CRM APPLICATION

Software Requirements Specification

Revision History

Date	Revision	Description	Author
6/15/2021	1.0	Initial Version	GROUP 3
6/22/2021	2.0	Cleanup, formatting, case id’s	GROUP3

Table of Contents

1. Purpose

This document outlines the requirements for the Customer Relationship Management (CRM) system

1.1. Scope

This document will catalog the user, system, and hardware requirements for the CRM system. It will not, however, document how these requirements will be implemented.

1.2. Definitions, Acronyms, Abbreviations

CRM - Customer Relationship Management.

Admin - Administrator with total control over the CRM system.

User - A typical user with no admin level privileges.

Manager - A higher level user with some higher level privileges.

Client - A customer.

Record - A record or log of data.

Group - A collection of clients belonging to a user.

1.3. References

Use Case ID	1.0
Use Case Name	System startup
Relevant Requirements	
Primary Actor	System
Pre-Conditions	None
Post-Conditions	System is up and running
Basic Flow or Main Scenario	1. Bind port 2. Load previous data 3. Start internal systems
Extensions or Alternate Flows	
Exceptions	1. Port fails to bind 2. Data corruption or not found
Related Use Cases	

Use Case ID	2.1
Use Case Name	Admin creates user
Relevant Requirements	
Primary Actor	System
Pre-Conditions	None
Post-Conditions	New user is created
Basic Flow or Main Scenario	1. Admin supplies a new user and user-type for new user 2. System validates username and user-type 3. System creates a new entry for a new user 4. System reports username and password
Extensions or Alternate Flows	
Exceptions	● User already exists ● Username and password does not fit requirement
Related Use Cases	

Use Case ID	2.2
Use Case Name	Admin deletes user
Relevant Requirements	
Primary Actor	System
Pre-Conditions	None
Post-Conditions	New user is created
Basic Flow or Main Scenario	1. Admin submits username for deletion 2. System checks if user exists 3. System deletes user and erases all user date
Extensions or Alternate Flows	
Exceptions	● User does not exist
Related Use Cases	

Use Case ID	3.0
Use Case Name	User logs in
Relevant Requirements	
Primary Actor	System
Pre-Conditions	User is not logged in
Post-Conditions	User is logged in
Basic Flow or Main Scenario	1. User enters username and password 2. System validates credentials 3. System returns
Extensions or Alternate Flows	
Exceptions	● User credentials invalid
Related Use Cases	

Use Case ID	4.1
Use Case Name	User creates record

Relevant Requirements	
Primary Actor	System
Pre-Conditions	None
Post-Conditions	New record created by user
Basic Flow or Main Scenario	1. Enter new record 2. System validates record entry 3. System saves record
Extensions or Alternate Flows	
Exceptions	● Record already exist ● Invalid record parameters
Related Use Cases	

Use Case ID	
Use Case Name	User reads record
Relevant Requirements	4.2
Primary Actor	System
Pre-Conditions	None
Post-Conditions	Record read by user
Basic Flow or Main Scenario	1. User request record 2. System searches for record 3. System returns record contents to user
Extensions or Alternate Flows	
Exceptions	● Record not found
Related Use Cases	

Use Case ID	4.3
Use Case Name	User deletes record
Relevant Requirements	
Primary Actor	System
Pre-Conditions	None

Post-Conditions	Record deleted by user
Basic Flow or Main Scenario	
Extensions or Alternate Flows	
Exceptions	● Record not found
Related Use Cases	

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Use Case ID	4.4
Use Case Name	User updates record
Relevant Requirements	
Primary Actor	System
Pre-Conditions	None
Post-Conditions	Record is updated
Basic Flow or Main Scenario	1. User requests record to be updated 2. User passes updated record parameters 3. System searches for record 4. System validates new record parameters 5. System updates record old parameters with new parameters 6. System confirms success
Extensions or Alternate Flows	● Record not found ● Record parameters invalid
Exceptions	
Related Use Cases	

Use Case ID	5.1
Use Case Name	User creates group
Relevant Requirements	
Primary Actor	System
Pre-Conditions	None
Post-Conditions	Group is created

Basic Flow or Main Scenario	1. User request to create a new group with group name 2. System checks that group does not already exist 3. System creates new group 4. System confirms success
Extensions or Alternate Flows	
Exceptions	● Users not found ● Group already exist
Related Use Cases	

Use Case ID	5.2
Use Case Name	User adds client to group
Relevant Requirements	
Primary Actor	System
Pre-Conditions	None
Post-Conditions	Client added to group
Basic Flow or Main Scenario	1. User requests client be added to a group 2. System checks that client and group exists 3. System adds client to group 4. System confirms success
Extensions or Alternate Flows	1. System can ask User if System should create group should it not exist already
Exceptions	● Client not found ● Group does not exist
Related Use Cases	

Use Case ID	5.3
Use Case Name	User removes client from group
Relevant Requirements	
Primary Actor	System
Pre-Conditions	None

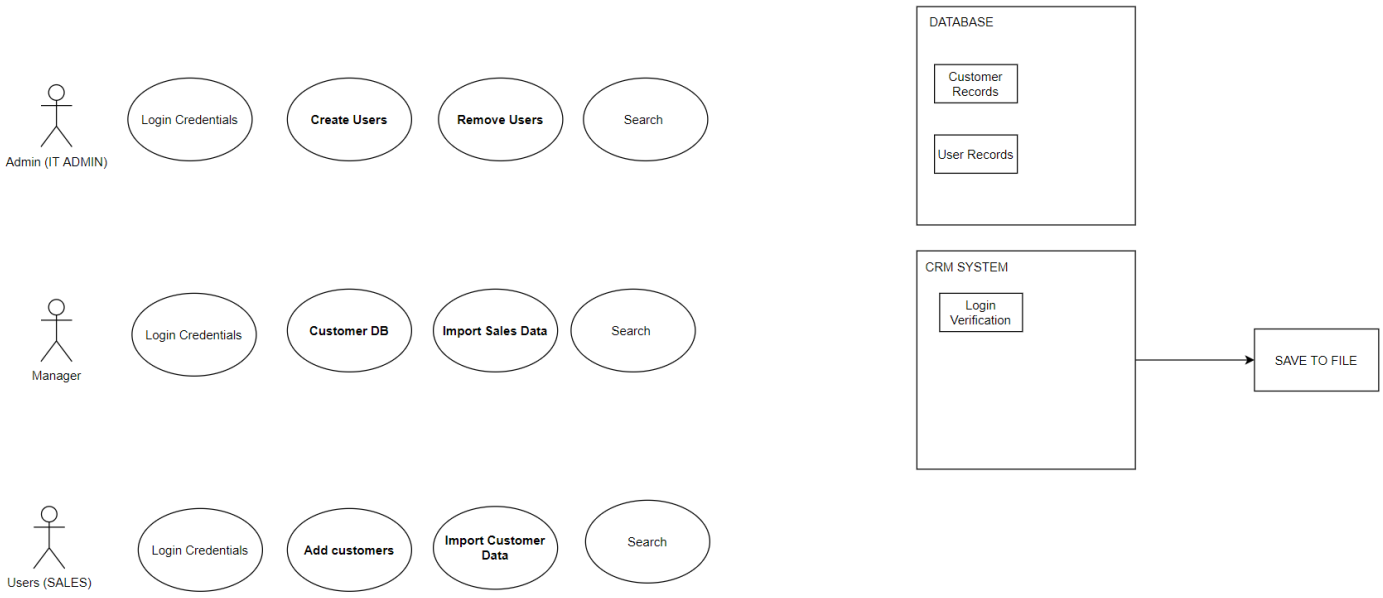
Post-Conditions	Client removed from group
Basic Flow or Main Scenario	1. User requests client be removed from a group 2. System checks that client and group exists 3. System removes client from group 4. System confirms success
Extensions or Alternate Flows	
Exceptions	● Client not found ● Group not found
Related Use Cases	

Use Case ID	6.0
Use Case Name	User prints report
Relevant Requirements	
Primary Actor	System
Pre-Conditions	None
Post-Conditions	User record data printed
Basic Flow or Main Scenario	1. User requests report based on parameters 2. System checks for records that match criteria 3. System collates all matching records 4. System returns results to User
Extensions or Alternate Flows	
Exceptions	● Search could yield no results
Related Use Cases	

Use Case ID	7.1
Use Case Name	System saves data to database
Relevant Requirements	
Primary Actor	System

Pre-Conditions	None
Post-Conditions	Data saved to database
Basic Flow or Main Scenario	1. System collects all data of all clients 2. System sends data to database for storage
Extensions or Alternate Flows	
Exceptions	● Data corruption
Related Use Cases	

Use Case ID	7.2
Use Case Name	System loads data from database
Relevant Requirements	
Primary Actor	System
Pre-Conditions	None
Post-Conditions	Data saved to database
Basic Flow or Main Scenario	1. Upon system initialization, system will fetch data from storage 2. Data will be read from storage and loaded by system
Extensions or Alternate Flows	
Exceptions	● Data corruption ● Empty file
Related Use Cases	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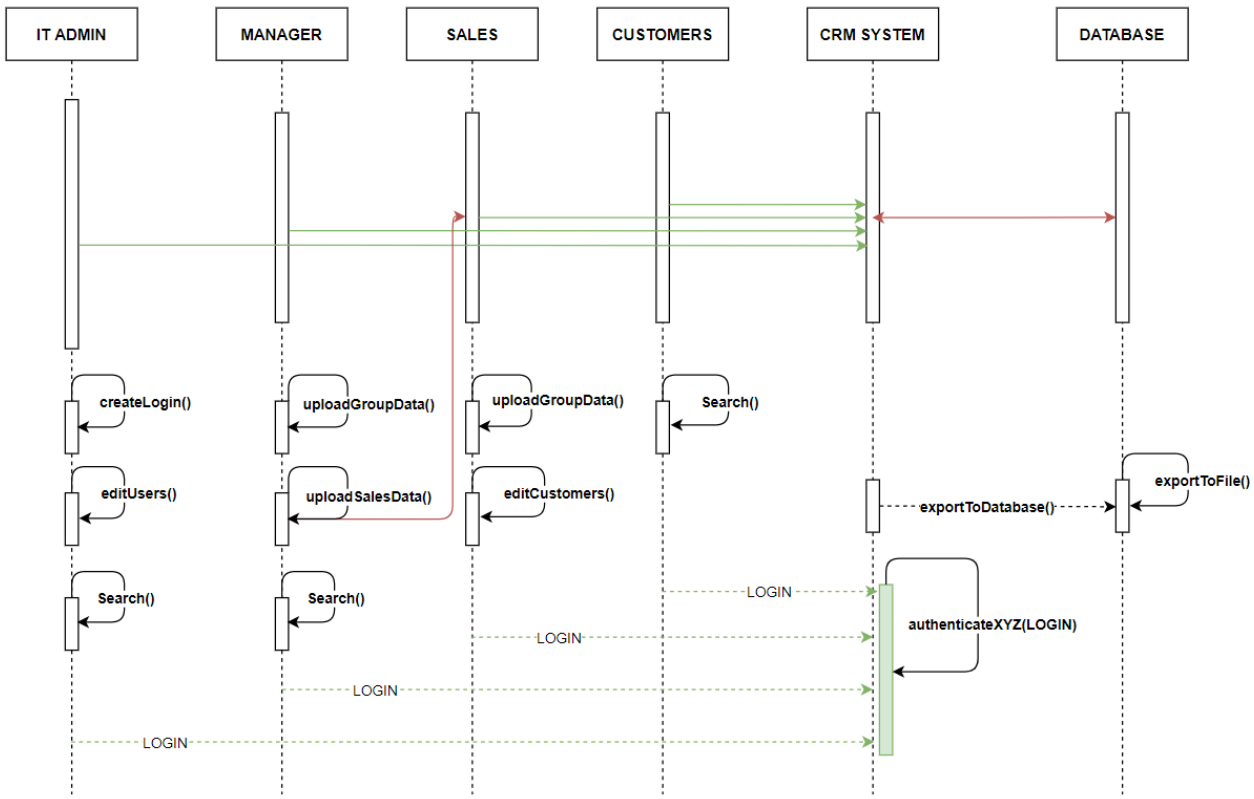
Login Credentials
Create Users
Remove Users
Search
Manager
Login Credentials
Customer DB
Import Sales Data
Search
Users (SALES)
Login Credentials
Add customers
Import Customer Data
Search
DATABASE
Customer Records
User Records
CRM SYSTEM
Login Verification
SAVE TO FILE


IT ADMIN
MANAGER
SALES
CUSTOMERS
CRM SYSTEM
DATABASE
createLogin()
editUsers()
Search()
uploadGroupData()
uploadSalesData()
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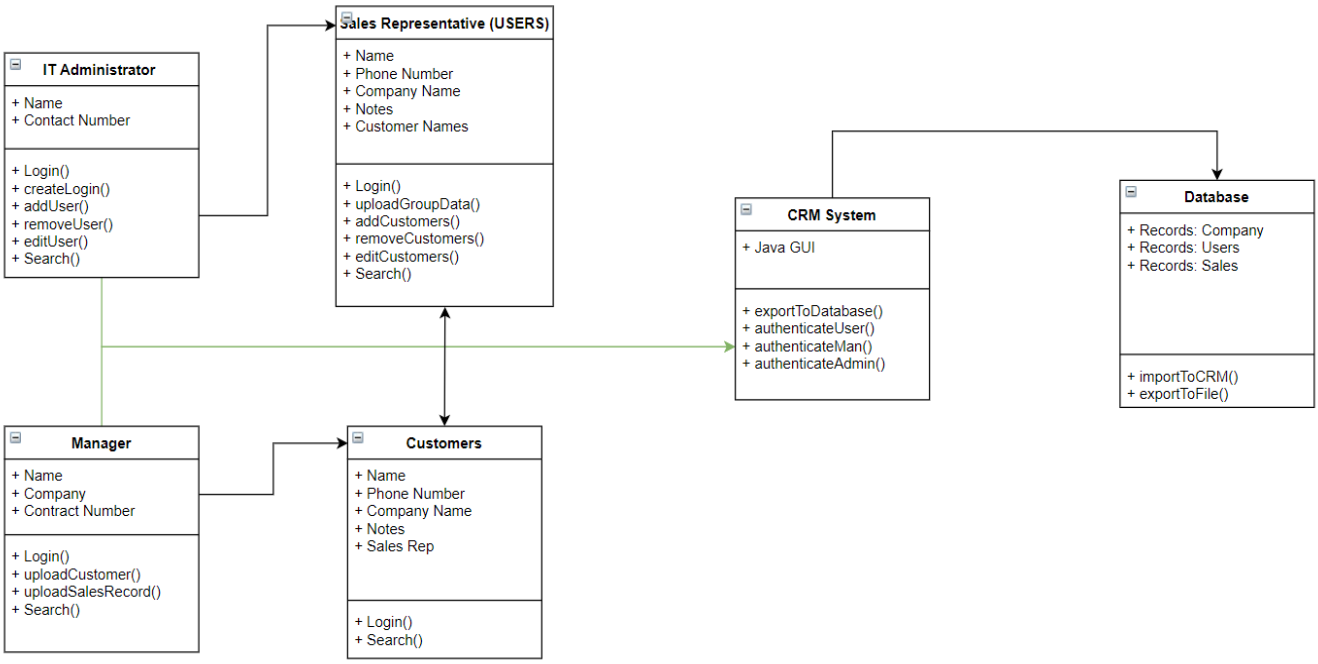
authenticateXYZ(LOGIN)



1.4. Overview

The CRM is a Customer Relationship Management application that is used to maintain records of client relationships.

2. Overall Description

2.1. Product Perspective

2.2. Product Architecture

The system will be organized into 3 major modules: the controller module, storage module and the client module.

2.3. Product Functionality/Features

The high-level features of the system are as follows (see section 3 of this document for more detailed requirements that address these features):

2.4. Constraints

2.4.1. The system does not use any off-the-shelf software for data storage

2.4.2. Administrators are responsible for creating subsequent users of the system

2.4.3. Users cannot manipulate or edit the data of other users

2.5. Assumptions and Dependencies

2.5.1. It is assumed that the system will have 3 levels of users: Administrator, Manager, User.

2.5.2. It is assumed that Administrator-level users will create all users.

2.5.3. It is assumed that data will persist for all connected users such that upon restarting or reaccessing the application, all their data will be present from the last session.

2.5.4. It is assumed that User-level users can create/read/update/delete data pertaining to their customers.

2.5.5. It is assumed that User-level users cannot interact with or manipulate data of other users

2.5.6. of the system.

2.5.7. It is assumed that each user has their own account and password.

2.5.8. Groups depend on the the user that created the group

3. Specific Requirements

3.1. Functional Requirements

3.1.1. Common Requirements:

3.1.1.1. Users log into the system using a username and password.

3.1.1.2. Users access the system using a GUI to connect to system

3.1.1.3. Administrator-level users create subsequent users.

3.1.1.4. User-level users can create/read/update/delete records

3.1.1.5. User-level users can create groups and add clients to these groups

3.1.1.6. All user data persists in external data storage

3.1.2. Storage Module Requirements:

3.1.2.1. Storage will be custom implementation and does not use any sort of off-the-shelf software (Cannot be a MYSQL db for instance)

3.1.2.2. Data for all users should be stored and loaded when the application is started

3.1.3. Controller Module Requirements:

3.1.3.1. Controls the initial startup of the application.

3.1.3.2. Binds port for clients to connect to.

3.1.3.3. Saves and loads all user data.

3.1.3.4. Processes user requests

3.1.4. Client Module Requirements:

3.1.4.1. The client module will help facilitate the connection between the client and the CRM controller.

3.1.4.2. A user will provide a login and password to the client which will send a connection request to the server.

3.1.4.3. The client will pass user requests to the server.

3.2. External Interface Requirements:

3.2.1. None

3.3. Internal Interface Requirements:

3.3.1. None

4. Non-Functional Requirements

4.1. Security and Privacy Requirements

4.1.1. The system requires a username and password for each user of the system.

4.2. Environmental Requirements

4.2.1. System is required to run as a Java based application

4.3. Performance Requirements

4.3.1. None