

A Project Report On

GARAGE SALE



For The Subject Of

Internship

Attestation Of College Studies

Mobile Application Development - 321

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August 2021

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1 Introduction

A garage sale or otherwise called a yard sale, moving sale or tag sale is regularly done at whatever point you need to dispose of certain things like doing a “spring cleaning”. The most common items sold in a garage sale are undesirable furniture, toys, books, games and even clothes. It is prudent to sell things that are still in great condition since they have a superior opportunity to be purchased. Having a yard sale does not really require any business permit or tax since it is just what people do to earn a little bit of money out of the things they have. The sellers normally display their unwanted stuff in their garage/yard, hence the name suggested.

1.1 Description

Garage Sale is an android application consisting of a User and Admin side. User side has two options: Customer and Guest. Customers need to be registered users, so they can post ads about future events. Guests will not be registered but they can see the latest offers and events. They can reserve an item listed in the garage sales as online trade. The idea is for Customers to be able to post Ads for Garage Sales Ideally. Admin has access to manage/monitor the items posted by Customers.

In this garage sale application, you showcase what you want to sell or what you want to purchase. The most important step is to take great photos and post a description of each article that will make everyone want to buy it. This application is great because you can post on the run. Say you have one item to sell, take a photo, write a brief description, price it and post. It is a great local resource too, as only people in your area will be interested to see your post.

1.2 Scope

First of all, there are no specific applications available for garage sale; we can consider Kijiji & Facebook Marketplace as the main competitors which do not have specific options for Reserving the item that gives our application an edge over them. Considering this scenario, the scope of this application is fairly wide and useful for people.

2 User Stories

Story ID	Name			Story Points
	As a...	I want to...	So that...	
001	Admin	Have a splash screen in the app	I can start the app	5
002	Customer	Register myself into the app	I can get access to sell stuff on the app	8
003	Guest	Have direct access to all the app features without any registration process	I don't have to share my personal info & experience remains seamless	8
004	Customer	Login into the app	I can start posting the items for sale	5
005	Customer	Have map integration	I can display the stuff available for sale on map	5
006	Customer	Show my location on map	Guests can find my location on map	3
007	Customer	Have bottom navigation bar	UI is easily accessible	5

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008	Customer	Have search box	It is easy to find items by name	3
009	Guest	Display recently added items on top	I know which latest items are added for sale	8
010	Customer	Upload image of items	To show guests how it looks	5
011	Guest	See pictures of item	I can get exact view of item	3
012	Customer	Store the detailed information of item	Guests can know comprehensive about item	5
013	Admin	Store the customer information	Guests can know about the customers for further contact	5
014	Customer	Have profile settings	I can keep my profile updated & guests can contact me easily	8
015	Guest	Have option for Reserving the item	Customer can reserve the item for me	8
017	Customer	Have "Manage Product" option	I can check my all previous and latest posting & edit for any changes	8

018	Customer	Logout from app	I can exit from the app	1
019	Admin	Have access to see & manage items	I can make sure there is no misuse of the app	8
020	Customer	Have forgot password option	I can reset the password in case if i lose it	5
021	Admin	See list of all customers	I can know which active customers are currently available	5
022	Customer	Incoming Request handling mechanism	I can respond to incoming requests regarding the reservation of the posted item	8
Total User Story Points				120

3 Functional Requirements

- Application will provide multiple pins on the map to find nearby sellers
- Guests will be able to see Customer postings
- Guests do not need to register in order to use app
- Guests can reserve the items by a request button given below item details
- Guests can reserve items even without registration
- Guest will need to provide name & contact number before making a reservation request

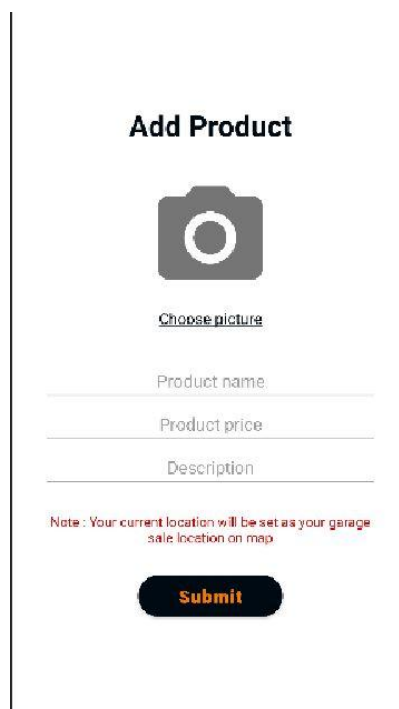
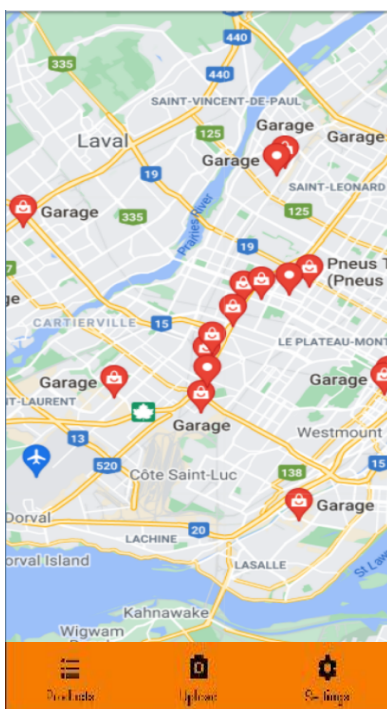
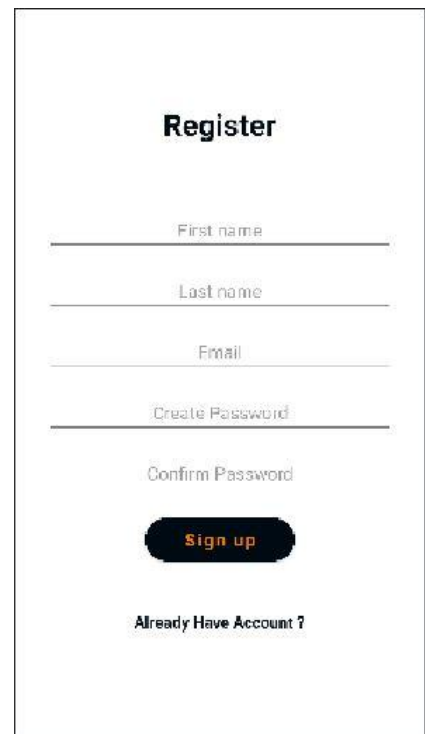
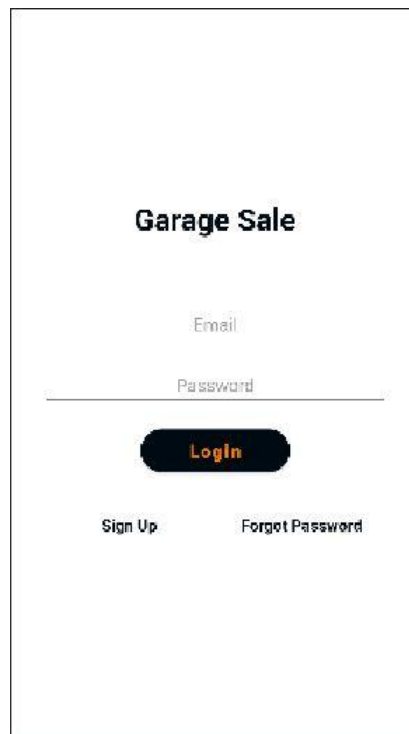
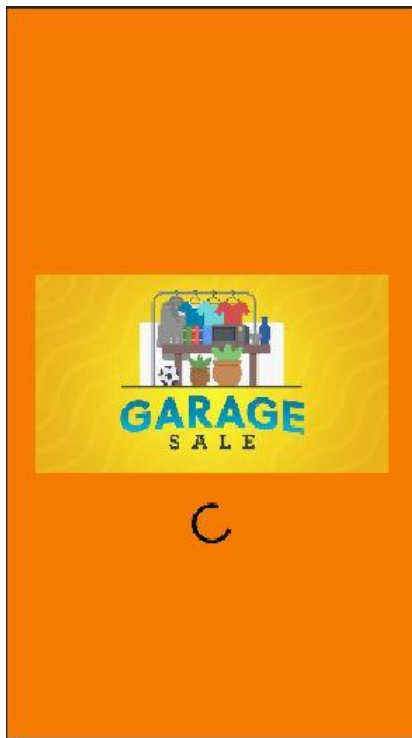
- The Customer shall be able to register
- The Customer shall be able to login
- The Customer should be able to request a password reset if they forgot their login credentials.
- Customer should be able manage his own profile
- Customer should be able manage his items after uploading
- App should have multiple pins on map to show distinct Customer location on screen
- Details of item should be shown when it is clicked on the map
- Customer should be able to change the status (online/offline) of item
- Customer will be able to respond to reserve request by approving or rejecting it
- Customer should be shown basic contact details of person who sent the reserve request
- Not more than one user should be to reserve a single product
- Admin should be able to monitor & delete the items that are uploaded on the app
- Admin should be able to monitor details of registered customers & reserved items
- Items which are registered will not be shown to other users on map or in list

4 Non-Functional Requirements

- App UI should be simple & user friendly
- Customer must be registered; Without registration there should be no sellings access
- App should handle possible exceptions to avoid malfunctioning
- Customer information, upload pictures, price and details of selling item cannot be empty
- The app efficiency would not be altered if multiple user uses it
- Users should be able to access the application at any time
- App should be able to handle input validations
- Customer's login session should be maintained in the app
- Any changes in the database should become effective in real time
- Different flags will be used in the database to track the reservation and online status of any items
- Map camera will be adjusted to zoom level value of 11 which covers appropriate area around in map
- Glide image library will be used for displaying the images in app
- Firebase Storage will be separately used for saving images; i.e. images will not be saved in the same collections as user/product details in the database
- CardView will be used to provide rounded corners to images appearing in the list

5 Mockups

Customer Side



Garage Sale



Name
No
Email
pro added
pro reserved




Name
No
Email
pro added
pro reserved



Name
No
Email
pro added
pro reserved

Edit Product



Choose picture

Product name

Product price

Description

Update

Forgot Password ?

Enter registered email address to get password reset link

Email

Submit



Product name Item 0 ☐

\$0.0

Edit Product

Approve **Reject**



Product name Item 1 ☐

\$0.0


Edit Product

Approve **Reject**



Product name Item 2 ☐

\$0.0



Horse

Price

Desc

Reserve


Seller Information

Name

Address

Mobile no.

Set Profile



Choose picture

Email

Phone number

Address

Submit

Garage Sale

Manage profile

Manage product

Logout



Name
price
sold by name
reserved by name



Name
price
sold by name
reserved by name



Name
price
sold by name
reserved by name

Fill up the information

User name

Phone number

Note : This information will be shown to item owner for further communication

Request Reserve

Garage Sale

Admin Side:



6 Use Cases

1)

Use case	Reserve Products
Primary Actor/s	Customer & Guest
Secondary Actor/s	Firestore Database
Main Success Scenario	<ol style="list-style-type: none"> 1) Open the app & browse through the item that you want to buy 2) Clicks an item which opens a new activity with details of product & its seller's information 3) User decides to Reserve item, so he clicks "Reserve Now" button 4) App opens a dialogue box in which user has to provide his name & contact number 5) A confirmation message is displayed on screen
Pre Condition	User has installed the application on his smartphone & is connected to the stable internet & location turned on
Post Condition (Success Guarantee)	User gets confirmation of the reservation inside the app.
Alternative Scenario	<p>3a) If User doesn't want to reserve item after looking at the details, he can go back & cancel the process</p> <p>4a) If name and contact numbers are not provided, user cannot proceed further</p>

2)

Use case	Browse Products
Primary Actor/s	Customer & Guest
Secondary Actor/s	Firestore Database
Main Success Scenario	<ol style="list-style-type: none"> 1) User opens the app 2) App shows a map with different pins which indicates that there are Sales available at that location 3) User click on a pin which opens a new page on which

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	<p>all the items for sales are displayed for that location</p> <p>4) Alternatively, User can click on the “Product List” button which will show all the products in a list.</p> <p>5) User can click any item which he want to see further in detail</p>
Pre Condition	User has installed the application on his smartphone & is connected to the stable internet & location turned on
Post Condition (Success Guarantee)	Details of the item is shown to user
Alternative Scenario	3a) If user doesn't want to see the item, he can go back & cancel the process

3)

Use case	Upload Item For Sale
Primary Actor/s	Customer
Secondary Actor/s	Firestore Database
Main Success Scenario	<p>1) Customer opens the app and click on “Upload” button which indicates option to post an item</p> <p>2) App opens a page on which seller has to provide details of the item he wants to sell as per below requirement Upload an Image, Name, Details & Price of product</p> <p>3) Click “Submit” button</p>
Pre Condition	<p>1) Customer has installed & registered in app</p> <p>2) Customer's android device is connected to the stable internet & location is turned on</p>
Post Condition (Success Guarantee)	A confirmation message is displayed inside the app.
Alternative Scenario	2a) If any of the details are kept empty, an error message will be shown to user to fill it

4)

Use case	Manage Profile
Primary Actor/s	Customer
Secondary Actor/s	Firestore Database
Main Success Scenario	<ol style="list-style-type: none"> 1) Customer opens the app and click on “Settings” button in the bottom navigation panel 2) App opens a page on which the seller has different options available like Manage Profile, Logout. 3) Click “Manage Profile” button 4) Click to update the information like Address/Contact Number or add/update a profile pic etc. 5) Click “Submit” button
Pre Condition	<ol style="list-style-type: none"> 1) Customer has installed & has registered in app 2) Customer’s android device is connected to the stable internet & location turned on
Post Condition (Success Guarantee)	A confirmation message is displayed inside the app.
Alternative Scenario	4a) If any other details are kept empty, an error message will be shown to the seller to fill it

5)

Use case	Manage Products
Primary Actor/s	Customer
Secondary Actor/s	Firestore Database
Main Success Scenario	<ol style="list-style-type: none"> 1) Customer opens the app and click on “Settings” button in the bottom navigation panel 2) App opens a page on which the seller has different options available like Manage Profile, Logout. 3) Click “Manage Products” button

	<ol style="list-style-type: none"> 4) App opens the list of products with an “Edit” button and a toggle button which indicated the “Status” of product being online or offline for the sale. If there are incoming requests available for reservations, Approve & Reject button will be shown along with the details of who sent those requests. 5) Click on the “Edit” button to update the existing product info in a separate page. 6) Alternatively, use the toggle button to change the status of the product from online to offline or vice versa. 7) If there are incoming requests available, use Approve or Reject button to treat the request accordingly.
Pre Condition	<ol style="list-style-type: none"> 3) Customer has installed & has registered in app 4) Customer’s android device is connected to the stable internet & location turned on
Post Condition (Success Guarantee)	A confirmation message is displayed inside the app.
Alternative Scenario	<ol style="list-style-type: none"> 4a) If any other details are kept empty, an error message will be shown to the seller to fill it 4b) Requests, once Approved or Rejected, cannot be undone.

6)

Use case	Manage User
Primary Actor/s	Admin
Secondary Actor/s	Firestore Database
Main Success Scenario	<ol style="list-style-type: none"> 1) Admin logs in into Firestore Web Console 2) Click on “User” collection 3) Firestore Web Console shows the email id of the registered customer 4) Click “Delete” button to remove Customer’s registration from the app 5) A confirmation is displayed on Firestore web console
Pre Condition	<ol style="list-style-type: none"> 1) Customer has been registered in app 2) Admin has logged in to Firestore with correct credentials

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Post Condition (Success Guarantee)	A confirmation message is displayed inside the app.
Alternative Scenario	3a) If any Admin wants to see the password of Seller, he cannot see it, because it is encrypted by default in the Firebase Web Console 4a) Details once deleted cannot be undone.

7)

Use case	Manage Postings
Primary Actor/s	Admin
Secondary Actor/s	Firestore Database
Main Success Scenario	<ol style="list-style-type: none"> 1) Admin logs in into "Garage Sale" app 2) A list of all postings are displayed to Admin. 3) Admin can click on a posting to see the details 4) If there are some inappropriate stuff found for sale, click "Delete" option 5) A confirmation is displayed on Firestore console
Pre Condition	<ol style="list-style-type: none"> 1) Admin has logged in to app with correct credentials 2) There is at least 1 post available for admin to delete
Post Condition (Success Guarantee)	A confirmation message is displayed inside the app.
Alternative Scenario	4a) If Admin wants to restore the deleted item, he cannot do it.

8)

Use case	Monitor Customers
Primary Actor/s	Admin
Secondary Actor/s	Firestore Database
Main Success Scenario	<ol style="list-style-type: none"> 1) Admin logs in into "Garage Sale" app 2) Click on "Customers" button 3) A list of all customers are displayed with their profile photo & details.
Pre Condition	<ol style="list-style-type: none"> 1) Admin has logged in to app with correct credentials

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	2) There is at least 1 customer registered in the app.
Post Condition (Success Guarantee)	A list of all customers is displayed
Alternative Scenario	3a) If there are no registered customers, the list will be empty and nothing will be shown.

9)

Use case	Monitor Reservations
Primary Actor/s	Admin
Secondary Actor/s	Firestore Database
Main Success Scenario	<ol style="list-style-type: none"> 1) Admin logs in into "Garage Sale" app 2) Click on "Reservations" button 3) A list of all item reservations which have been Approved by customer are displayed with the item photo & details
Pre Condition	<ol style="list-style-type: none"> 1) Admin has logged in to app with correct credentials 2) There is at least 1 item reservation approved by the customer
Post Condition (Success Guarantee)	A list of all reserved items is displayed inside the app.
Alternative Scenario	3a) If there are no approved requests, the list will be empty and nothing will be shown.

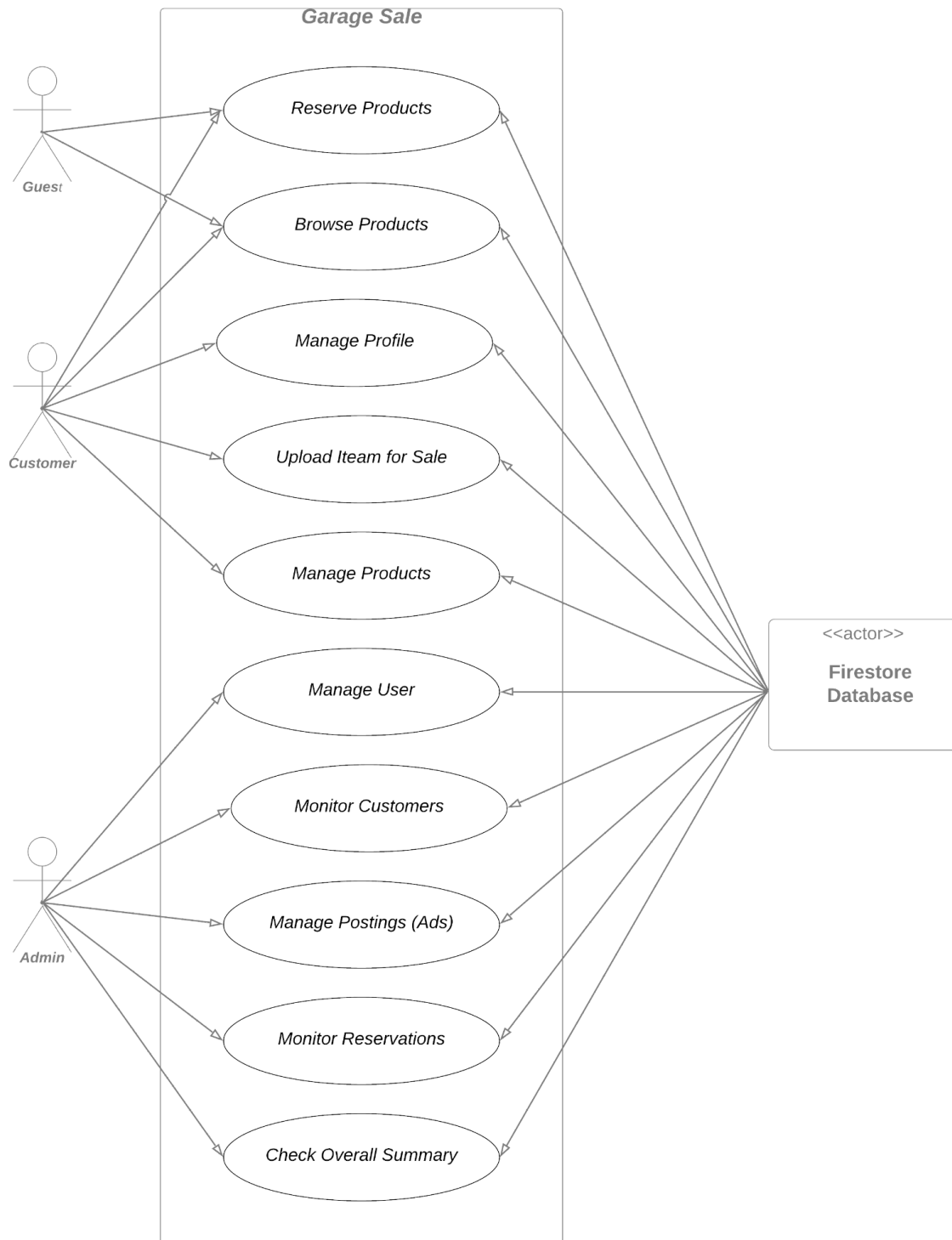
10)

Use case	Check Overall Summary
Primary Actor/s	Admin
Secondary Actor/s	Firestore Database
Main Success Scenario	<ol style="list-style-type: none"> 1) Admin logs in into "Garage Sale" app 2) A list of total number of registered customers, items online & approved reservations will be shown
Pre Condition	1) Admin has logged in to app with correct credentials

Garage Sale

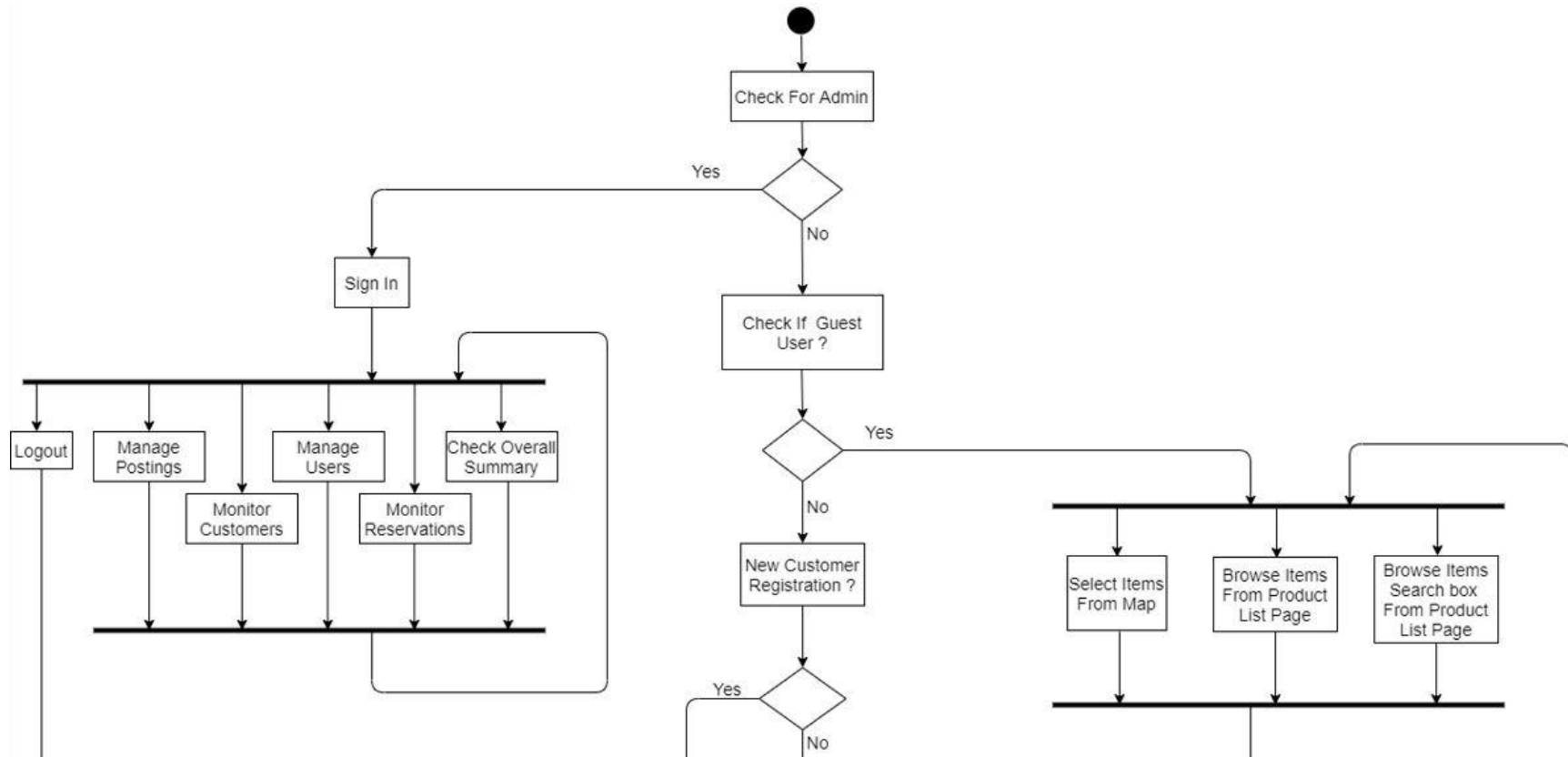
	2) There is at least 1 item, approved reservation or registered customer in the app
Post Condition (Success Guarantee)	A list mentioned above will be displayed.
Alternative Scenario	2a) If there is no adequate data available, the number will be shown as 0.

7 UseCase Diagram

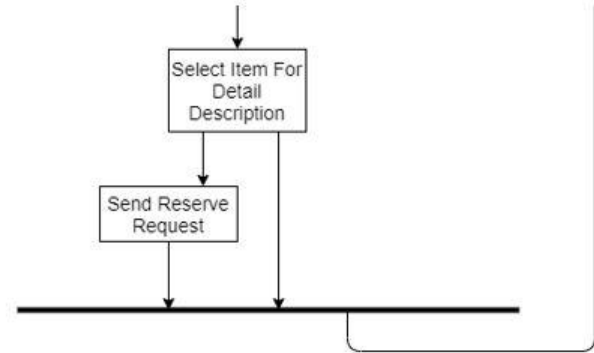
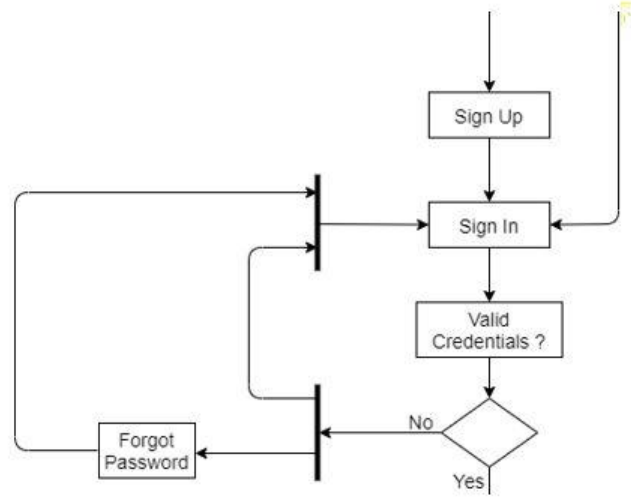


8 Activity Diagram

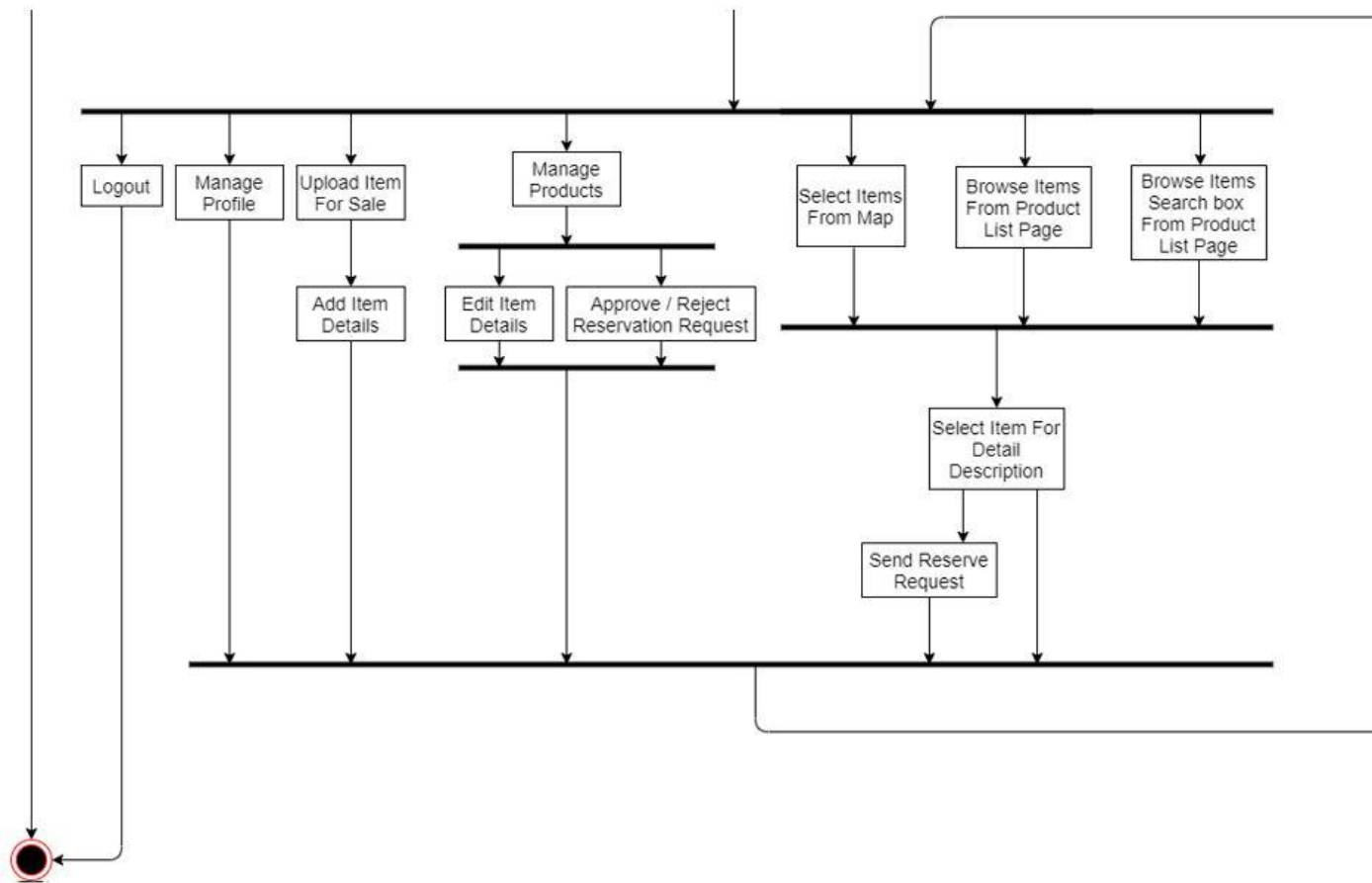
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Garage Sale



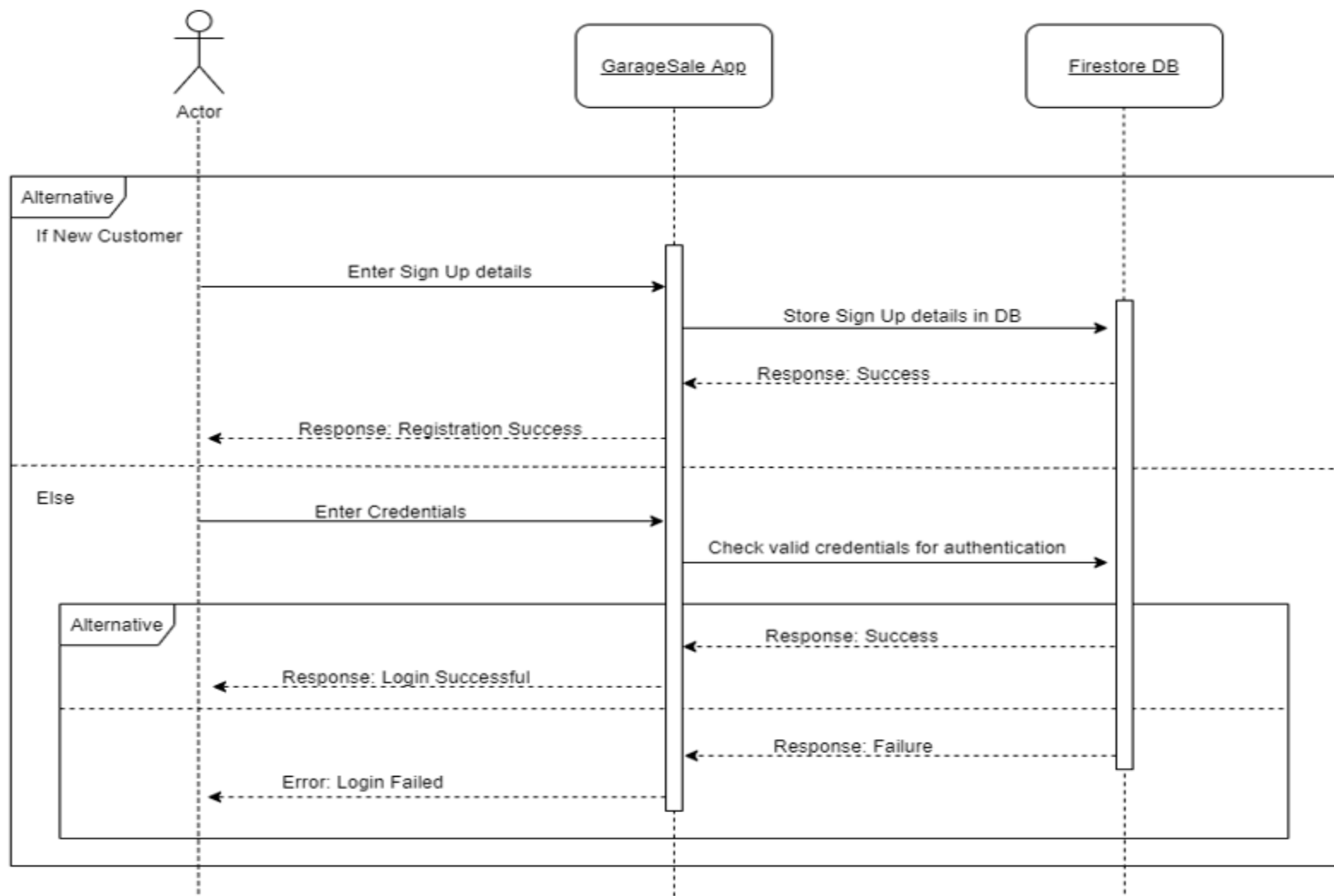
Garage Sale



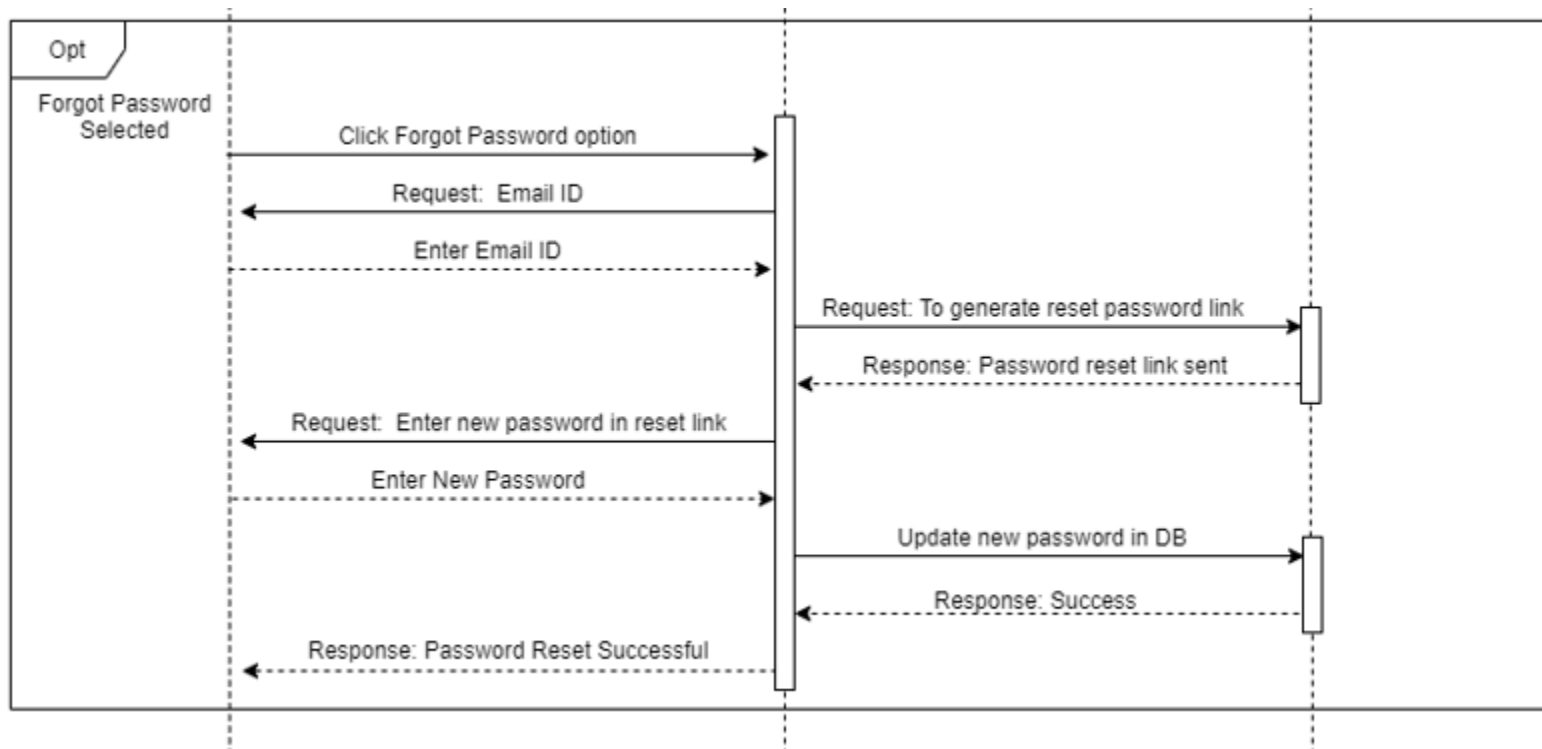
(Uncut Activity Diagram Link:- <https://drive.google.com/file/d/1UdZt2wPyTkg5W2ADp7FsRF63Q3qT4WJ0/view?usp=sharing>)

9 Sequence Diagram

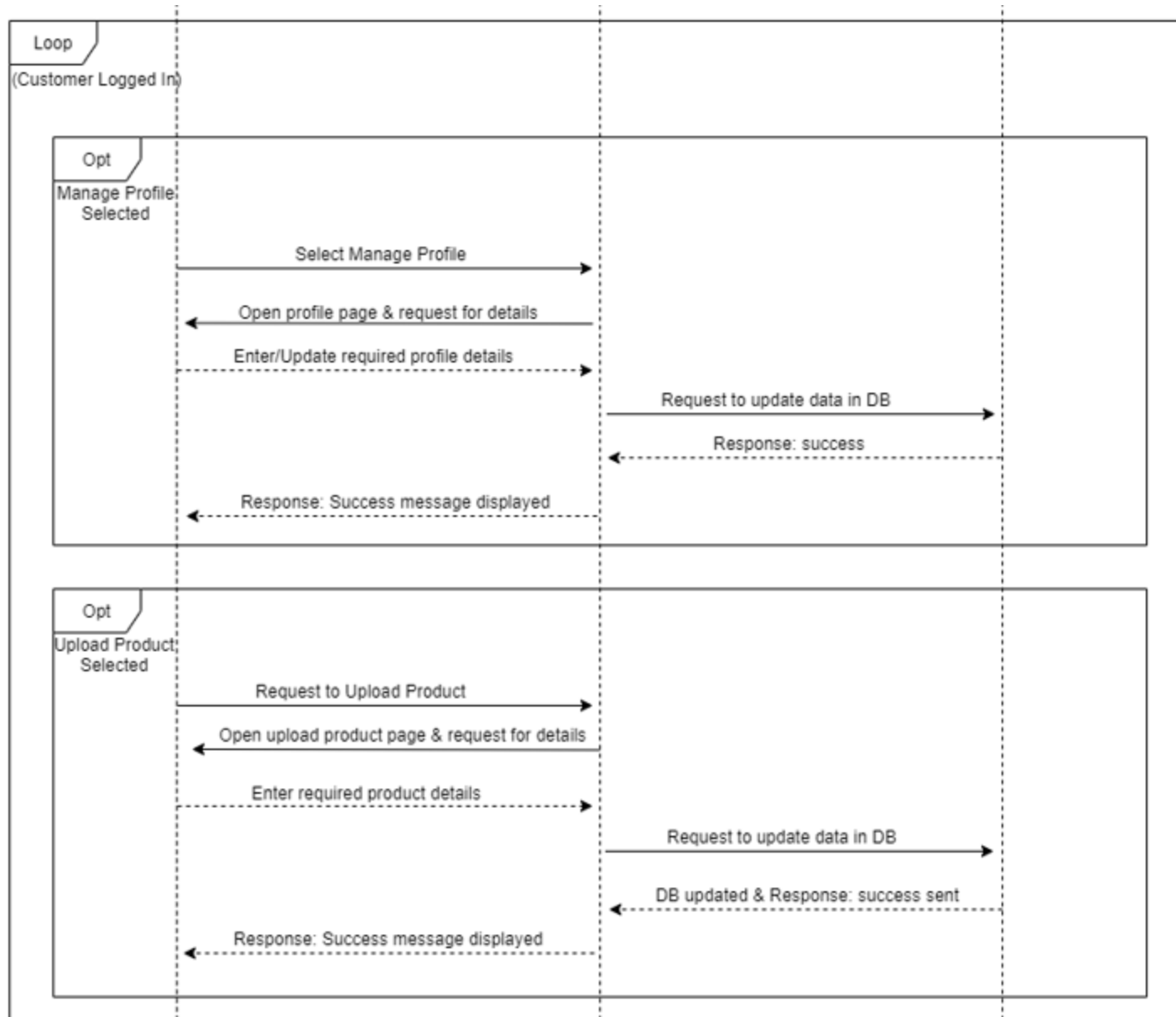
(Uncut Sequence Diagram-Customer: <https://drive.google.com/file/d/1rUfz8vOEg5YoXBynBj7WTWrizD7tx1kY/view?usp=sharing>)



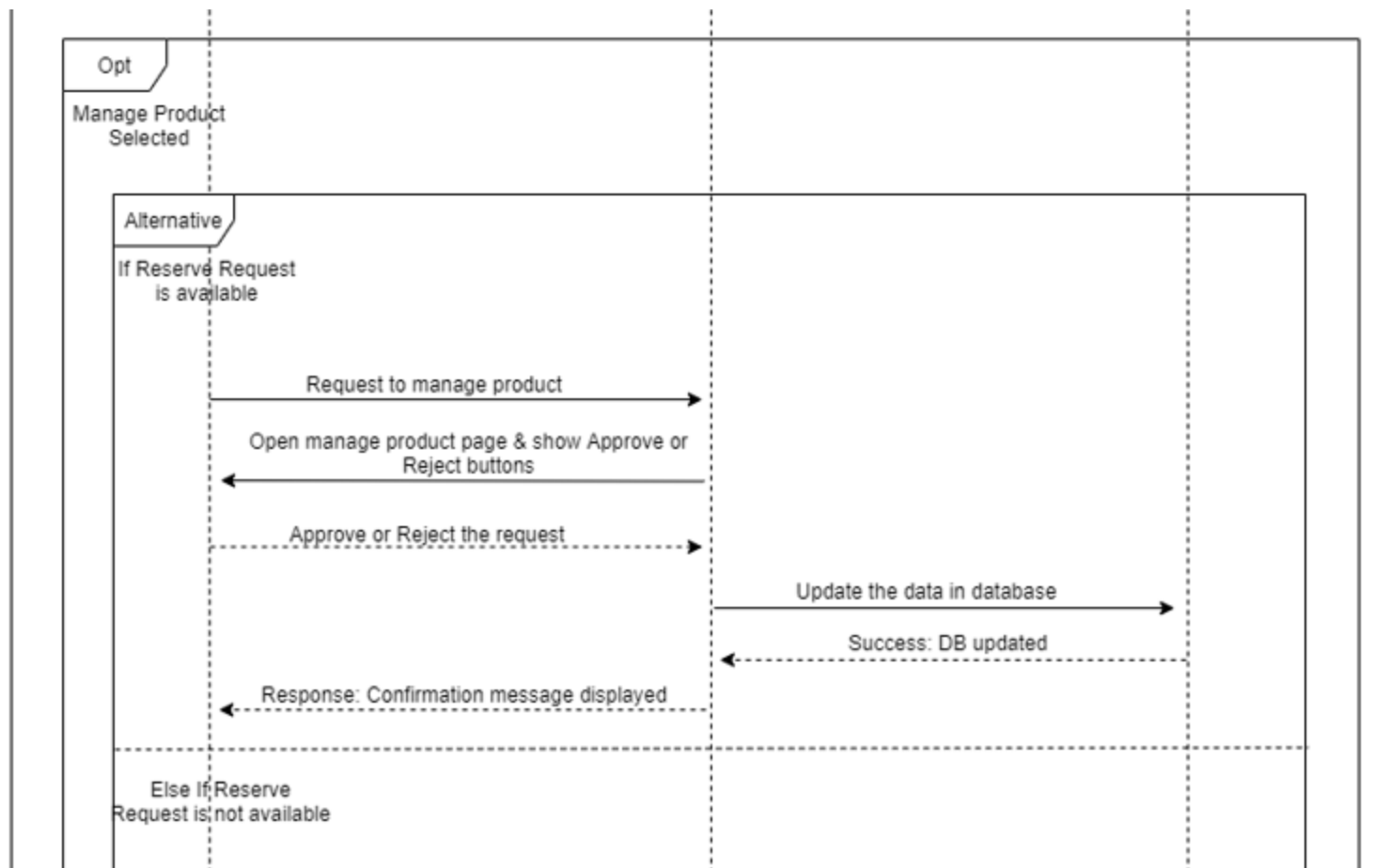
Garage Sale



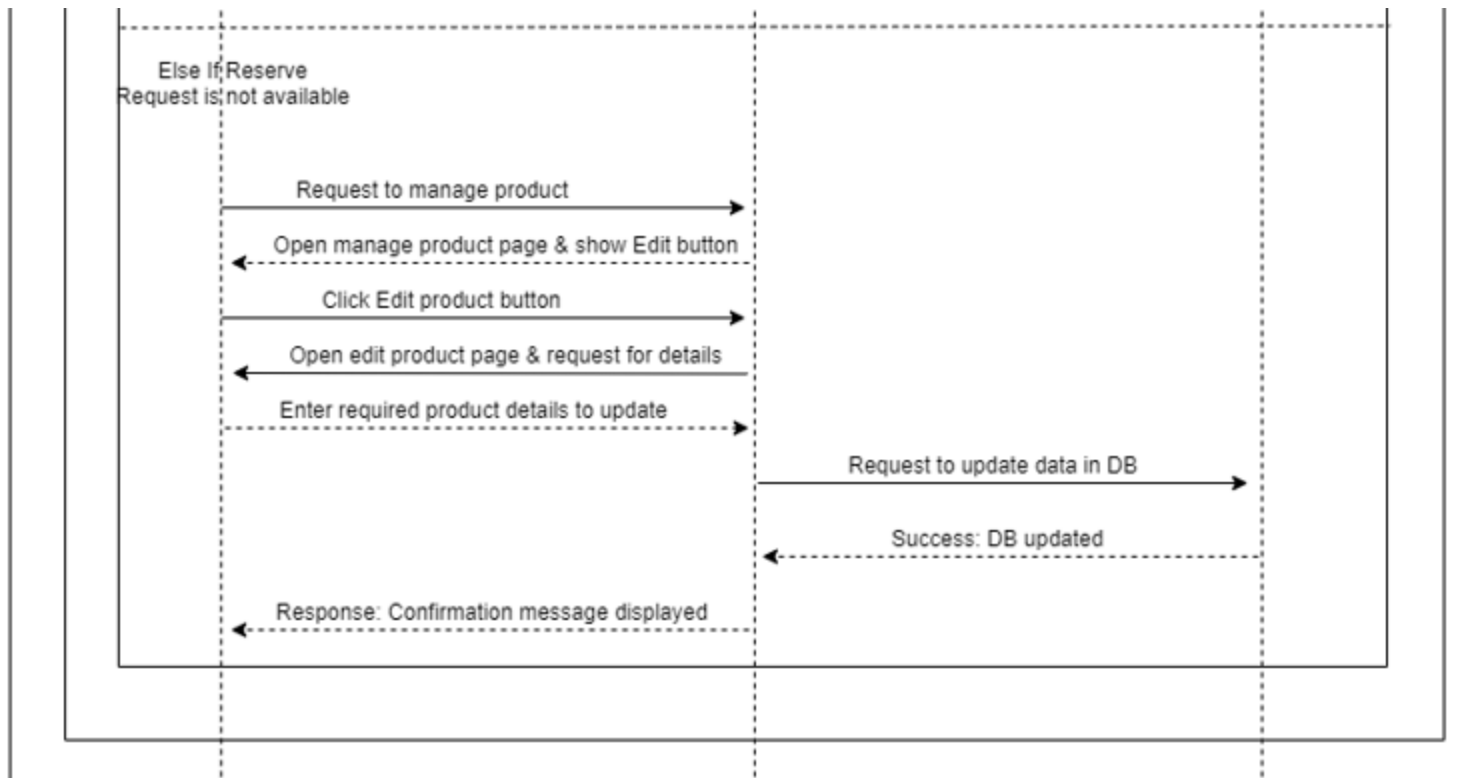
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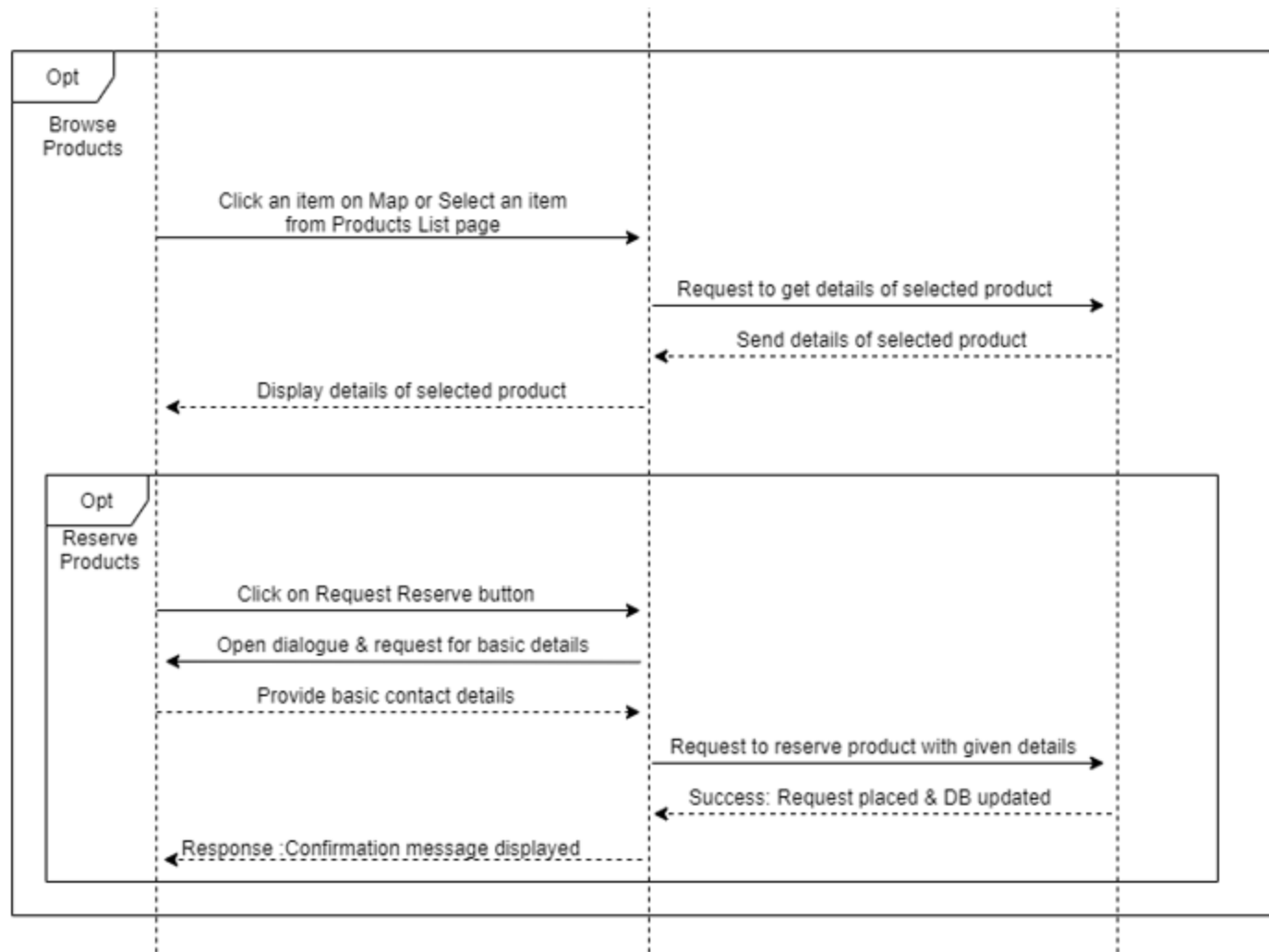
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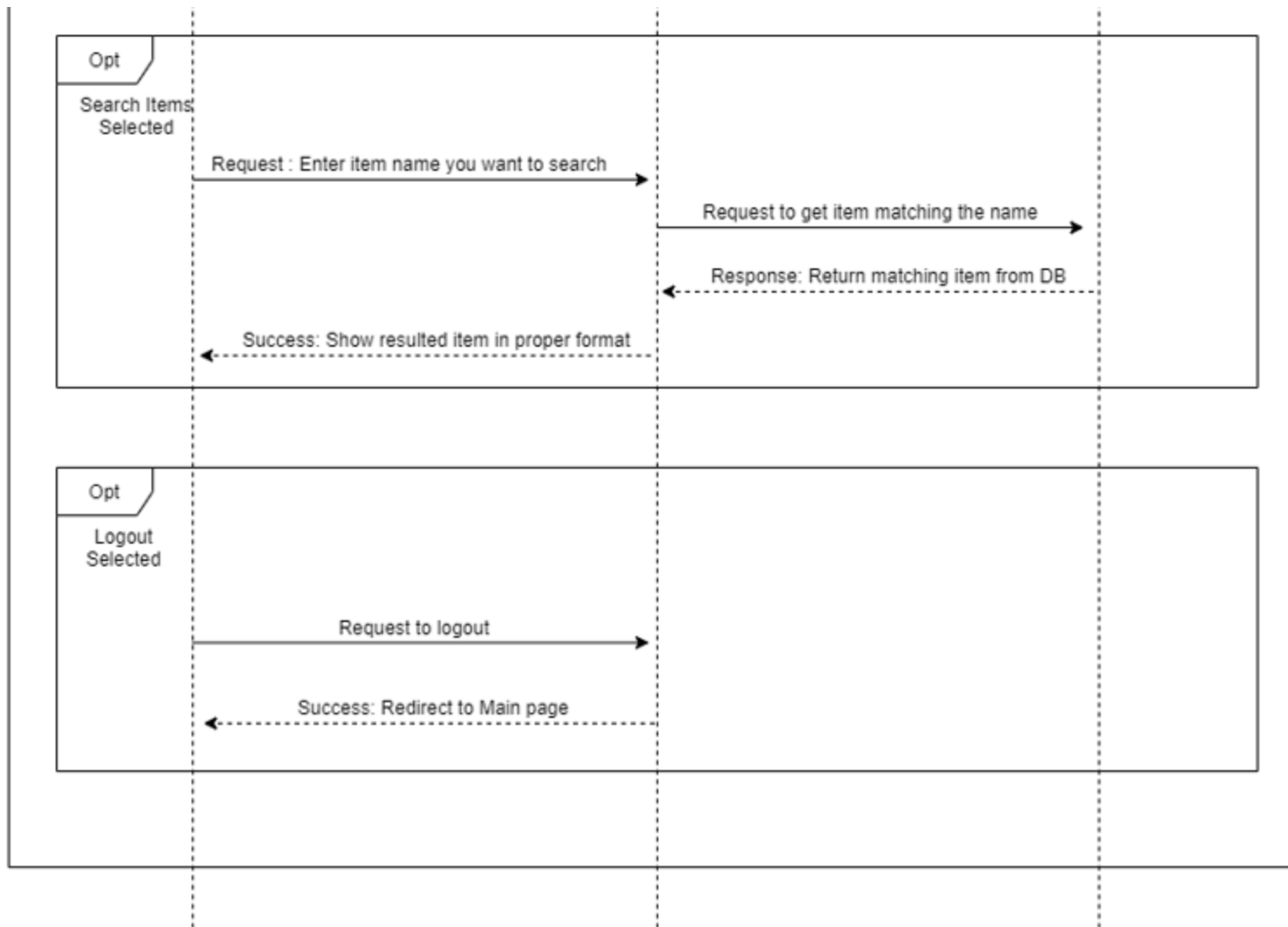
Garage Sale



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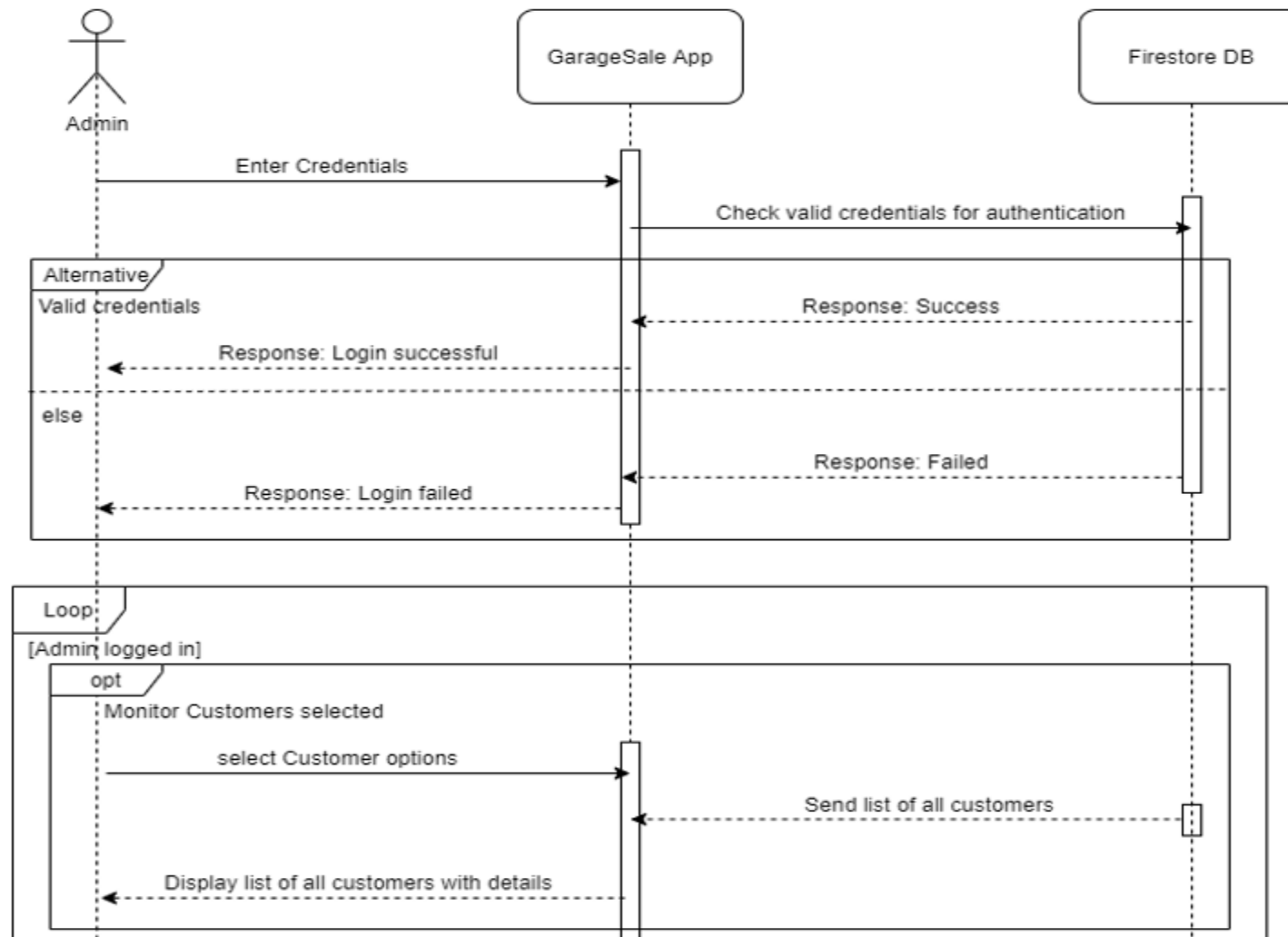
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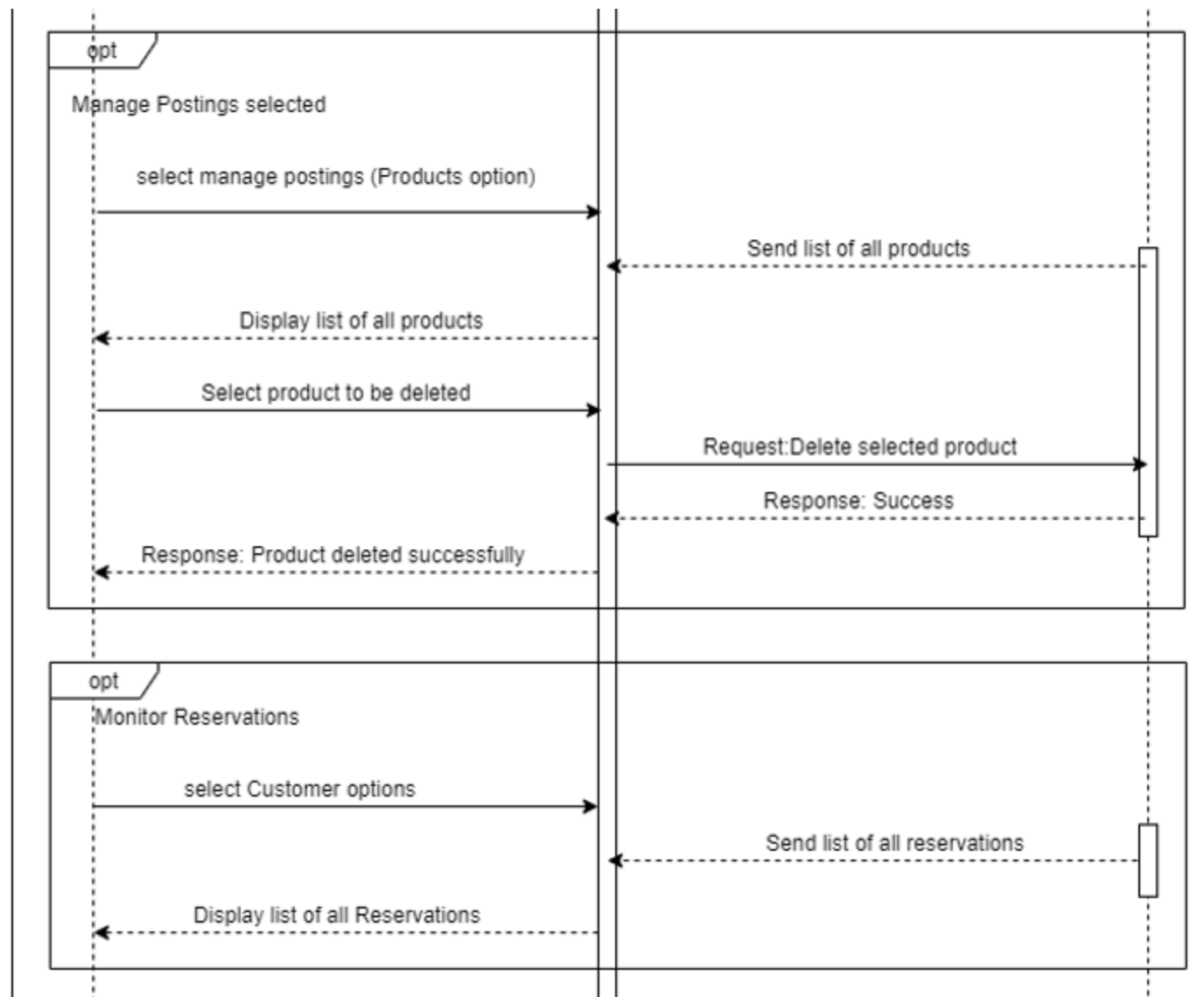
(Uncut Sequence Diagram-Customer: <https://drive.google.com/file/d/1rUfz8vOEg5YoXBynBj7WTWrizD7tx1kY/view?usp=sharing>)

9.1 Sequence Diagram - Admin

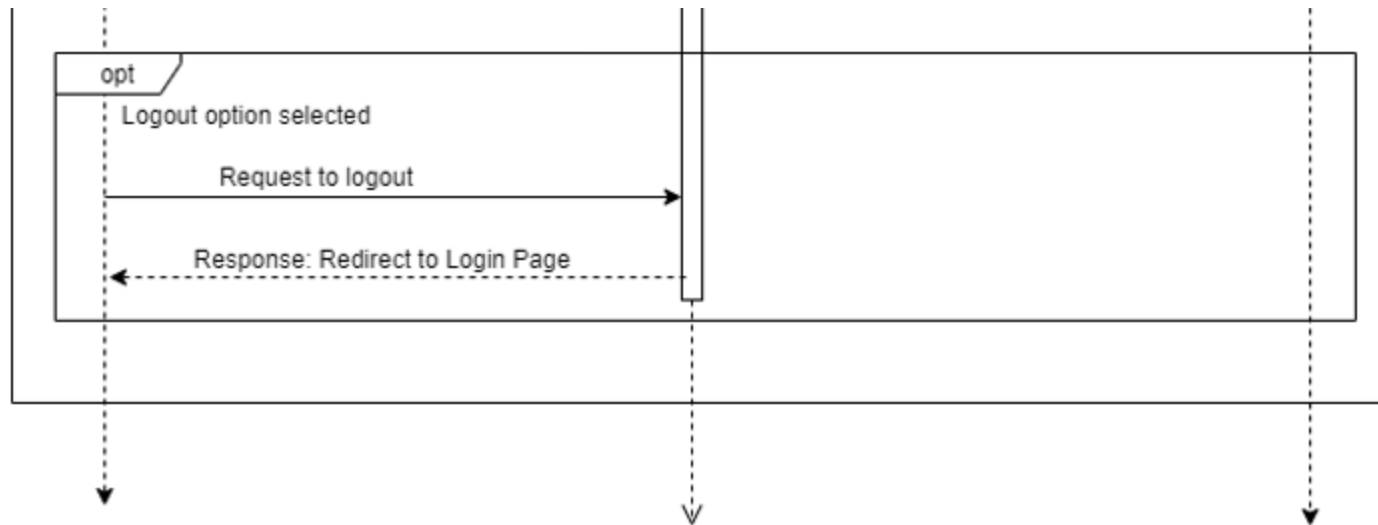
(Uncut Sequence Diagram - Admin :- <https://drive.google.com/file/d/1Q7q7cpdIUKKFFqj3JN-6rJdt51LSuu1U/view?usp=sharing>)



Garage Sale



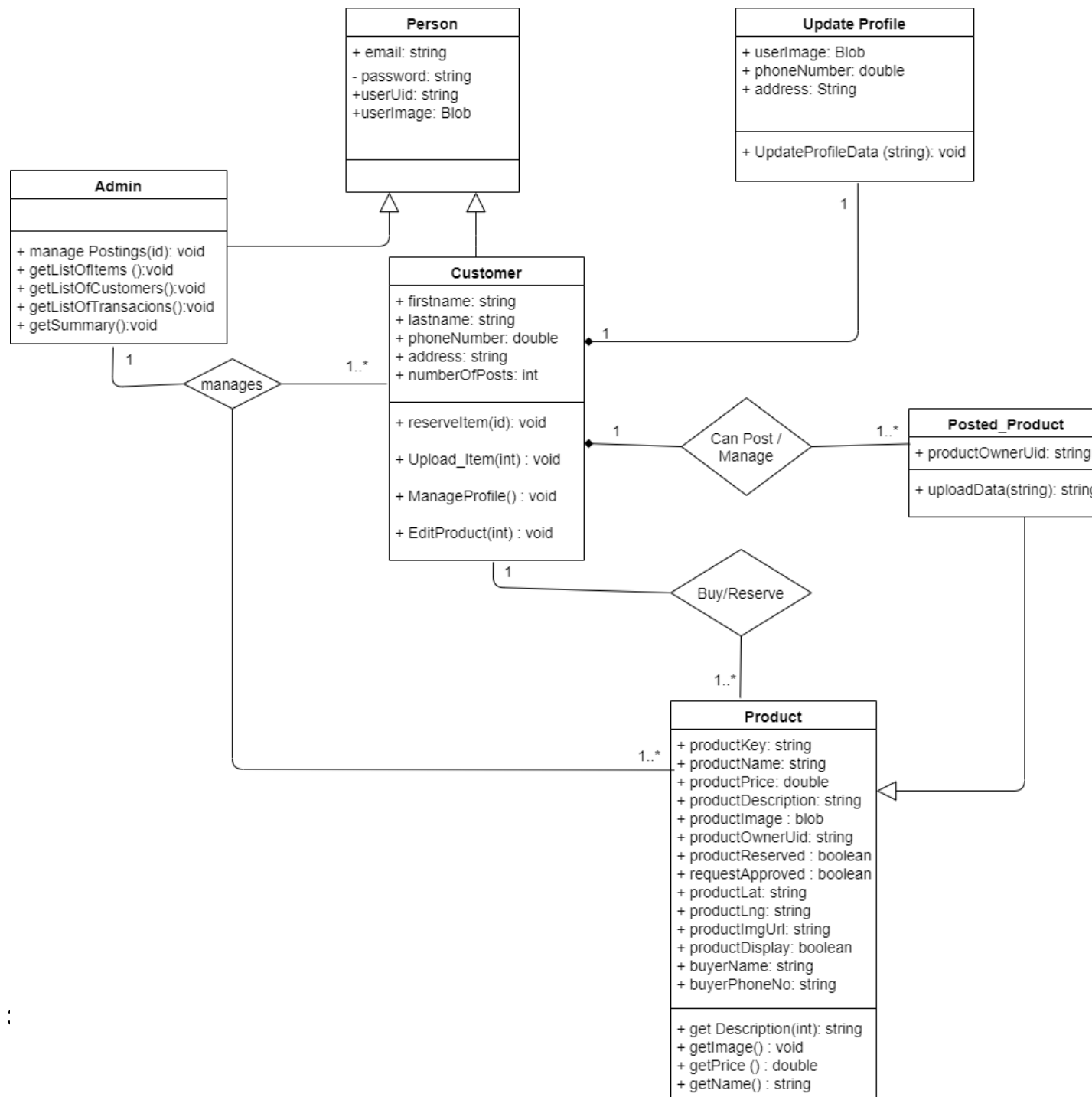
Garage Sale

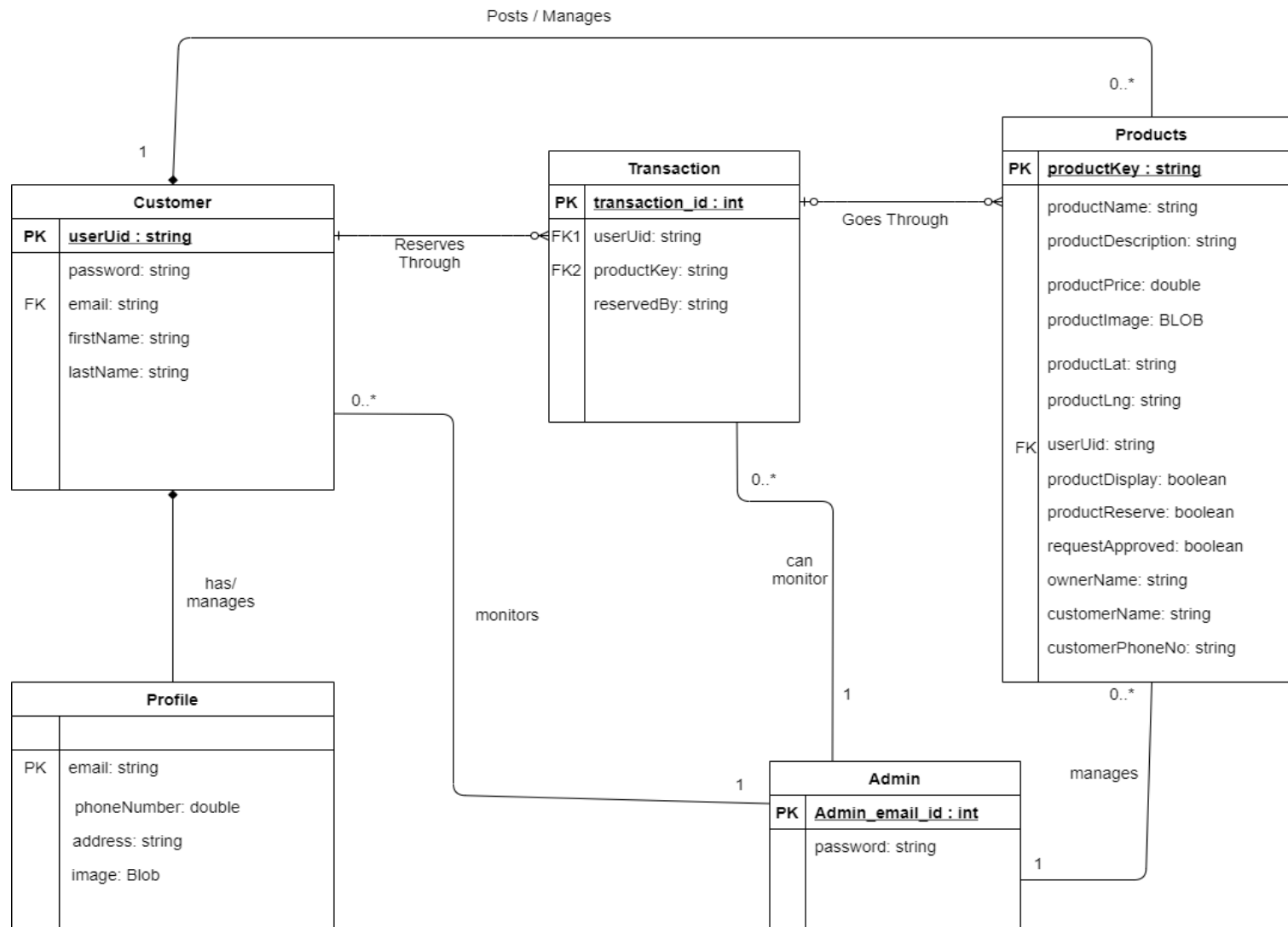


(Uncut Sequence Diagram - Admin :- <https://drive.google.com/file/d/1Q7q7cpdIUKKFFqj3JN-6rJdt51LSuu1U/view?usp=sharing>)

10 Class Diagram: (Next Page)

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12 Distribution Of Tasks

Mehul Mangukiya	<p>Documentation:-</p> <ul style="list-style-type: none">• Activity diagram• Sequence Diagram• Use Case Diagram <p>Programming:-</p> <ul style="list-style-type: none">• Splash Screen• Registration• Login• Forgot Password
Harsh Patel	<p>Documentation:-</p> <ul style="list-style-type: none">• Class Diagram <p>Programming:-</p> <ul style="list-style-type: none">• Customer location pin on map• Fetch product details on customer map pin click (in List format)• Search functionality & fetch product details on click (in List format)
Falak Desai	<p>Documentation:-</p> <ul style="list-style-type: none">• Use Case tables• ER Diagram <p>Programming:-</p> <ul style="list-style-type: none">• Posting new product module• Upload image, description, price, & name of the product from customer & store it in database• Product Reservation• Edit Product module

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Krina Patel	<p>Documentation:-</p> <ul style="list-style-type: none">• Functional & Non functional requirements• Userstories• Project Description & Scope <p>Programming:-</p> <ul style="list-style-type: none">• Homepage with bottom navigation panel (design)• Profile Update module• Manage Product Module(Show in list)
Krutarth Rangunwala	<p>Documentation:-</p> <ul style="list-style-type: none">• Mockups <p>Programming</p> <ul style="list-style-type: none">• Admin panel (Summary)• Show reserved items with details (Transactions)• List of Customers & Products (Admin side)

13 References

Below is the list of references used while developing this app. Please note that the list is not limited only to these references, there were other inputs or results (like youtube videos) involved which might not be included here.

- for run time permission

<https://developer.android.com/training/permissions/requesting>

- for map integration

<https://developers.google.com/maps/documentation/android-sdk/start>

- display marker in map

<https://developers.google.com/maps/documentation/android-sdk/marker>

- read data from firestore

<https://stackoverflow.com/questions/46706433/firebase-firestore-get-data-from-collection>

- create a recyclerview simple adapter

<https://stackoverflow.com/questions/40584424/simple-android-recyclerview-example>

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- delete data from firestore

<https://firebase.google.com/docs/firestore/manage-data/delete-data>

- create firebase user & sign in user

<https://firebase.google.com/docs/auth/android/start>

- update data into firestore

https://www.youtube.com/watch?v=K2KE5Ku8qxc&ab_channel=CodingWithMitch

- bottom navigation

<https://www.geeksforgeeks.org/bottom-navigation-bar-in-android/>

- for Toggle Switch

<https://material.io/develop/android/components/switches>

- store image into storageReference and getting url to store in firebase firestore

<https://stackoverflow.com/questions/40177250/in-firebase-after-uploading-image-how-can-i-get-url>

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- for making custom alert dialog

<https://stackoverflow.com/questions/22655599/alertdialog-builder-with-custom-layout-and-edittext-cannot-access-view>

- for passing one product data to one activity to another activity

<https://stackoverflow.com/questions/2736389/how-to-pass-an-object-from-one-activity-to-another-on-android>

- for adding product id to marker tag

https://developers.google.com/maps/documentation/android-sdk/marker#maps_android_markers_add_a_marker-java

- for underline inside textview

<https://stackoverflow.com/questions/2394935/can-i-underline-text-in-an-android-layout>