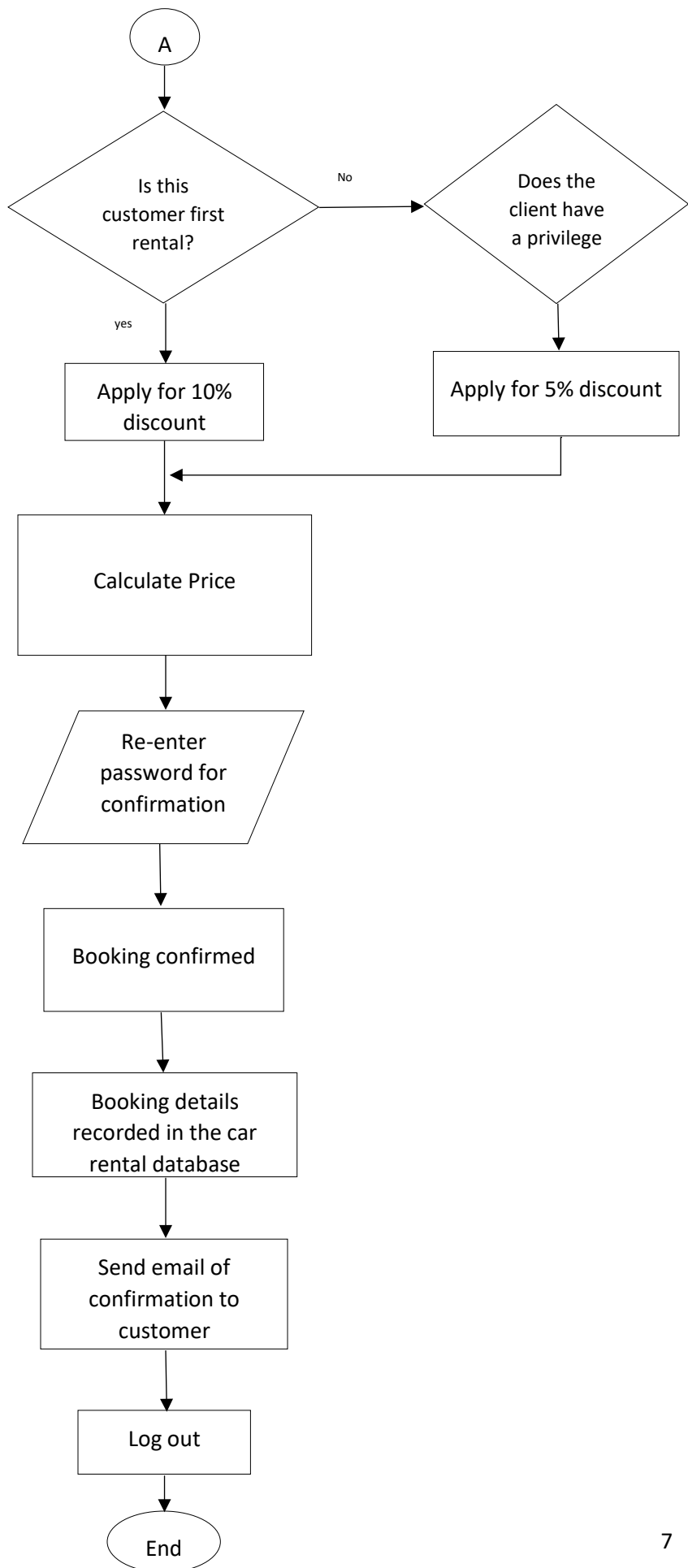
Assumptions:

1. Each car will have their own unique insurance assigned to them and vice versa.
2. If a customer rents a car, then no matter the length of time the car was rented for, it cannot be re-rented to another customer during the same day.
(A customer can rent many cars at once but a specific car cannot be rented by more than 1 customer during the same day)
3. A customer can carry out many bookings but each booking must be traced back to only a specific customer.
4. A customer can carry out many payments but each payment must be traced back to only a specific customer.
5. Each customer will have access to a unique login details and vice versa.

4. Flowchart:

The following flowchart will elaborate upon the single process of *Booking*.





5. Questionnaire:

Survey on online car booking:

Dear respondent,

In this modern world where technology is so advanced, online booking makes life a lot easier due to its faster access and where everything can be done within a few clicks such as customization, booking and even payment amongst many. The following survey is being conducted to know about your opinions relevant to an online car rental platform. Do spare a few minutes of your time to fill in the questionnaire accordingly. Thank you in advance.

1. Which one do you prefer?

- ☐ Traditional Car Booking (i.e. face to face interactions)
- ☐ Online Car Booking

2. Have you ever conducted an online booking ? If yes, Please specify, how did you feel about the experience?

3. On what criteria(s) do you choose a car rental company ?

- ☐ Reservation procedure
- ☐ Customer service
- ☐ Vehicle reliability
- ☐ Price
- ☐ Other:

4.

You feel comfortable divulging your bank details while doing online transactions on the car rental website

☐ **SD**

☐ **D**

☐ **N**

☐ **A**

☐ **SA**

KEY:

SD: Strongly Disagree

D: Disagree

N: Neutral

A: Agree

SA: Strongly Agree

5. What additional features would you like to be implemented in an online car booking experience ?

***You have reached the end of the questionnaire. Thank you for your time for filling it up.**