

## Lab 5 | IT314 Software Engineering

Group: 25

Project: Online Grocery Shopping

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Q3)

### Project Description

This is a project for the design of a mobile application for grocery shopping. The users can browse items from multiple stores, compare prices, buy their choice and get it delivered right to their doorstep. Stores that supply grocery items like fresh vegetables, fruits, cooked and uncooked food among others can register as merchants on the application. The objective will be to offer fast, convenient and reliable services to customers who would save on time they spend at the store, walking between shelves and money they pay for transport. The list of stores that the customers can buy from will be limited by the distance as the delivery time for groceries will be a constraint.

### Project Scope

It is a simple grocery application. There are two sides of the application - User side and Merchant side. Users can browse, search, sort and filter items. They can add the desired items to cart, remove items from cart, proceed to checkout and buy the items. There are multiple payment modes available like UPI, card, COD or Net banking. They can also track their orders, view order history and reorder items they want again. On the merchant side, the merchants can add, remove and manage their inventory of items. They can accept or reject orders and can update order status on the application. The merchants are responsible for the delivery of the items. There is also a functionality of viewing the analytics for the merchants which can help them grow their business.

The technologies used will be Android Studio, which uses Java code as a logic, and XML code as design. We will be using a firebase database for real time functionalities of the server and firebase storage for storing different images of projects on the server. Google's authentication system is used for verifying a user.

## Assumptions

- Users need to have a basic knowledge of a smartphone and internet
- Suppliers will deliver the product on time for every order
- The payment will go through every time - there would be no transaction errors in online payment options
- It is assumed that the software will not crash
- It is assumed that the server will not crash

## Stakeholders of the system:

1. Customers
2. Merchants
3. Project Manager
4. Mentors
5. Developers
6. Investors

## User Requirements:

1. See different products (with all details like photos, features, reviews etc..)
2. Add items to cart
3. Mark an item favourite
4. Sort and Search through items
5. Filter products
6. Schedule delivery time
7. Have different payment options (like UPI, cash, cards)
8. Cancel order
9. Order again
10. View previous orders
11. Track orders
12. Give a feedback
13. User can Rate a product and Merchants
14. Profile SetUp
15. Delivery notification (i.e. Order on the way, Order cancelled, Order Delivered).

## System Requirements:

1. User should register first time
2. User should be logged in
3. System should be able to accept simultaneous orders (at the same moment)
4. System should be secure enough to save user details
5. Server should be working 24 x 7

## Non - functional requirements

1. Easy to use UI/UX.
2. Lower build and maintenance cost.
3. Privacy Protection.
4. Notification should be sent with a latency of no greater than 5 minutes.
5. Data recovery should be possible in case of application crash.

## User interfaces for each user of the system

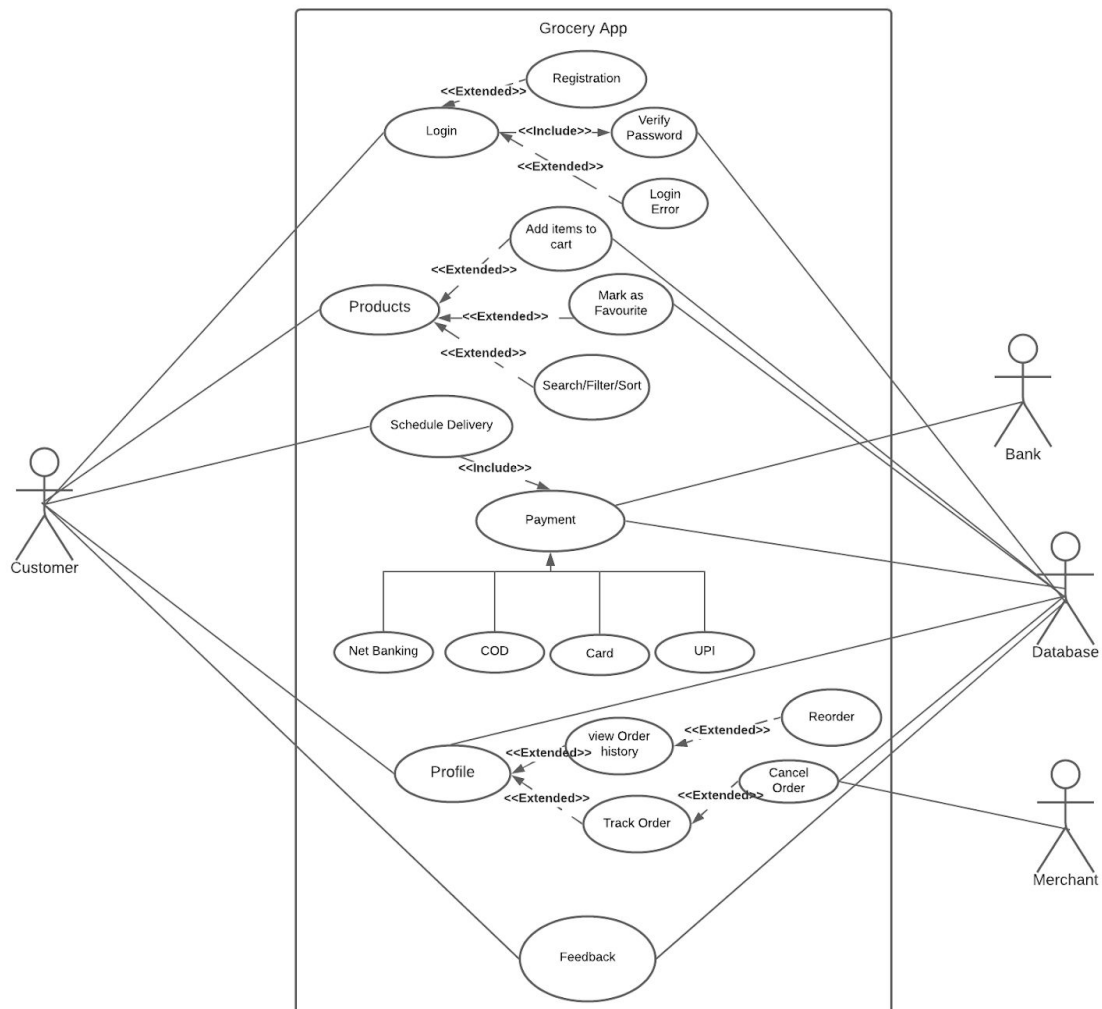
1. Customers
  - Product
  - Menu
  - Cart
  - Payment
  - Profile (view order, track order etc..)
2. Merchant
  - Login
  - Profile (Analytics, Bank Details etc)
  - Products (add, remove, stock)
  - Order Details
  - Feedback
  - Transactions

## Open issues

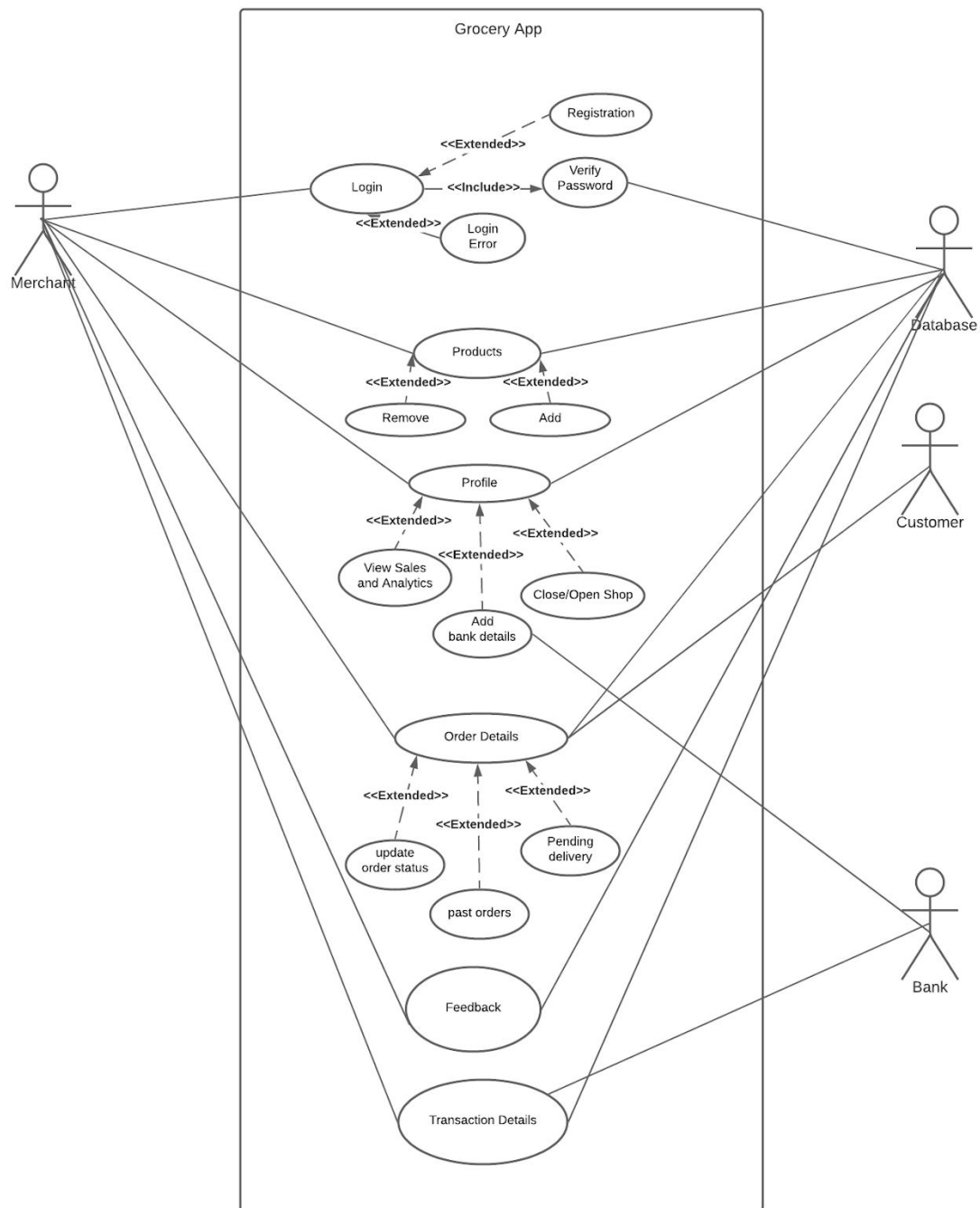
1. Transaction failure
2. System Failure
3. Delivery of the Product not on time.

## Use case diagrams

Customer:



Merchant:



## Objectives of the project

The project is meant to provide online shopping software for grocery items. Users can order different items, and get it delivered right away or schedule it.

## Need of the project

Online shopping is a new standard in the shopping industry. It is an easier way to shop rather than to go physically.