SOFTWARE DESIGN DOCUMENT

for

NURSERY MANAGEMENT SYSTEM

Version 1.0

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1 Introduction

1.1 Purpose

The main objective of this document is to make visualize the requirements of an online Nursery Management System using uml diagrams.
This document gives the detailed description of both functional and non-functional requirements proposed by the client. The purpose of this project is to provide a friendly environment to maintain the sales records, products, accessories and carton labels of plants and customers.
The software handles most accountin systems also for employees

1.2 Project Scope

The purpose of the online Nursery Management System is to ease the work of keeping records of sales for the nursery owners, and to create a convenient and easy-to-use application for customers, trying to buy Plants and various accessories.
The system is based on a relational database with its Nursery management and reservation functions.
The project is specifically designed for the use of nursery owners and the managers.The product will work as a complete user interface for nursery management process.
Online Nursery Management System can be used by any existing or new nursery to manage their sales records, products, accessories and carton labels of plants and customers.It is especially useful for any plant nursery where modifications in the content can be done easily according to requirements.
This project can be easily implemented under various situations.We can add new features as and when we require, making reusability possible as there is flexibility in all the modules.

1.3 Definitions and acronyms

This section of introduction consists of the definitions,acronyms and abbrevations of all terms that might properly interpret the software design document.

The following are listed in the below table :

NMS	Nursery Management System
SRS	Software Requirement Specification
PC	Personal Computer
HDD	Hard Disc Drive
RAM	Random Access Memory
IE	Microsoft Internet Explorer
Java	Platform Independence
SQL	Structured Query Language
ER	Entity Relationship
UML	Unified Modeling Language
IDE	Development Environment Integrated
ISBN	International Standard Book Number
IEEE	Institute of Electrical and Electronics Engineers

Figure 1.1: All abrevations and definitions

2 Design Overview

2.1 Description of problem

The physical buying of plants in vast quantities may result in extra cost of transport and physical work of the customer.This the reason we came with a productive solution as a "Nursery Website" in which transport cost can be saved due to our free delivery and physical work can be reduced due to a trusted website like nursery management system. And even the construction cost of the nursery can be cancelled due to a pure online management system.

2.2 Technologies used

We used html and css for the designing of frontend of the website.
The backend is done using python and flask framework, MYSql server , jinja templating are used technologies here.

1. Frontend : HTML-5 , CSS-3 , Bootstrap.
2. Backend : Flask framework , MYSQL Database , Jinja templating.

We used python for the project.

2.3 Website Framework

The inputs consist of the query to the database and the output consists of the solutions for the query.
Keeping an accurate database of all customers, the plants, other accessories and all items that are necessary as it would improve the overall of productivity of the library.
"NURSERY WEBSITE" has features that are main and also some are sub. But all the feature is necessary for this software.
The nursery admins/managers should be provided the surety that their data is secure. This is possible by providing -

1. Authentication: Nursery owners/managers authentication and validation using their unique member ID.
2. Updation of data: Proper monitoring by the nursery owners/managers which includes updating data.

3. Access to database: Proper accountability which includes only the nursery owners/managers to access the online database.

4. Managers : Managers manages the updation and deletion in the warehouse and the product management.

5. Bank Manager : The bank manager can add cards and even credit balance into the users payment card.

6. Customer : Customer can order the required product from website as per the requirements.

7. Admin : As the owner of the nursery he has the access to the database and can overview every activity.

The following class diagram and ER diagram are self explainatory that gives better understanding of our website

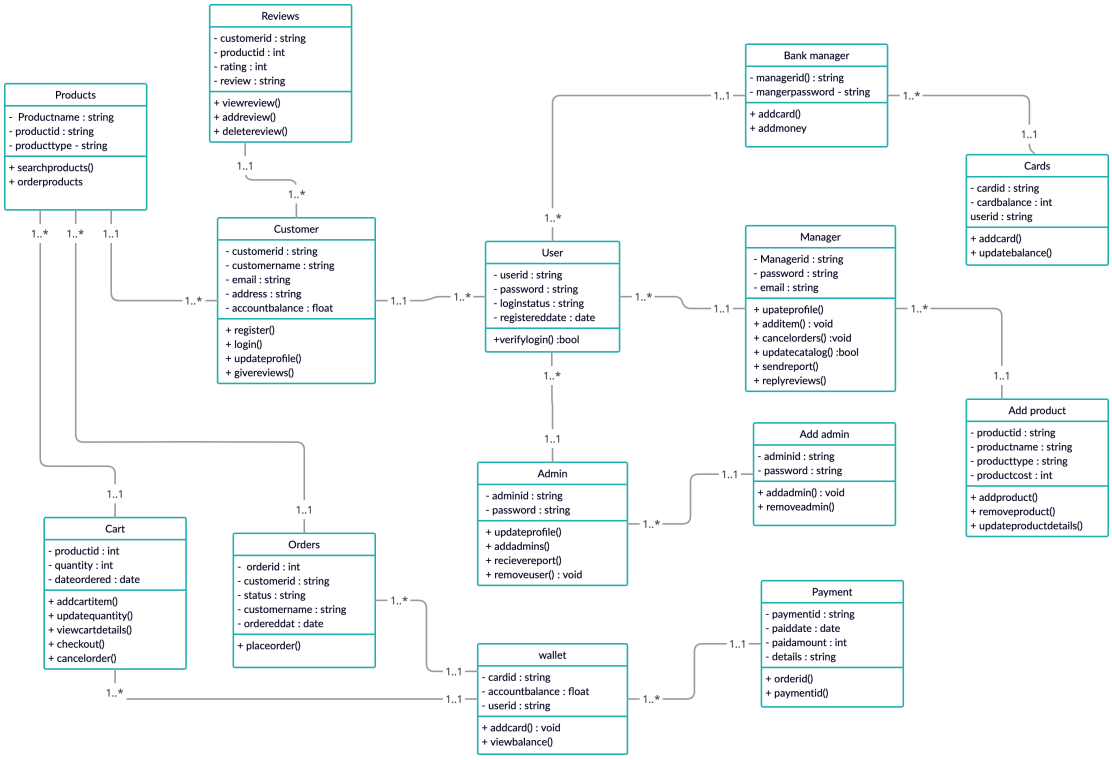

Figure 2.1: Customer Activities

we have used mysql for the construction of ER diagram

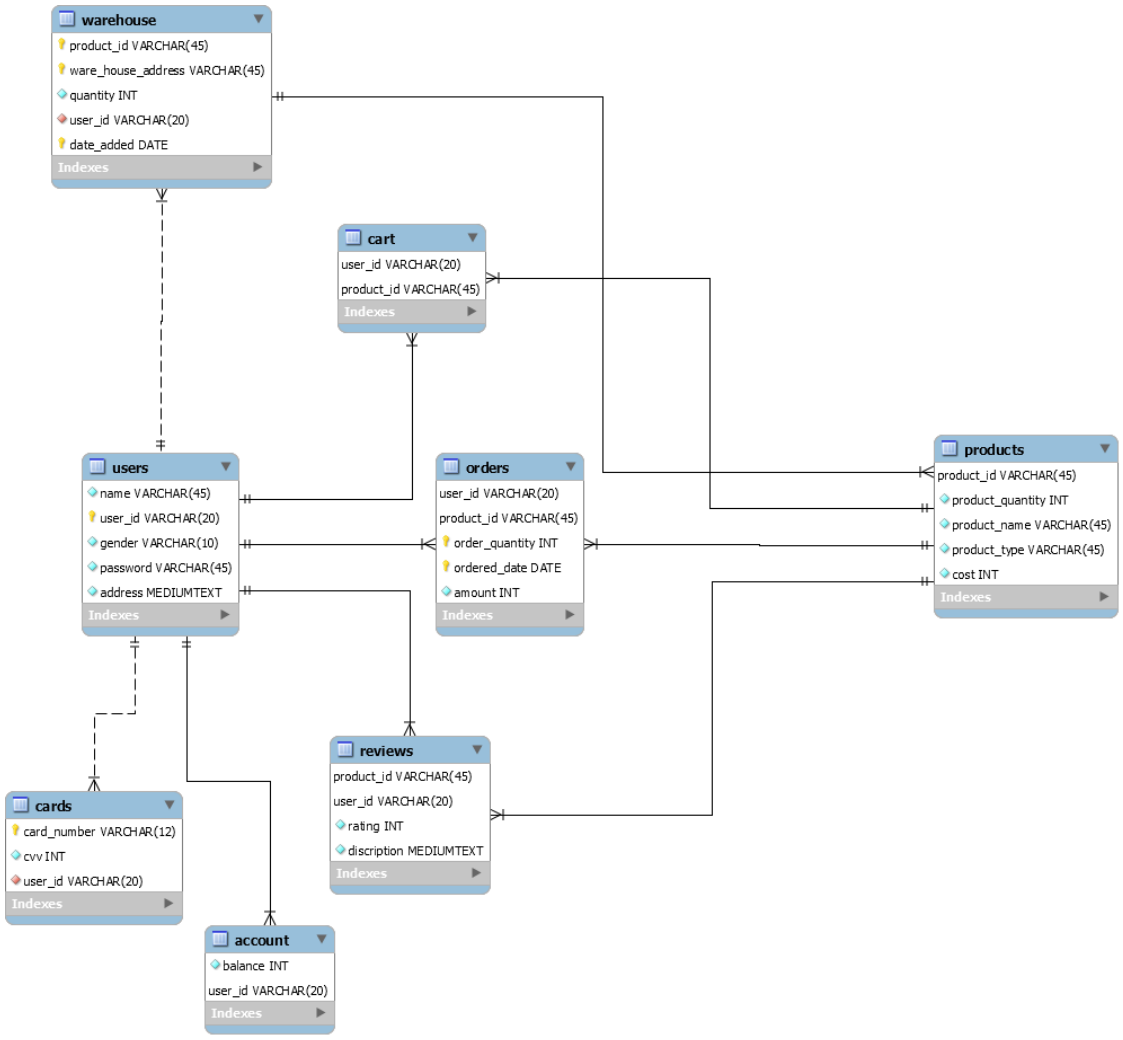

Figure 2.2: ER diagram

3 System Architecture

3.1 User Interface

The customer first register into the webpage and then log in using the registered credentials.After logging in user search for the needed product and can add the product to the cart or buy the product.
Further into the process, the payment process is initialized and after finishing the payment order.The feedback can be given by the customer.

3.2 Manager Interface

Manager activities have 2 steps -

- Warehouse management
- Product management

Manager will add the products to the warehouse entity which can be viewed by the admin known as the warehouse management.
Manager can update the products of the website from the warehouse entity.

3.3 Admin Interface

Admin (owner of the nursery) has the authority to update or delete products, can even add the admins.
Admin even has permission to overview the management of the nursery website.

3.4 Bank Manager Interface

Bank manager has the authority to add the payment cards to the customer wallet.
The bank manager can even credit the amount into the users card used for the payment.

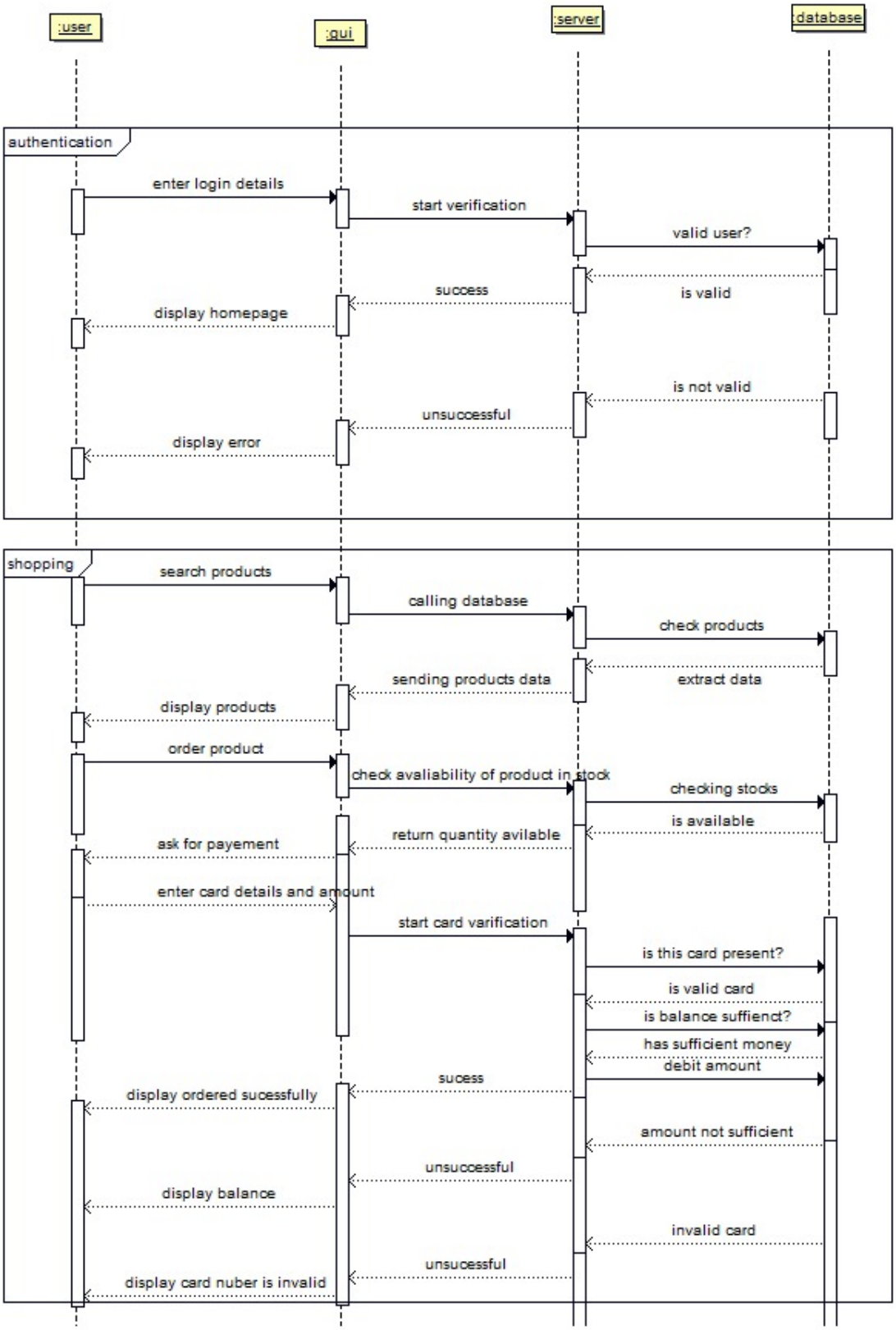

Figure 3.1: User sequential diagram

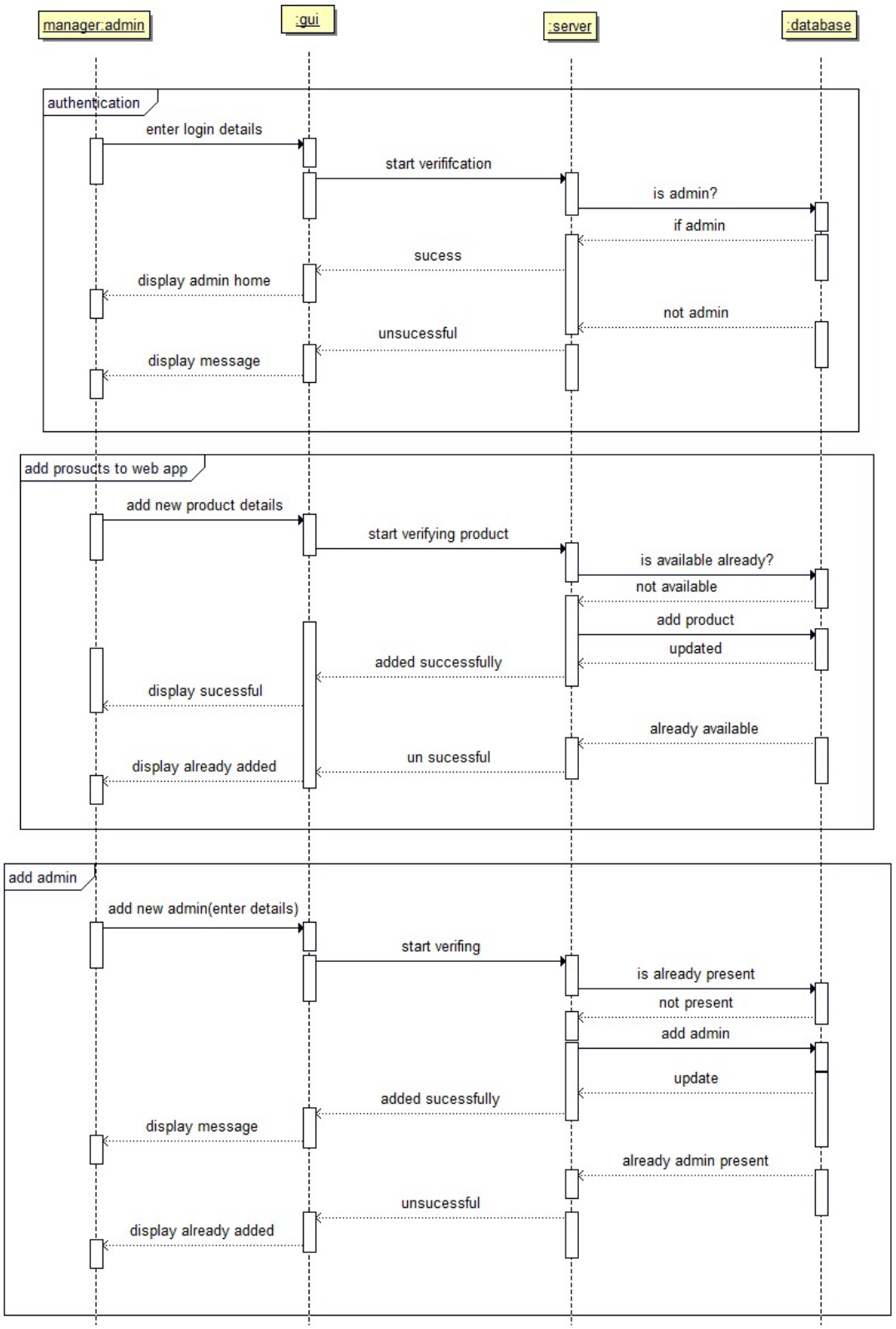

Figure 3.2: Manager sequential diagram

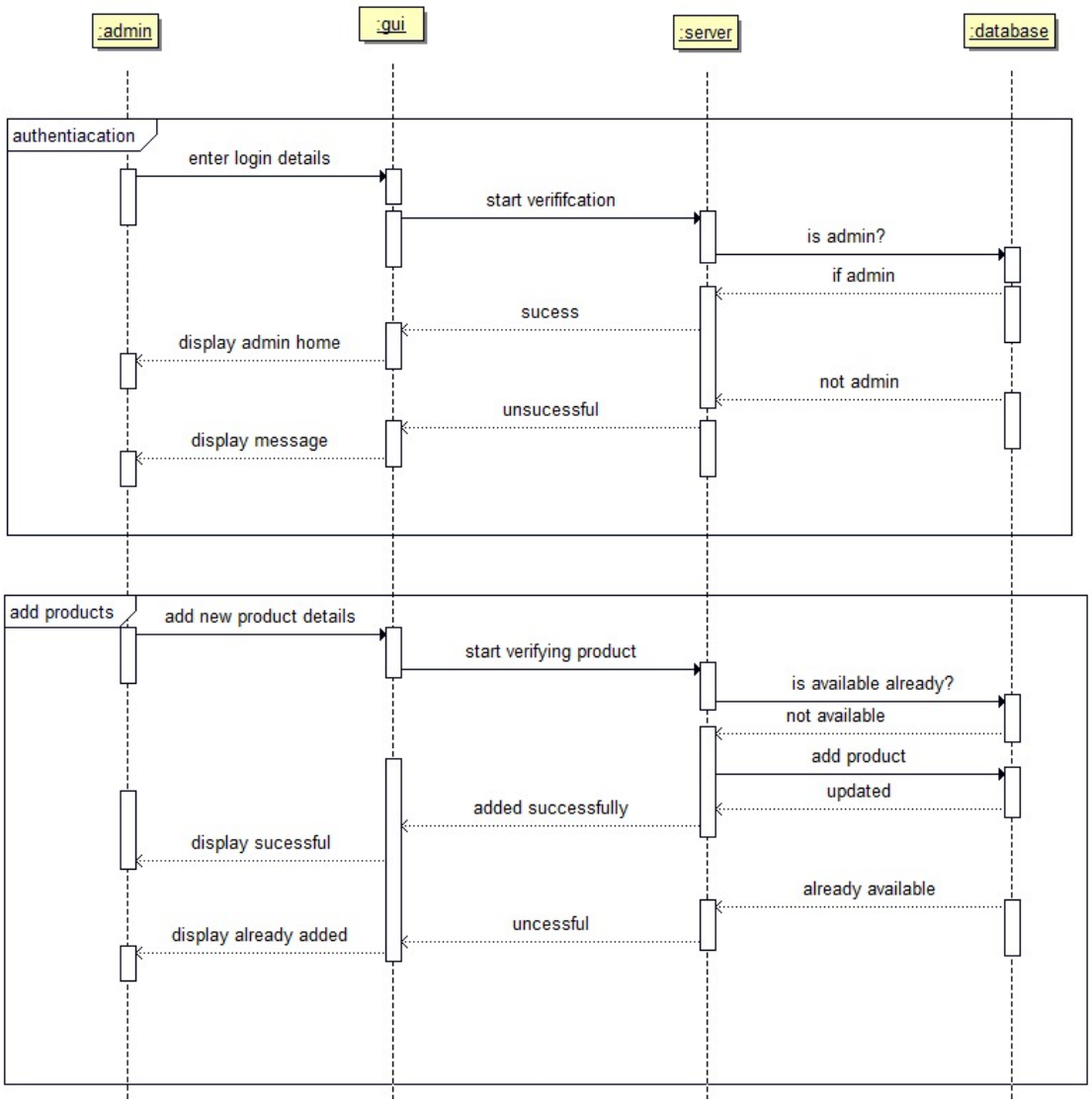

Figure 3.3: Admin sequential diagram

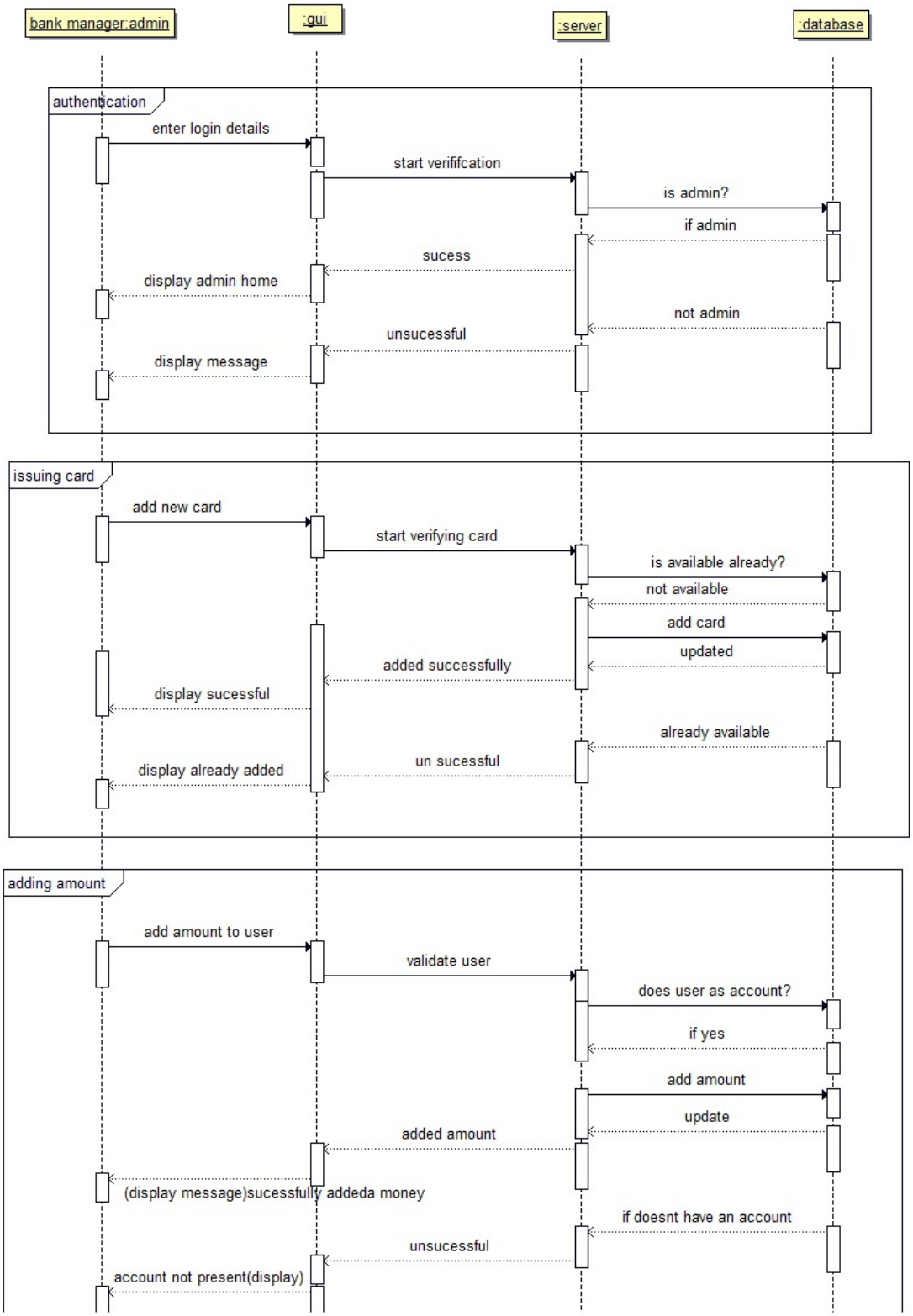

Figure 3.4: Bank manager sequential diagram

4 Architectural design

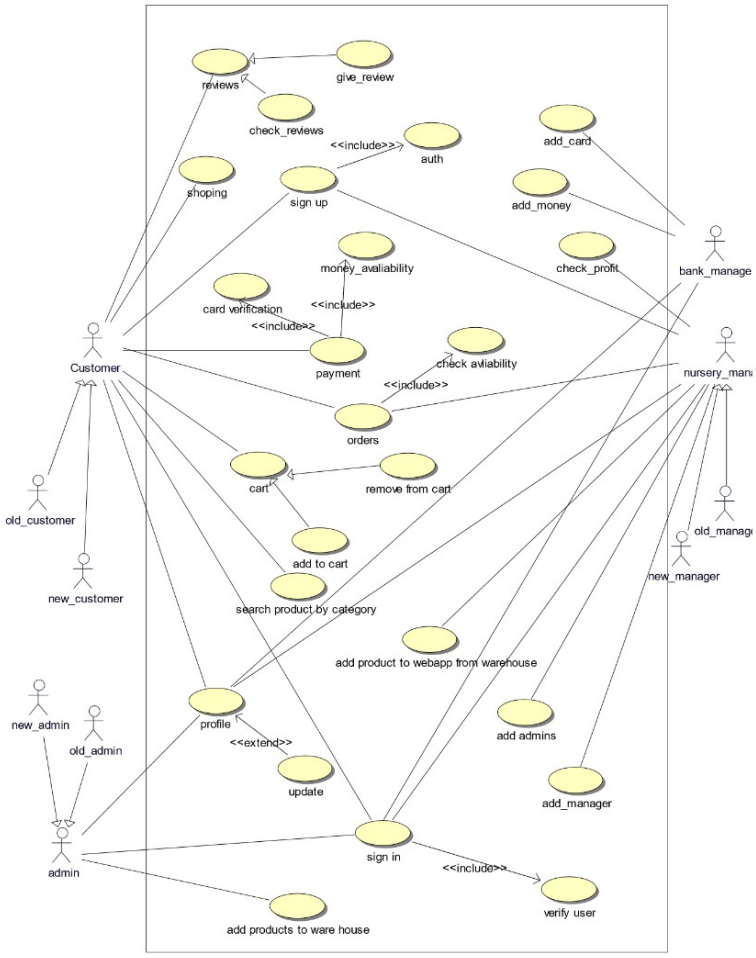

Figure 4.1: Use Case Diagram

5 Users Activities

5.1 Customer activity

Customer can order the required product from website as per the requirements.

5.2 Manager activity

Manager activities have 2 steps -

- Warehouse management
- Product management

Manager will add the products to the warehouse entity which can be viewed by the admin known as the warehouse management.
Manager can update the products of the website from the warehouse entity.

5.3 Admin activity

Admin (owner of the nursery) has the authority to update or delete products, can even add the admins.
Admin even has permission to overview the management of the nursery website.

5.4 Bank Manager Activity

The bank manager can add cards and even credit balance into the users payment card.

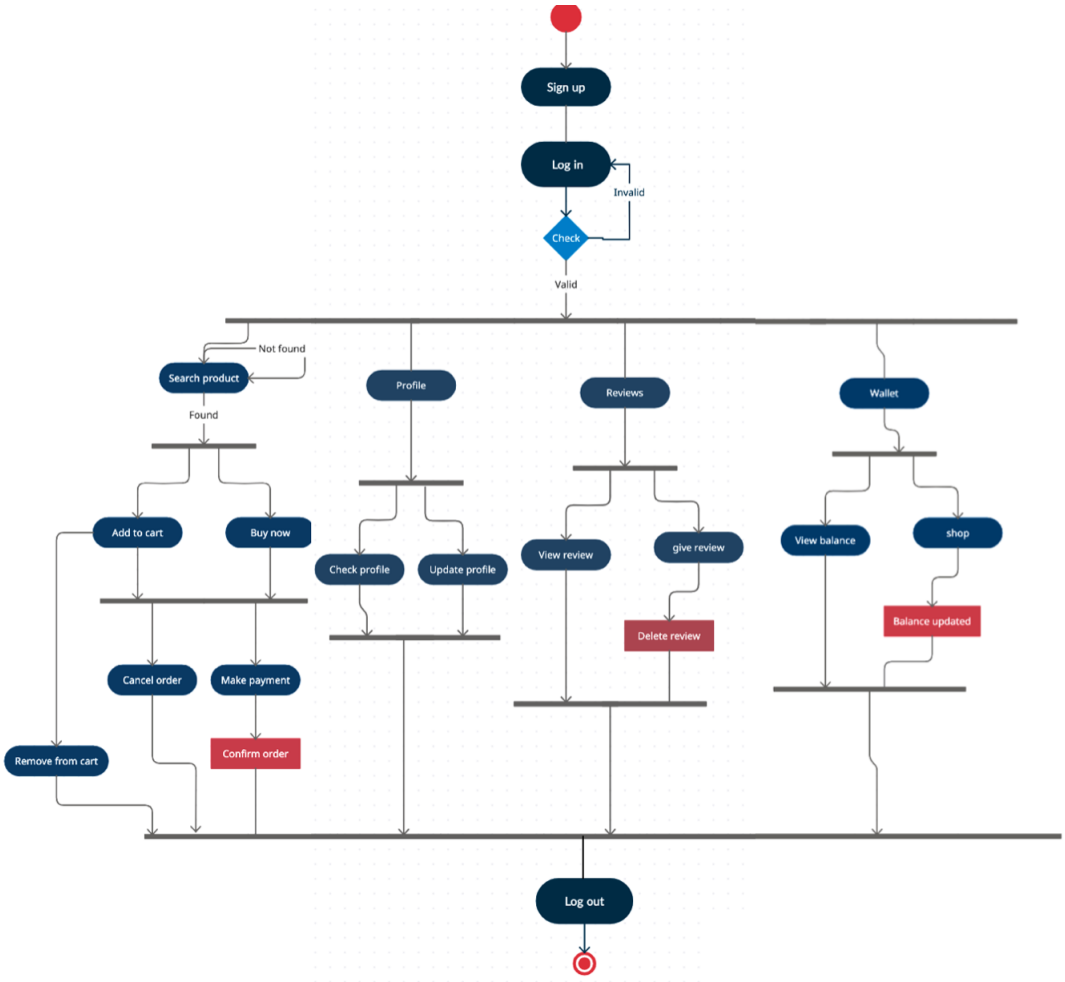

Figure 5.1: Customer activity Diagram

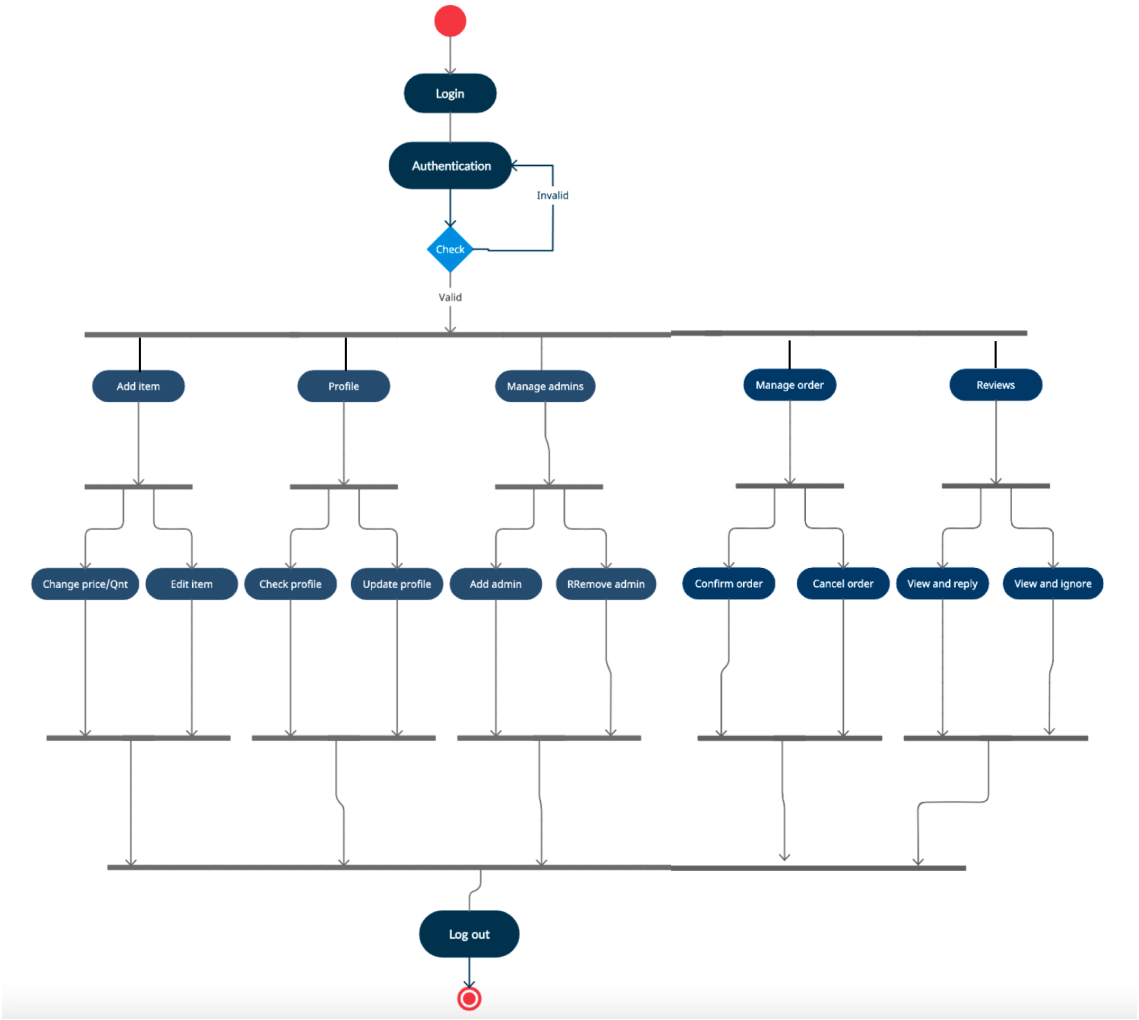

Figure 5.2: Manager activity Diagram

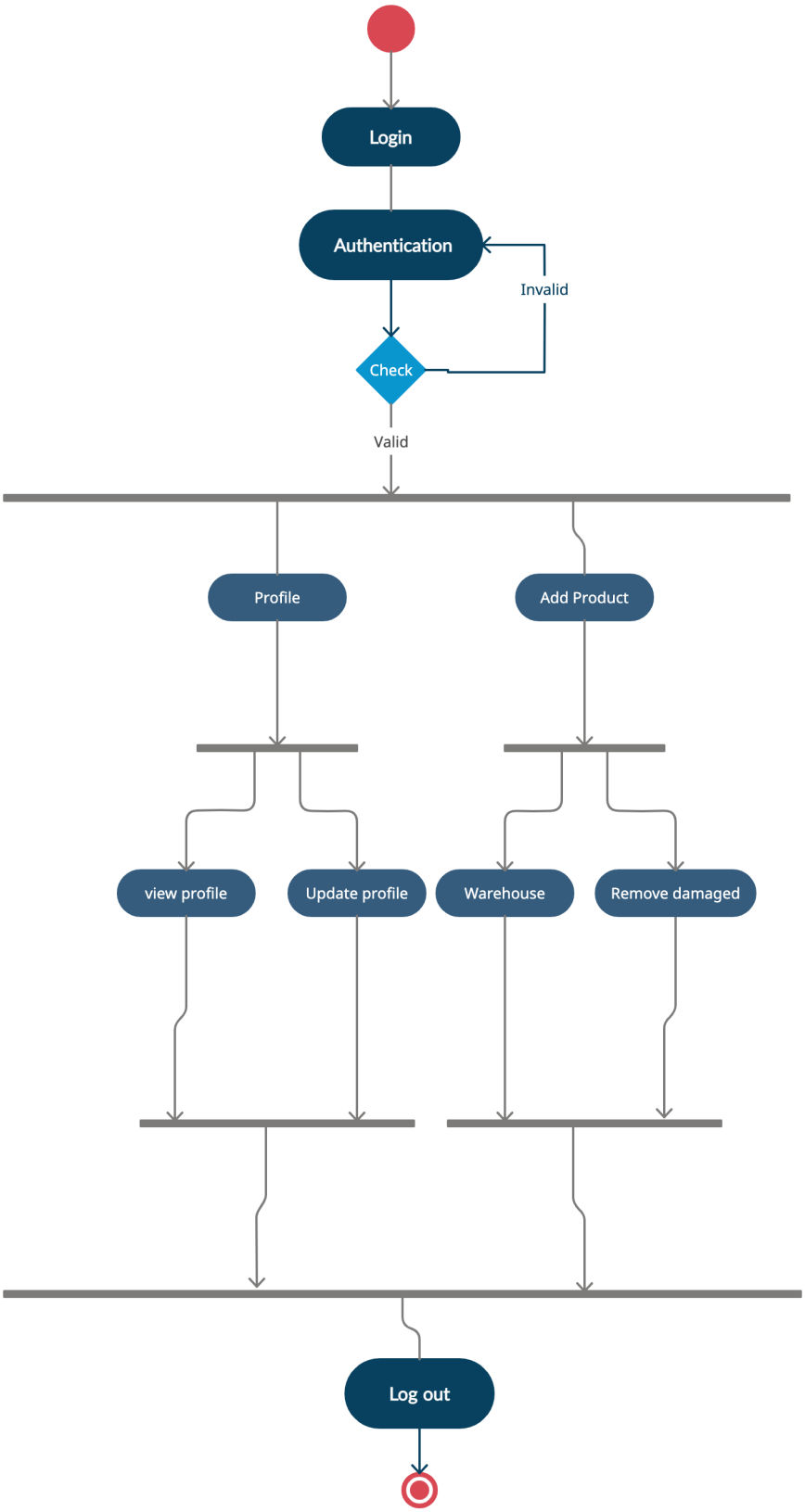

Figure 5.3: Admin activity Diagram

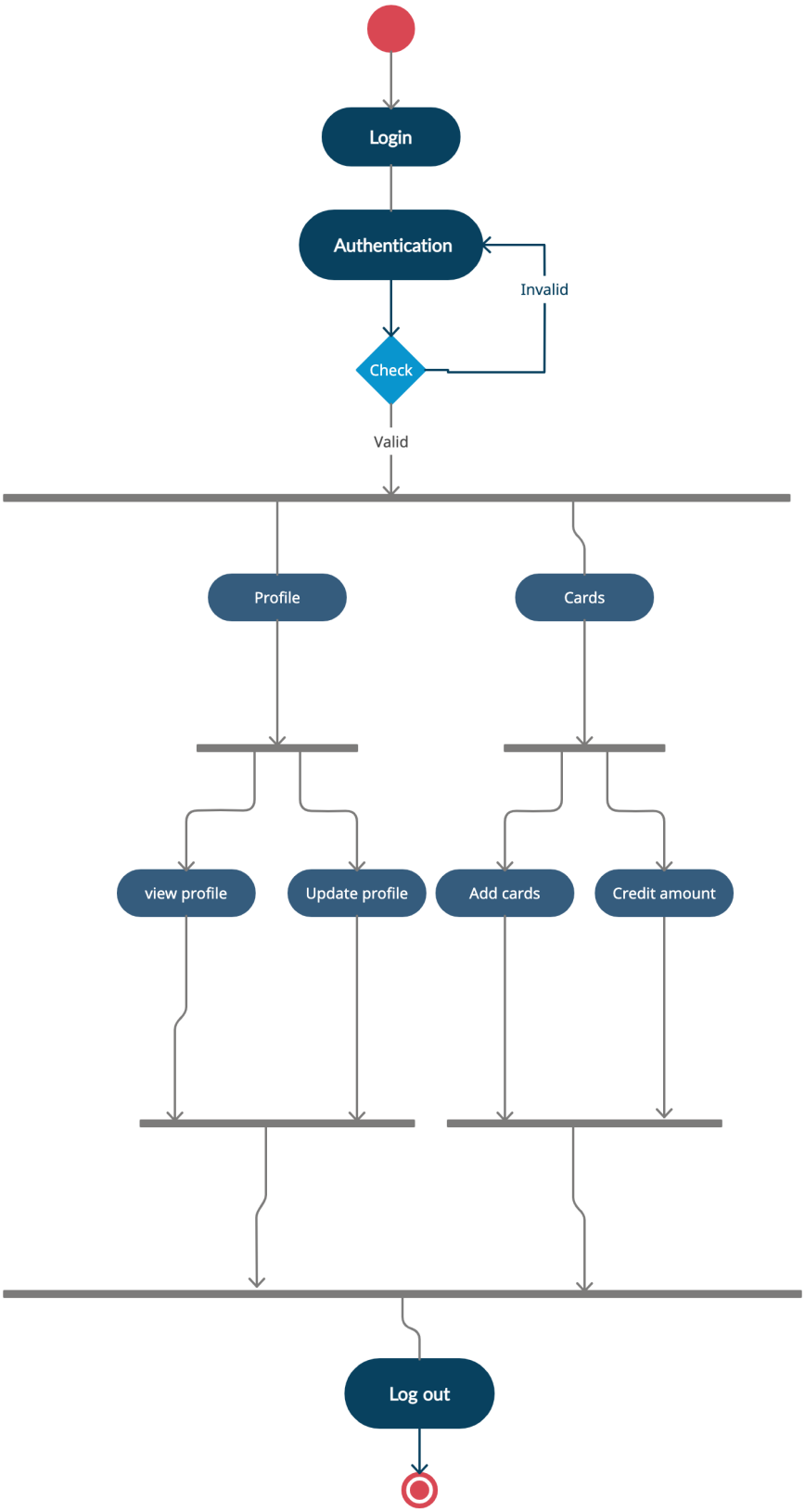

Figure 5.4: Bank Manager Activity Diagram

6 Appendices

In this software design document of nursery management system we included:

- Abbrevations,definitions table
- Use case diagrams
- Sequential diagrams
- Activity diagrams
- Class diagrams

We provided all these pictorial representations to understand our nursery management system.Thank you.

6.1 references

BOUML Tool, Creately, Chrome search, Few documentations, Reference pdf provided in mail.