# Medicine Shopping Application


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—

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# APPROVAL

This **Project/Thesis** titled "**Medicine Shopping Application**", submitted by **S.M Asif Mahmood**, **ID: 152-35 -1156** to the Department of Software Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc in Software Engineering and approved as to its style and contents.

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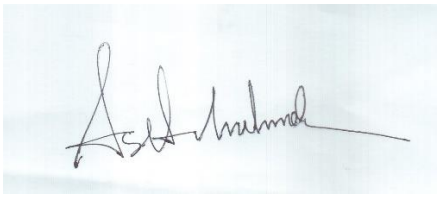
# Declaration

I hereby announce that I have engaged this project under the supervission of **Mr. Md. Mushfiqur Rahman,** Lecturer, Department of Software Engineering, Daffodil International University. I also decleare that neither this project nor any portion of this report takes been submitted else anywhere for any degree or award.



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# Acknowledgement

I take this case to thank God, almighty for consecration us with his beauty and taking our effort to a successful conclusion. I extend my honest and heartfelt thanks to our respected guide, Md. Ashraf Remon, for providing me with the right guidance and advice at the crucial junctures and for showing me the right way. I extend my sincere thanks to our respected Mr.Mushfiqur Rahman Lecturer, Department of Software Engineering, for allowing us to use the facilities available. I would like to thank the other faculty members also, at this occasion. Last but not the least, I would like to thank my friends and family for the support and encouragement they have given me during the course of our work.

**S.M Asif Mahmood**

17th Batch

Department of software engineering

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# Executive Summary

This project is a web based shopping system for an pharmacy shop. The project objective is to deliver the online shopping application into android platform. This project is an attempt to provide the advantages of online shopping to pharmacy owner. It helps buying the products in the shop anywhere through internet by using an android device. Thus the customer will get the service of online shopping and delivery from the company warehouse. This system can be implemented to any shop in the locality or to multinational branded shops having retail outlet chains. If company are providing an online portal where their customers can enjoy easy shopping from anywhere, the shops won't be losing any more customers to the trending look like such as daraaz.or evaly. Since the application is available in the Smartphone it is easily accessible and always available.

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# Chapter - 1

# Introduction

## 1.1 Project Overview

This project is a mobile android application. It is a ecommerce application fully online based. There are many kind of ecommerce application in Bangladesh. Lot's of ecommerce has provided many products. Nowadays medicine has been sell in online. But pharmacy shop owner can not buy in online ecommerce application. Medical representative go to pharmacy shop to promote their company medicine and then shop owner choose whose medicine are they buy. Those kind of any mobile android application doesn't make. This android app user or any pharmacy owner buy his favorite or needed medicine easily through this app from the medicine product company. So those fact are ensure that pharmacy shop are can easily buy their medicine from company directly. A complete and efficient android application which can provide the online shopping experience is the basic objective of the project.

## 1.2 Purpose & Scope

- Pharmacy owner make easily buy medicine from company
- No longer time wait to medical representative.
- No need to paper work process (analog system).
- Time process make to efficient.
- Secure system process because it authentication.

This system can be implemented to any shop in the locality or to multinational branded shops. The system recommends a facility to accept the orders 24 hours in a day.

### 1.2.1 Background

Firstly, a medical representative came to the pharmacy to promote or sell the medicine. Pharmacy people sometimes not interest to buy medicine. Then they negotiate to them. After few moment later they buy or not to buy their medicine. Sometimes they delivery their product to pharmacy not on time. Pharmacy people suffer to hassle or maybe more. So those problem had to solution and that's why this app is make more easier to get out those problem.

### 1.2.2 Benefits & Beneficiaries

- Secure authentication system
- Secure database
- No longer time to spend
- Safe payment process
- Easy to order product
- No unauthorized access

### 1.2.3 Goals

- Safe and secure to use
- Never wait for medical representative
- Waiting time are save
- Anywhere anytime to order product
- Company to pharmacy owner have a strong relation

## 1.3 Stakeholders

- Admin
- User

## 1.4 Proposed Solution

Develop this project in this time to proposed a solution process model. This model are briefly to clear confusion the system.


**Figure-1.1: Proposed Solution Model**

This application is easy to use. But in order some product registration require first. Then log in the application to order the product. No log in this system no one can buy any product.

## 1.5 Project Schedule

### 1.5.1 Gantt Chart

This project is planning, I have been use Gantt chart to manage correctly to the project. Those tools in use to clarify which are done or not done and also schedule for the up-coming task.

| Task | Start | End | Duration |
|---|---|---|---|
| Planning | 12-09-2019 | 18-09-2019 | 07 |
| Requirement | 16-09-2019 | 28-09-2019 | 13 |
| Analysis design | 29-09-2019 | 10-10-2019 | 12 |
| DB design | 11-10-2019 | 21-10-2019 | 11 |
| Implementation | 17-10-2019 | 22-11-2019 | 37 |
| Testing | 23-11-2019 | 29-11-2019 | 07 |
| Delivery | 30-11-2019 | 01-12-2019 | 01 |
| Total | | | 88 days |

**Figure-1.2: Project Planning**

### 1.5.2 Release Plan/Milestone

Release plan or milestone is a time schedule of the project. Those are as a

| Task | Name | Duration |
|---|---|---|
| 01 | Planning | 07 |
| 02 | Requirement | 13 |
| 03 | Analysis design | 12 |
| 04 | DB design | 11 |
| 05 | Implementation | 37 |
| 06 | Testing | 07 |
| 07 | Delivery | 01 |
| | | 88 days |

# Chapter - 2

# Software Requirement Specification

A software requirements specification (SRS) is a detailed description to be developed of a system software. It lays out of the functional and non-functional requirements, and may include a set of use cases that describe user interactions that the software must provide.

## 2.1 Functional & Non-Functional Requirements List

### Functional

Functional requirement of the project are below,

- User log in
- Registration new user
- Purchasing an item
- Admin

**User log in**

A user must login with his user name and password to the system after registration. If they are invalid, the user not allowed to enter the system.

- Username and password will be provided after user registration is confirmed.
- Password should be hidden from others while typing it in the field.

**Registration new user**

A new user will have to register in the application by providing essential details in order to view the products in the system. The admin must be accept a new user by unblock.

- System must be able to verify and validate information
- The system encrypt password of the customer to provide security.

**Purchasing an item**

User can add the desired product to his cart by clicking add cart. User can view his cart and also can remove from an item. After that the will become empty.

- System must ensure that, only register user can purchase items.

**Admin**

- Manage user
  - The administrator can add user, delete user, view user and block user
- Manage moderator
  - The administrator can add moderator, delete moderator, block moderator and search for a moderator.
- Manage products
  - The administrator can add product, delete product and view product.
- Manage orders
  - The administrator can view orders and delete orders.

- The system must identify login of the admin
- Admin account should be secured so that only owner of the shop can access

**Non-Functional**

- Efficiency requirement
- Reliability requirement
- Usability requirement
- Implementation requirement
- Delivery requirement

## 2.3 Performance Requirements

Performance requirement of the application is very necessary. For better performance will provide some requirements in this project.

### 2.3.1 Speed and Latency Requirements

Need a check to minimum speed of the system task

| SLS | System faster speed |
|---|---|
| Description | It depends on browsing to their internet and it also bandwidth server speed |
| Stakeholders | User, admin |

### 2.3.2 Precision or Accuracy Requirements

Precision or accuracy requirement system to confirm of the data

| PAR | Precision data require |
|---|---|
| Description | Invalid data never saved to the system. Correct input data or right pattern data will be saved otherwise it not save |
| Stakeholders | User, admin |

### 2.3.3 Capacity Requirements

Capacity requirement should on maintain the data of all inserting

| CR | Database system in all data are maintain |
|---|---|
| Description | All user registration data and other information store on right way in the database |
| Stakeholders | User, admin |

## 2.4 Dependability Requirements

Dependability require means the availability, safety, security and more. The system need to avoid mistakes, detect and remove errors.

### 2.4.1 Reliability Requirements

The system should provide a reliable environment to both customers and owner. All orders should be reaching at the admin without any errors.

| RR | 24 hours the system are must be available |
|---|---|
| Description | • The system 24*7 available in a day<br>• Regularly updated are must be do |
| Stakeholders | User, admin |

### 2.4.2 Availability Requirements

The System should be available 99% of the time.

| AR | the system are 24 hours must be available |
|---|---|
| Description | • In a day the system 24*7 available<br>• Regularly updated are must be do |
| Stakeholders | User, admin |

### 2.4.3 Robustness or Fault-Tolerance Requirements

Robustness or fault-tolerance requirement are not needed in this system. Without this requirement project will be run time on process.

### 2.4.4 Safety-Critical Requirements

Safety requirement is a major priority in the system. safety-critical systems developers working with regulations and compliance standards know that opting for speed over safety, or safety over speed, adds risk. to succeed, both must be prioritized.

| | |
|---|---|
| SCR | Secure authenticate and authorize access to the system |
| Description | • Safety criteria major important part in the system |
| Stakeholders | User, admin |

## 2.5 Maintainability and Supportability Requirements

### 2.5.1 Maintenance Requirements

Support to the system and maintain it. Many people are connected with the system. User can easily use, run and maintain it. User friendly app system user can easily to use.

### 2.5.2 Supportability Requirements

Five principles of the supportability requirement

- Design for supportability
- Check the “ileitis”
- Manage changes
- Control quality
- Organize supportability

### 2.5.3 Adaptability Requirements

Specific no adaptability requirement for the project

## 2.6 Security Requirements

❖ Log in as a user in the system

This system to get access a specific module must be an authenticate. This system all users are Individual uniquely identify. The system to all attempts to access must have be logged.

### 2.6.1 Access Requirements

The user authentic to access the authentication way the system provides accesses.

### 2.6.2 Integrity Requirements

Integrity requirements are wrong or not clearly communicated, the system will ultimately be flawed. User information has been stolen. Encrypted password is not easy to stolen of decrypted password.

## 2.7 Usability and Human-Interaction Requirements

User can easily use the system, to buy his product anytime, delivery product and whatever they use they want.

### 2.7.1 Ease of Use Requirements

The android application is designed for user friendly environment and ease of use.

### 2.7.2 Accessibility Requirements

easy to access this system can anyone anytime. 24 hour in a day to access this project.

### 2.7.3 User Documentation Requirements

The system users while it necessities designing to the user interface. Very important to consults in the users.

## 2.8 Look and Feel Requirements

### 2.8.1 Appearance Requirements

This system user are not to need appearance requirements. It all depends on user.

### 2.8.2 Style Requirements

It's a simple design application not to create complexity design. User can easily use.

## 2.9 Operational and Environmental Requirements

### 2.9.1 Requirements for Interfacing with Adjacent Systems

There are no need for other interface requirement. This system only using the user interface

### 2.9.2 Release Requirements

it also need to release require two month for develop this project. All the require has fulfil then it to be comes release.

## 2.10 Legal Requirements

### 2.10.1 Compliance Requirements

This system are not happen or no one can use. So who are use this system have to need compliance. User can use without compliance.

### 2.10.2 Standards Requirements

This system has maintain the standard protocol or require that to specify the standard Procedure.

# Chapter - 3

# System Analysis

System analysis is the process of assembly and interpreting facts, diagnosing problems and using the information to recommend progresses on the system. System analysis is a problem solving activity that requires  concentrated communication between the system users and system developers.

## 3.1 Use Case Diagram

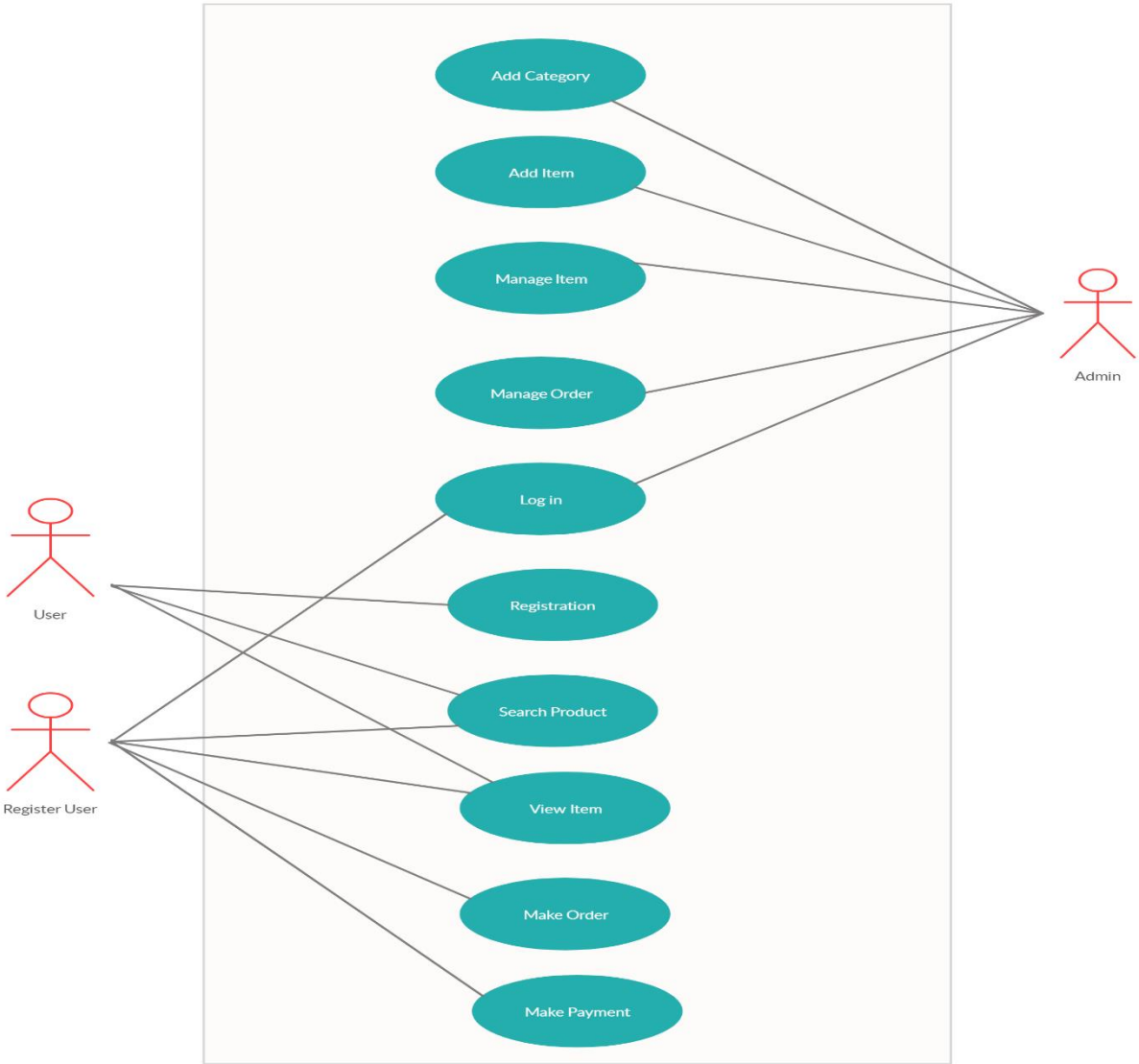


**Figure-3.1: Use Case Diagram**

## 3.2 Use Case Description

**User**

Use case diagram has to clarify the system working process. This user can only the search product and the view products. Also the user can registration to go into more function in the system. Otherwise they can't go and do anywhere.

**Register User**

In the case, user have buy some product then user must be registration. After registration user log in to the system and buy their products. Only register user can buy product on this system. and also make payment the register user.

**Admin**

Admin have get to the authenticate authorize access. Admin can log into the system to add category, add item, manage item and also manage order etc. admin can anyone id has been block for the particular reason . so, admin is very important pressure for the admin panel.

## 3.3 Activity Diagram

### User

Online E commerce application project provides activity diagrams while in development stage, this article explain about user and admin work flow features with diagrams.

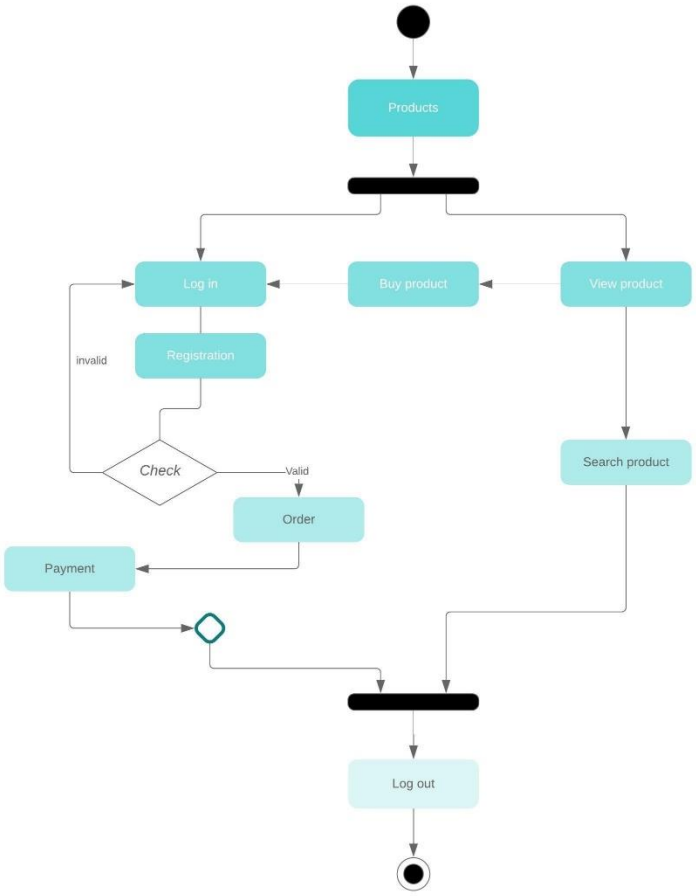


**Figure-3.3: Activity Diagram (user)**

## Admin

The attached Admin Activity Diagram explains admin username and password validation, managing user orders, manage new product details, data processing methods, accepting money payments, user and group permissions, etc.

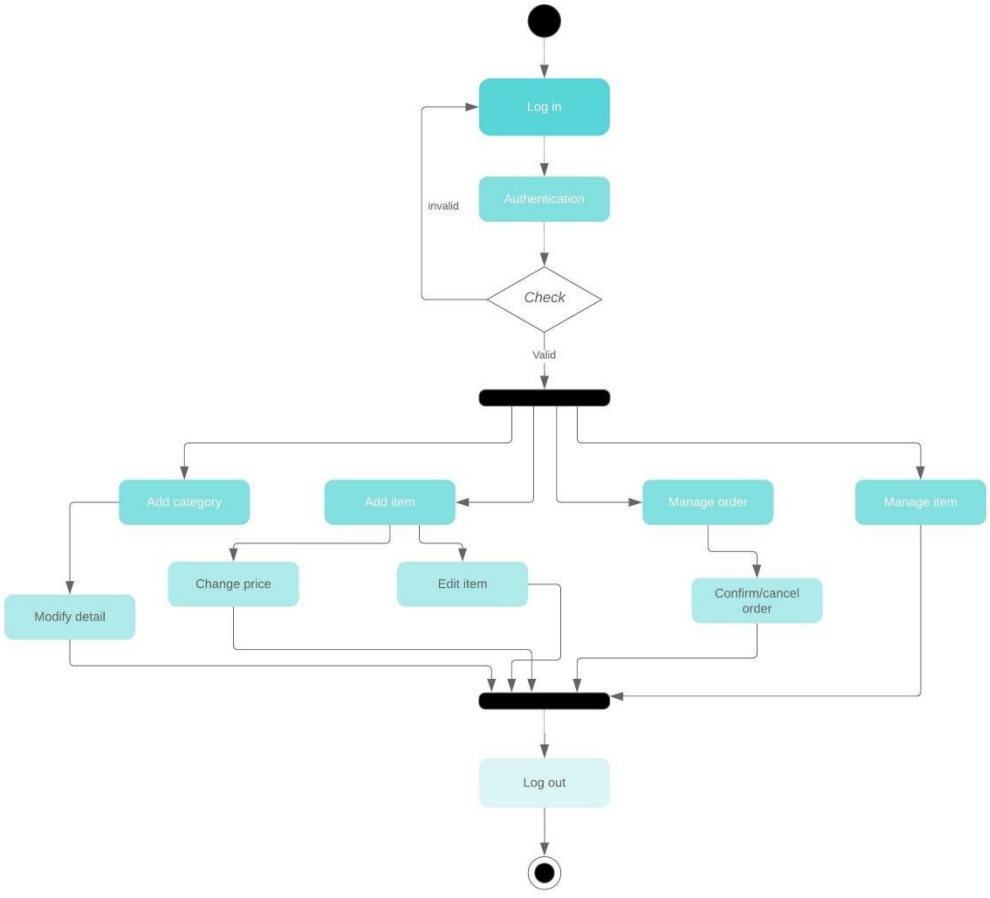


**Figure-3.3: Activity Diagram (admin)**

# Chapter - 4

# System Design Specification

## 4.1 Class Responsibilities Collaboration (CRC) Cards

CRC (Class-Responsibility-Collaborator) Card Modeling is a modest yet powerful object-oriented analysis method. CRC modeling often contains the users, analysts, and developers in the modeling and design process, getting together the entire development side to form a mutual understanding of an development project.
It is one of several tools that should be used in the collective design of a system.

A CRC Model is a collection of cards (usually standard cards or larger) that are divided into three sections –

- Class
- Responsibilities
- Collaborator

## 4.2 Sequence Diagram

we have seen altered diagrams, Use case diagrams define tasks that a scheme is supposed to achieve. It gives high-level data about how a operator should interact with the system. Class diagrams require the structure and the processes related to the statistics used by the system. A sequence diagram can support specifying the link among a use case and the methods and classes defined in class diagrams. It is consequently important to ensure reliability between these three kinds of diagrams.

**User (Sequence diagram)**

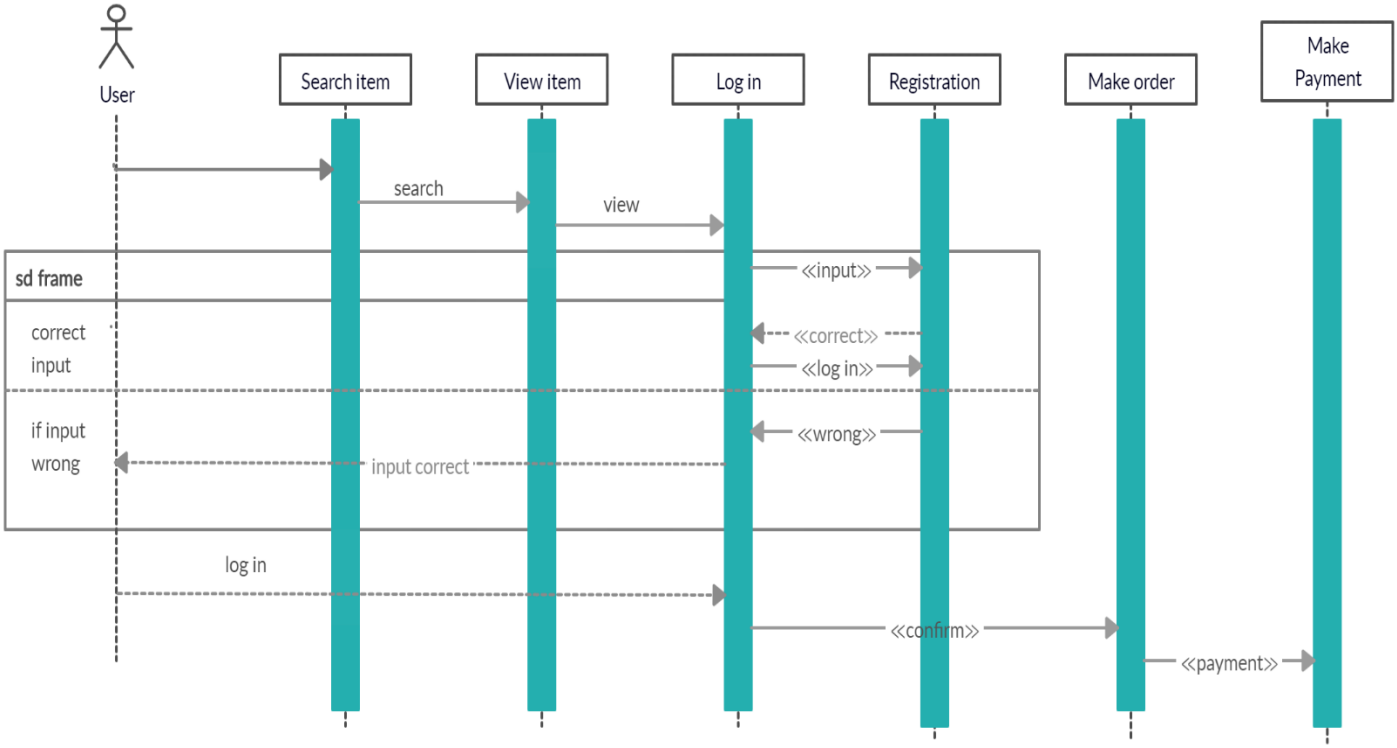


**Figure-4.2: Sequrnce Diagram (user)**

**Admin(sequence diagram)**

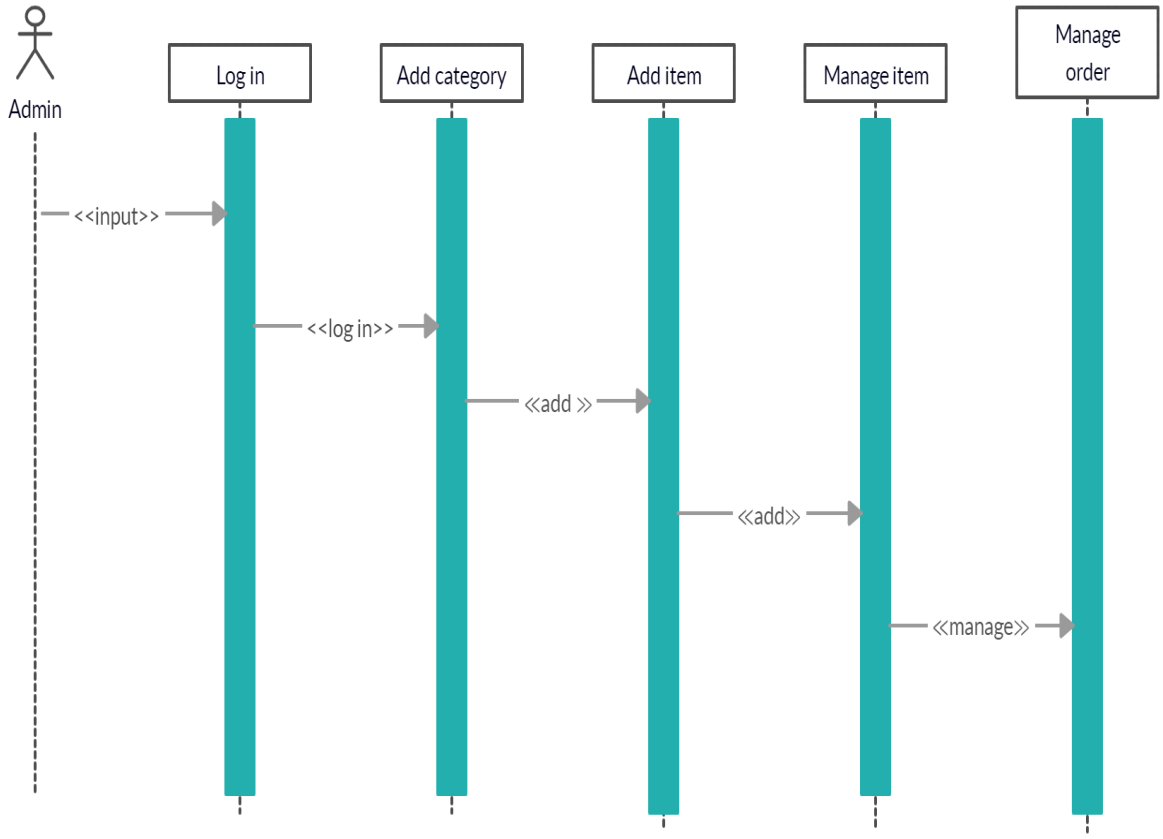


**Figure-4.2: Sequrnce Diagram (admin)**

## 4.3 Class Diagram

A class diagram remains a static model of a system. It displays the structure of the software in relations of the constituent classes and how individually class is related to other classes. It provides a static view of the system.

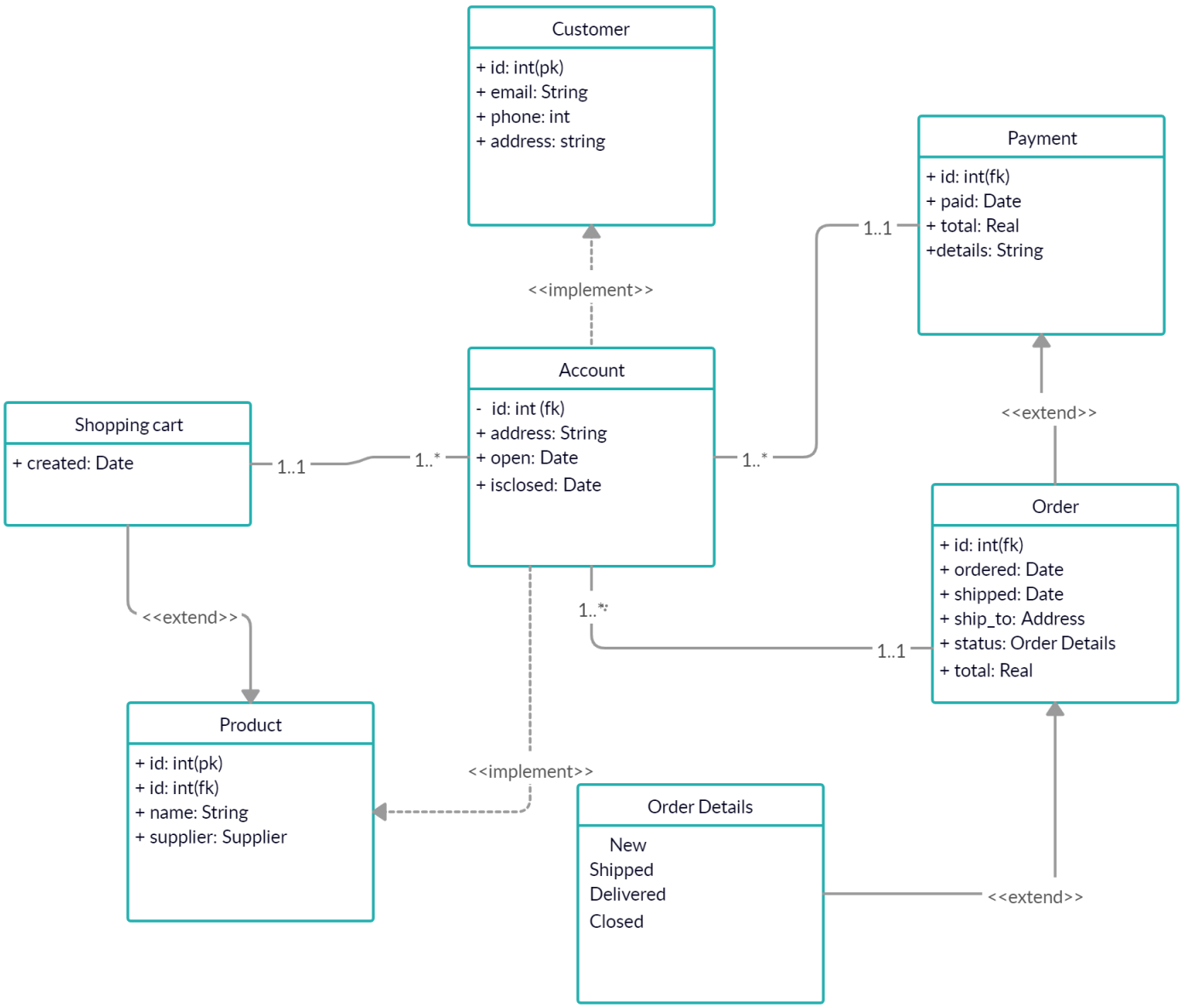


**Figure-4.3: Class Diagram**

## 4.4 Database Design Diagram

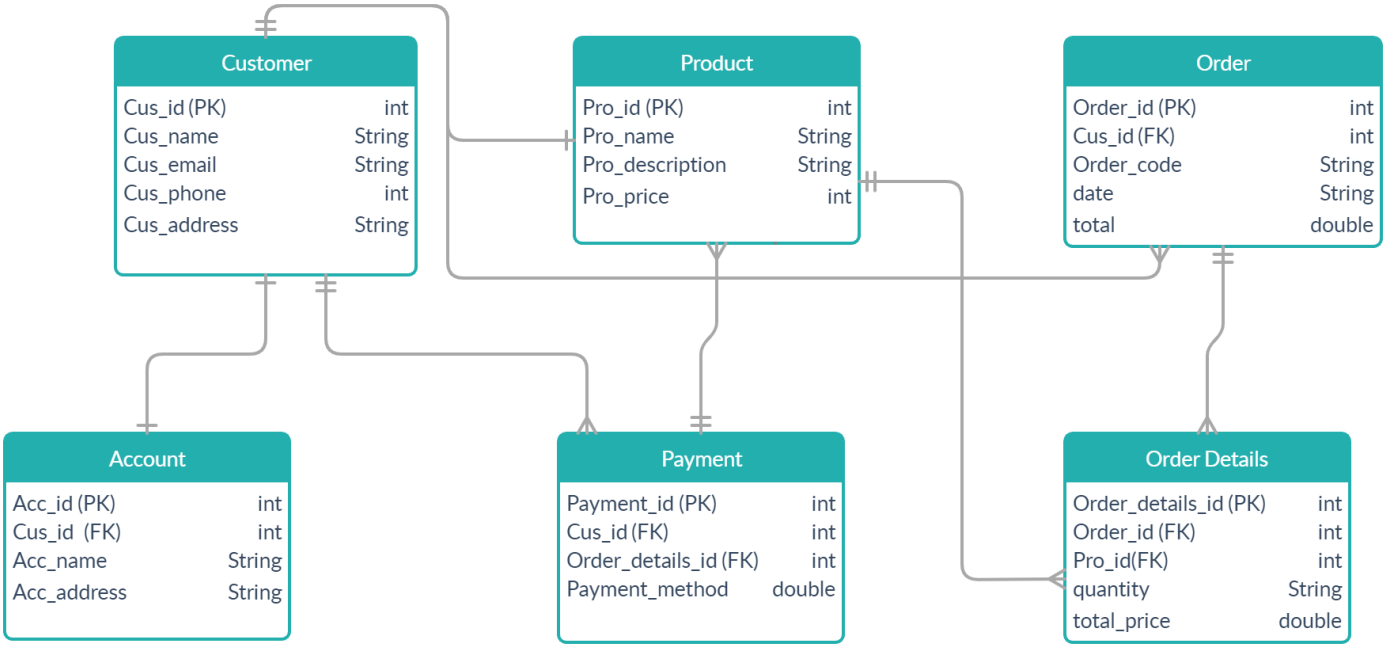


**Figure-4.4: Database Diagram**

## 4.5 Development Tools & Technology

Software tools and systems are most widely secondhand by systems analysts and computer operator for developing and keeping systems. They can similarly be valuable aids for the auditor in execution compliance or substantive difficult in the development, process or maintenance phases.

Many tools and methods have been developed that proposal significantly improved administration control and reduced budgets if properly applied. The amount of new tools besides techniques continues to grow.

### 4.5.1 User Interface Technology

- Java JDK 13
- Java SE Development Kit 8
- Android .xml layout

### 4.5.2 Implementation Tools & Platforms

- Android Studio 3.3.1
- Firebase
- Android Virtual Device Manager

# Chapter - 5

# System Testing

Testing is proposed to show that a package does what it remains intended to do then to discover program flaws before it is place into use. When you trial software, you execute a program using mock data. You check the outcomes of the test path for errors, anomalies before information about the program's non-functional characteristics.

Software testing is the key activity of evaluating then executing software with a opinion to find out faults. It is the procedure where the system supplies and system components remain exercised and evaluated physically or by using mechanization tools to find obtainable whether the system is satisfying

## 5.1 Testing Features

Mobile devices have developed more pervasive in our day-to-day lives, and are regularly replacing regular computers near perform traditional processes similar Internet browsing, editing pictures, playing videos and complete track, and reading altered files. The importance of mobile devices in our life requires more concerns of the consistency and compatibility of mobile applications, and so, testing these applications rises as an important stage in mobile devices alteration process.

### 5.1.1 Features to be tested

Features to be tried define is which of the structures of the system or sub-system will be tested. The principle effort is on what the organization can do for the organization rather than if it works. This is a principle key as whether it works should have been done in system testing.

| Item Being Tested | Business Scenarios Being Tested |
|---|---|
| Borrowers sub-system | Creating a new public library user |
| The circulation new sub-system | Issuing an item |
| The circulation new sub-system | Renewing an item |
| The circulation new sub-system | Returning an item including overdue fine calculations |

### 5.1.2 Features not to be tested

This is a citation of what is 'not' to be tested since both the user's lookout of what the system does and a conformation management/version control opinion. This is not a procedural description of the software, but a user's assessment of the functions. Recognize why the feature is not to be confirmed, there can be any number of reasons.

- Not to be involved in this release of the Software.
- Low risk, has remained used before and stayed considered stable.
- Will be released however not tested or standard as a functional portion of the release of this version of the software.

.

## 5.2 Testing Environment (hardware/software requirements)

Testing environment must take to require hardware software both. We need toward profile and need to highlight hardware and software condition as real as construction need or what has been specified in design document. Any disparity in this will main to testing issues.

- Test environment managing a clear-cut and actual way of managing and showing guidance to teams would be defined.
- Multiple types of difficult and multiple round/cycles of testing certainly affect testing environment. Requirement of test data would contrast from cycle to cycle besides one type of testing to other.
- Hardware requirements should remain analyzed early
- Software tools usage besides versions should be tested
- Environment reservation system should be made effective

## 5.3 Test Cases

| Test case id | Test case description | Test data | Expected result | Actual result | Pass/fail |
|---|---|---|---|---|---|
| 01 | Check customer valid email and password is entered | Email: tarek@gmail.com<br><br>Password: 1234567 | User Login should be successful | Login was successful | Pass |
| 02 | Check customer valid email and password is entered | Email: sumon11@gmail.com<br><br>Password: 1234### | User Login should be successful | Login was successful | Pass |
| 03 | Check customer valid email and password is entered | Email: hasan@email.com<br><br>Password: abcd1234 | User Login should be successful | Login was successful | Pass |
| 04 | Check customer valid email and password is entered | Email: maruf@email.com<br><br>Password: qwer4321 | User Login should be successful | Login was successful | Pass |
| 05 | Check customer valid email and password is entered | Email: rafy@gmail.com<br><br>Password: 1234@#$% | User Login should be successful | Login was successful | Pass |

# Chapter – 6

# User Manual

## 6.1 User Manual (user)

### Home Page

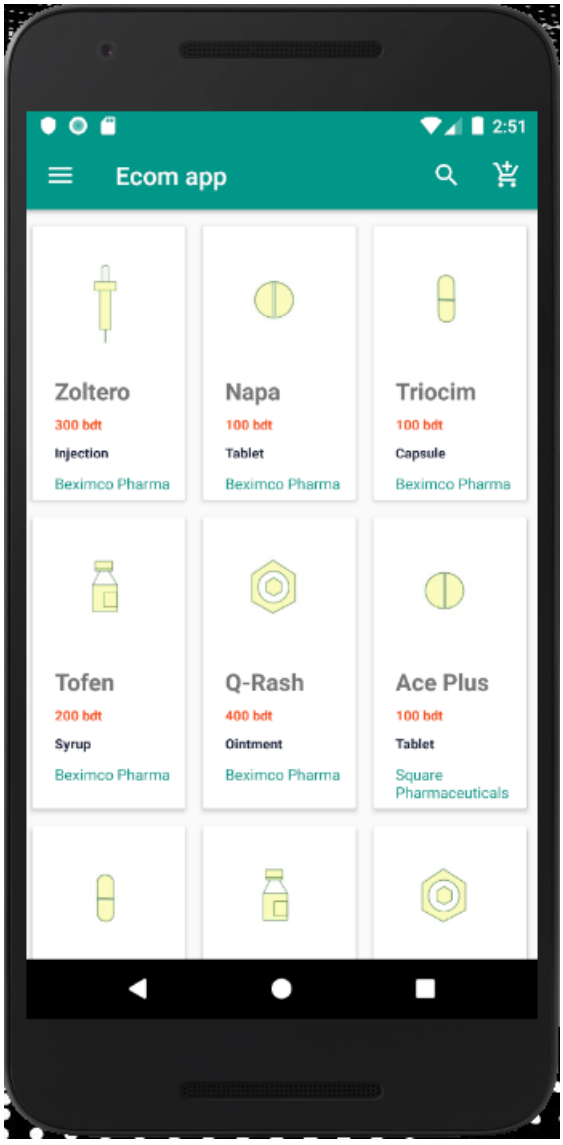


**Figure-6.1: Home page**

## Navigation

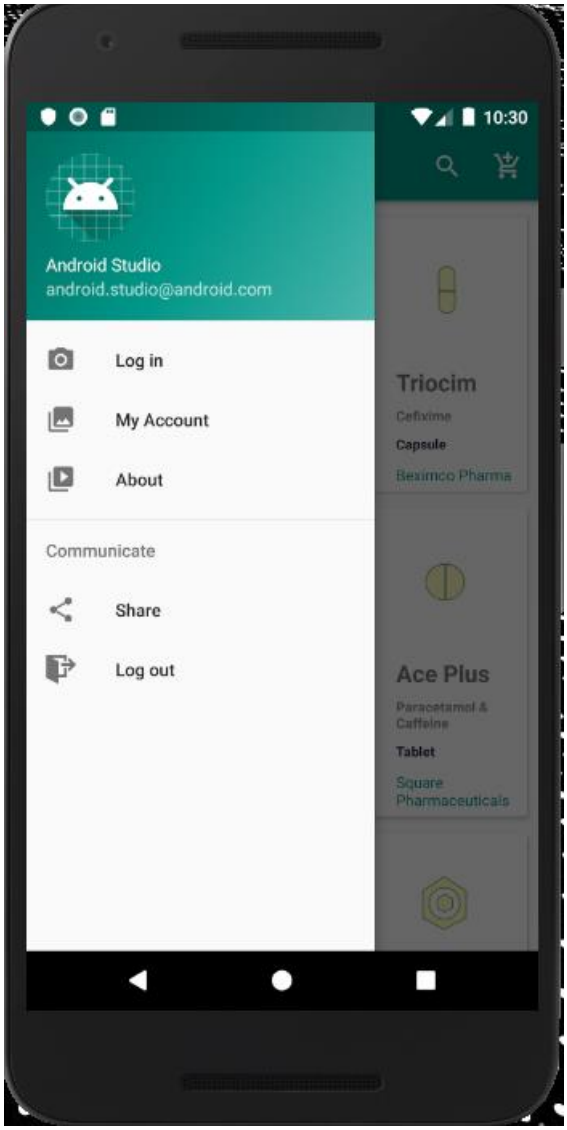


**Figure-6.1: Navigation**

## Search option

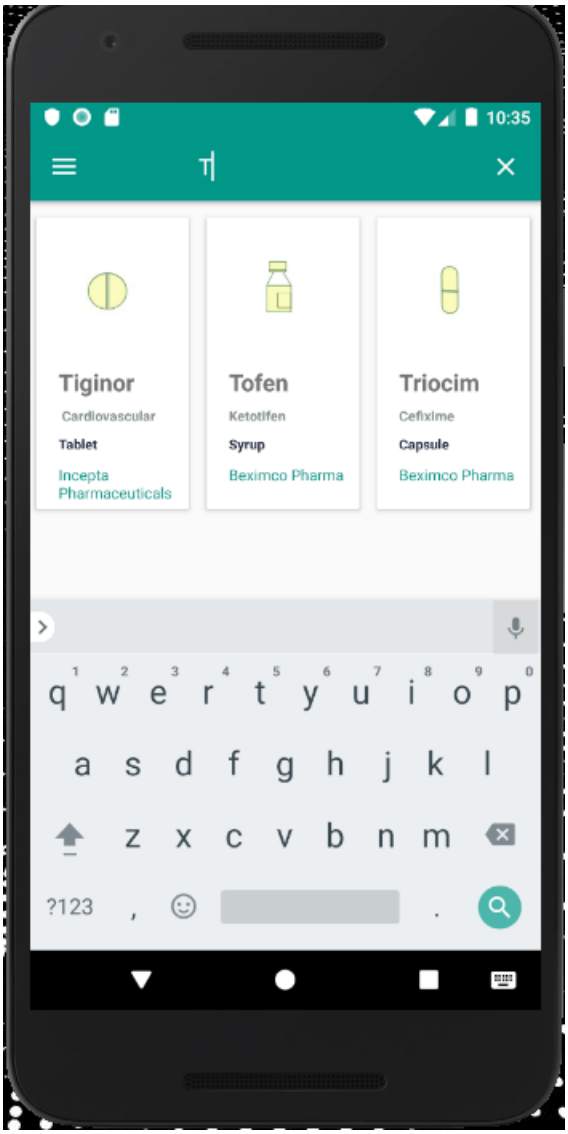


**Figure-6.1: Search option**

## Item view

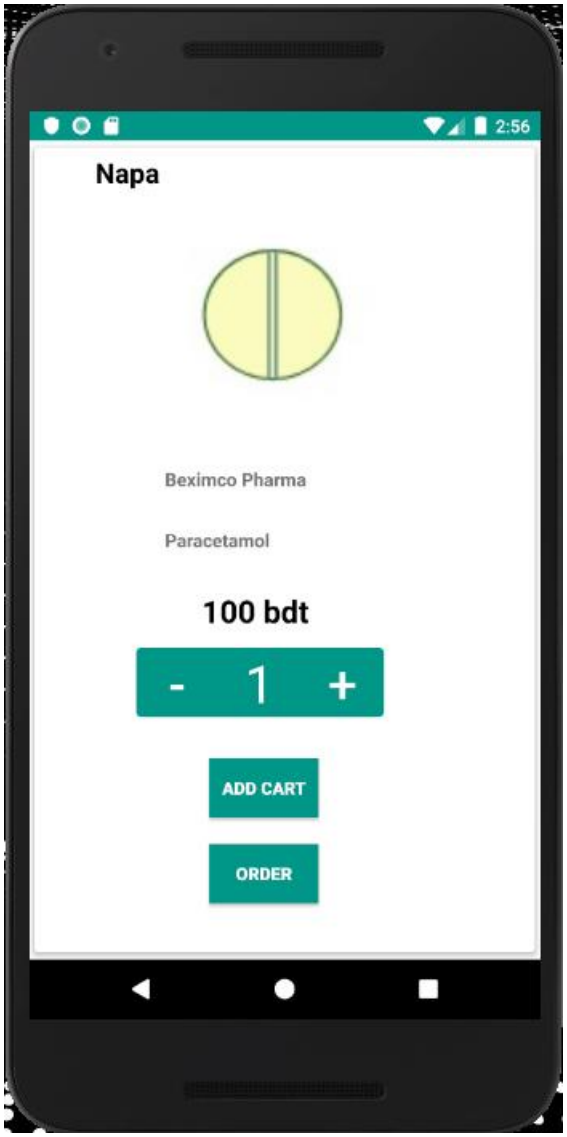


**Figure-6.1: Item view**

## Add Cart

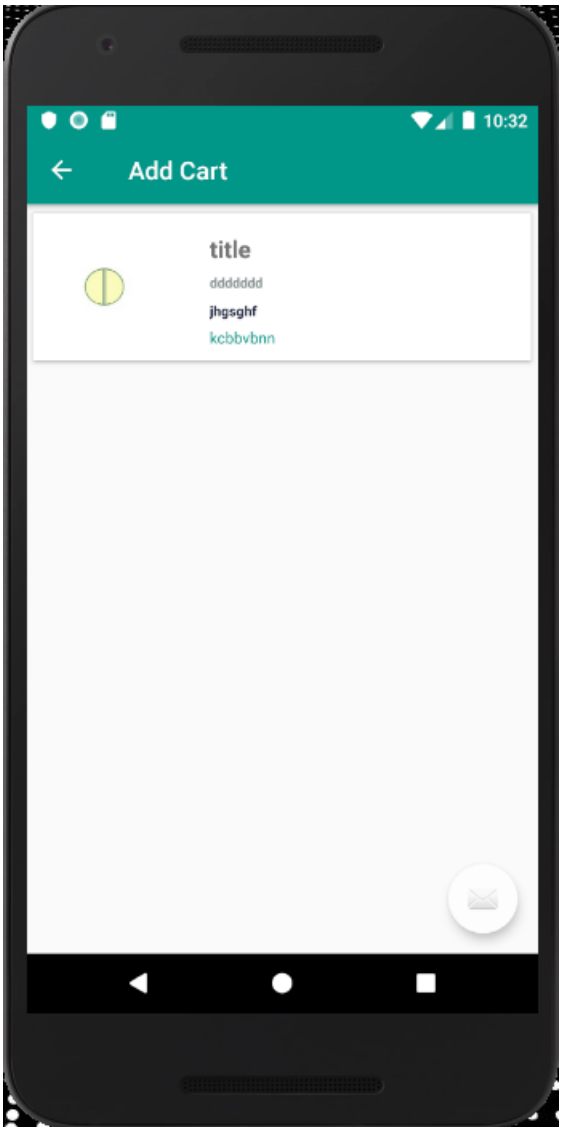


**Figure-6.1: Add cart**

## Order List

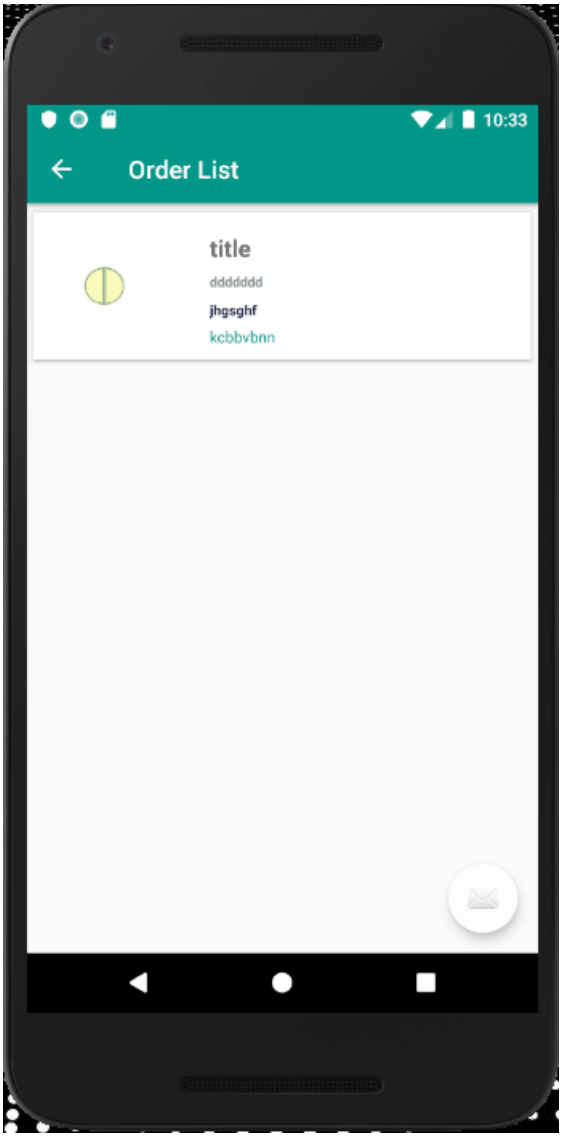


**Figure-6.1: Order list**

## Account

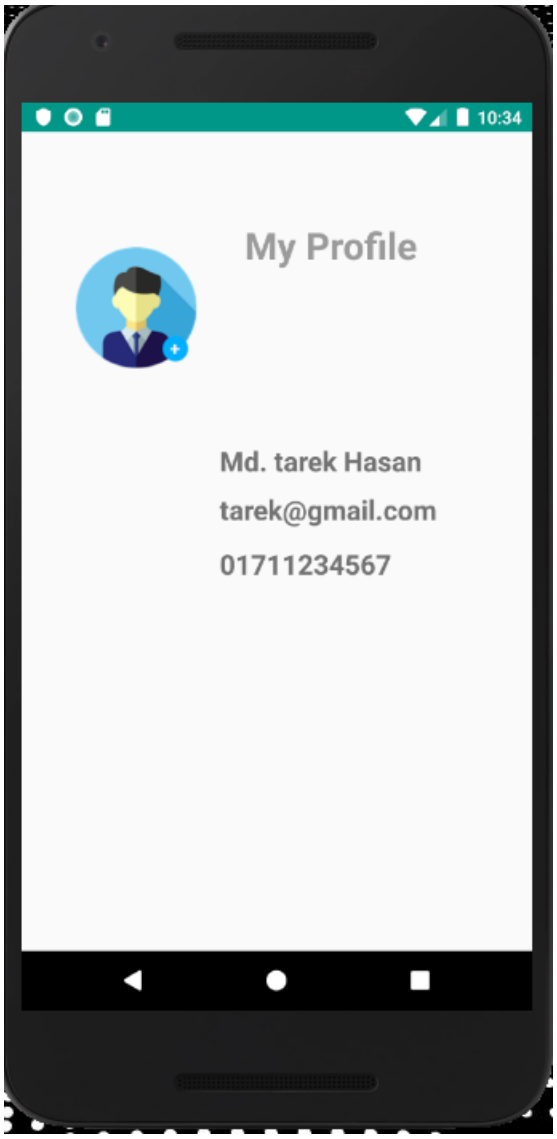


**Figure-6.1: Account**

## Log in

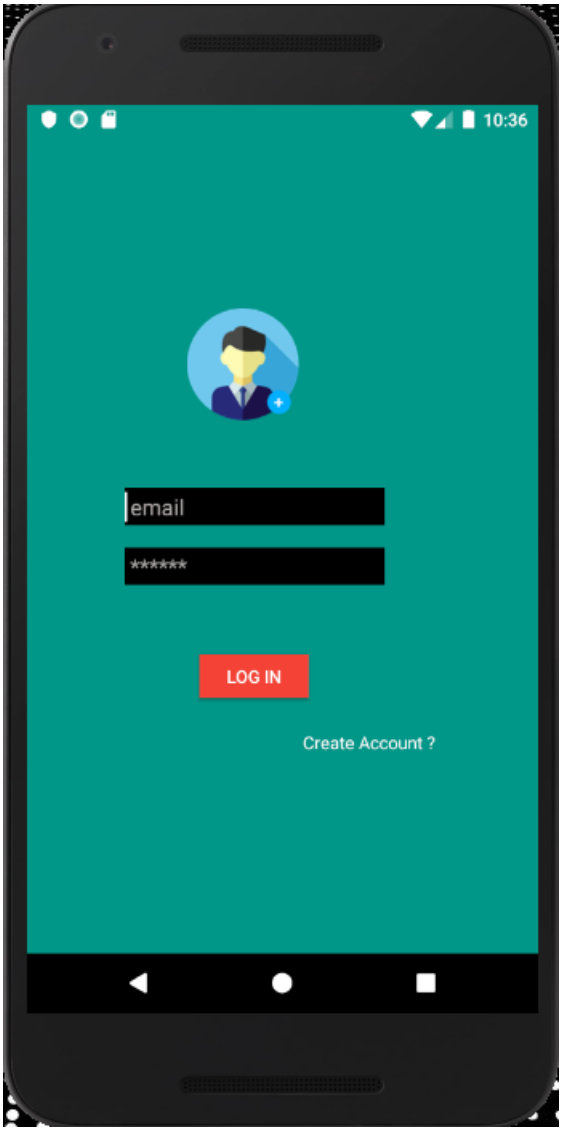


**Figure-6.1: log in**

## Registration

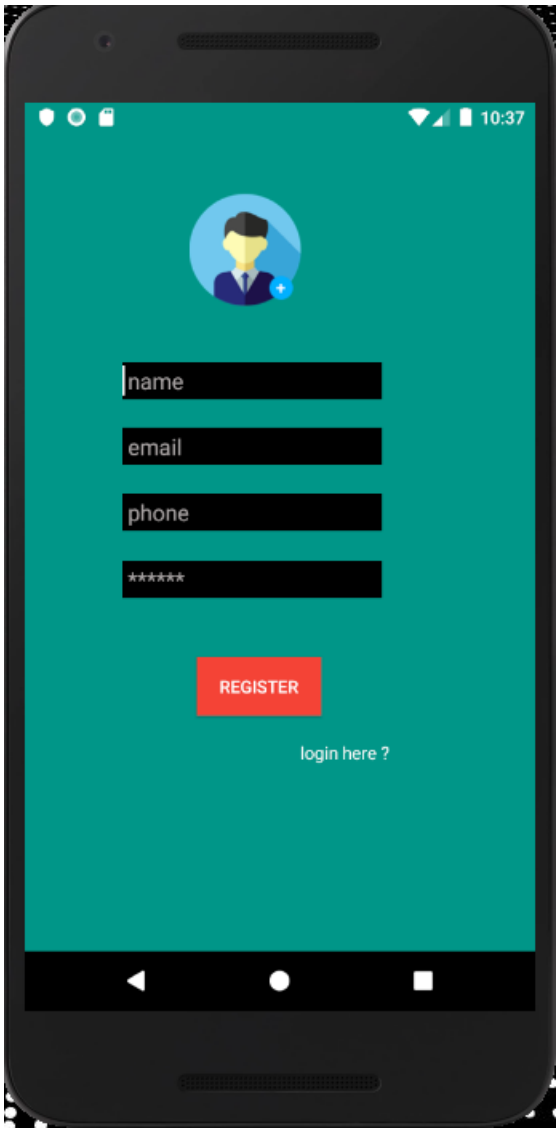


**Figure-6.1: Registration**

## 6.2 User Manual (Admin)

### Firebase authentication

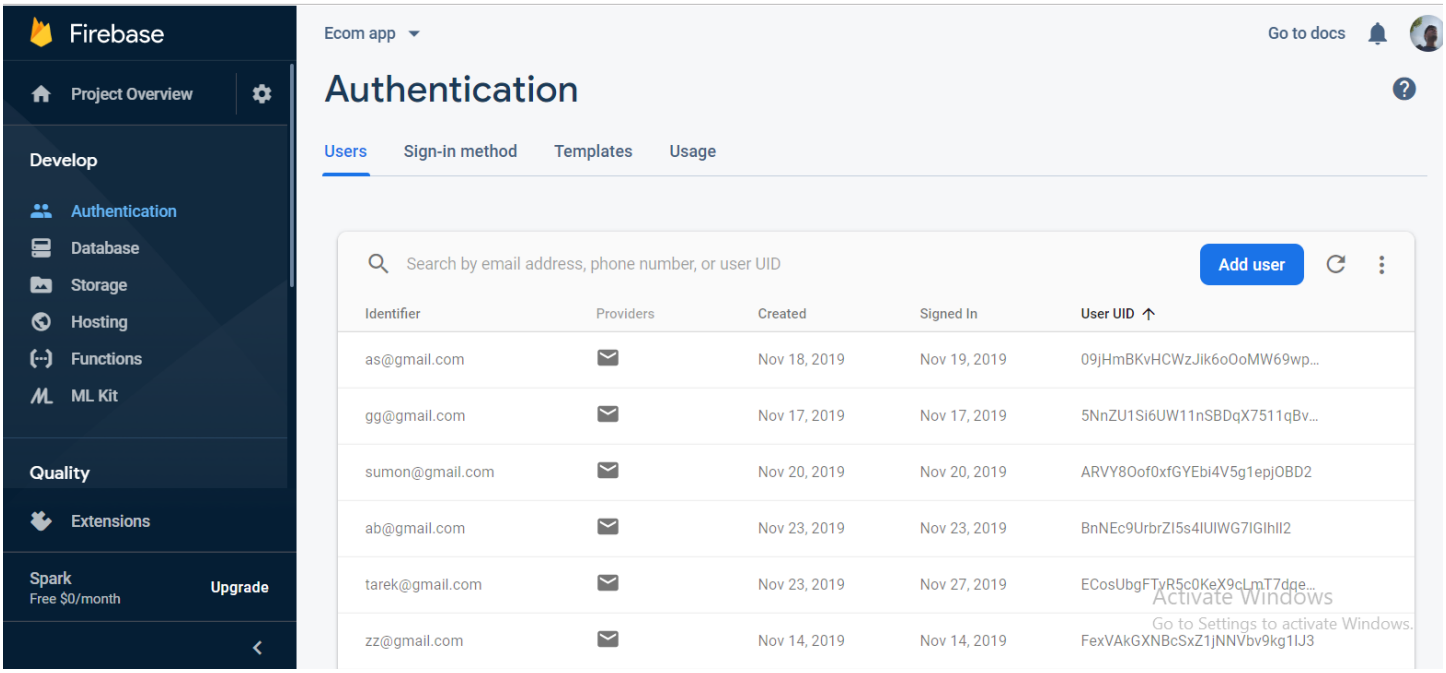


**Figure-6.2: Firebase authentication**

## Firebase storage

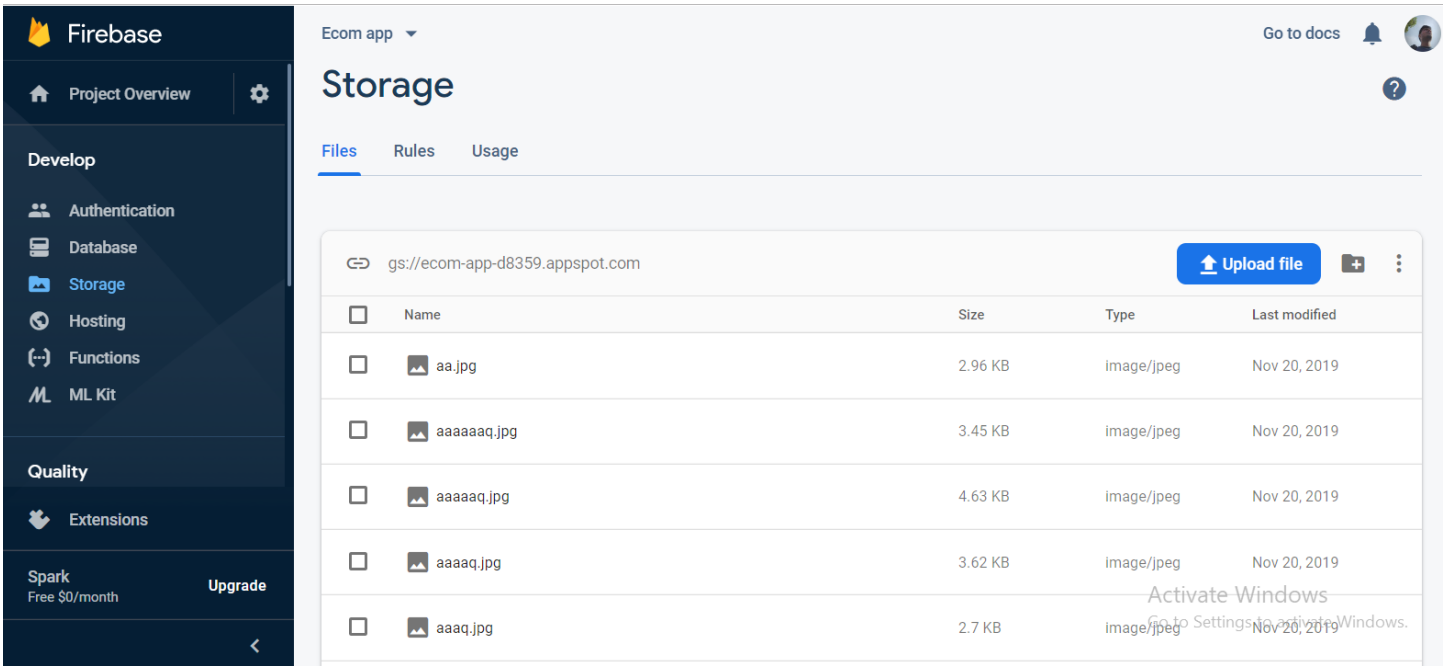


**Figure-6.2: Firebase storage**

## Firebase cloud firestore

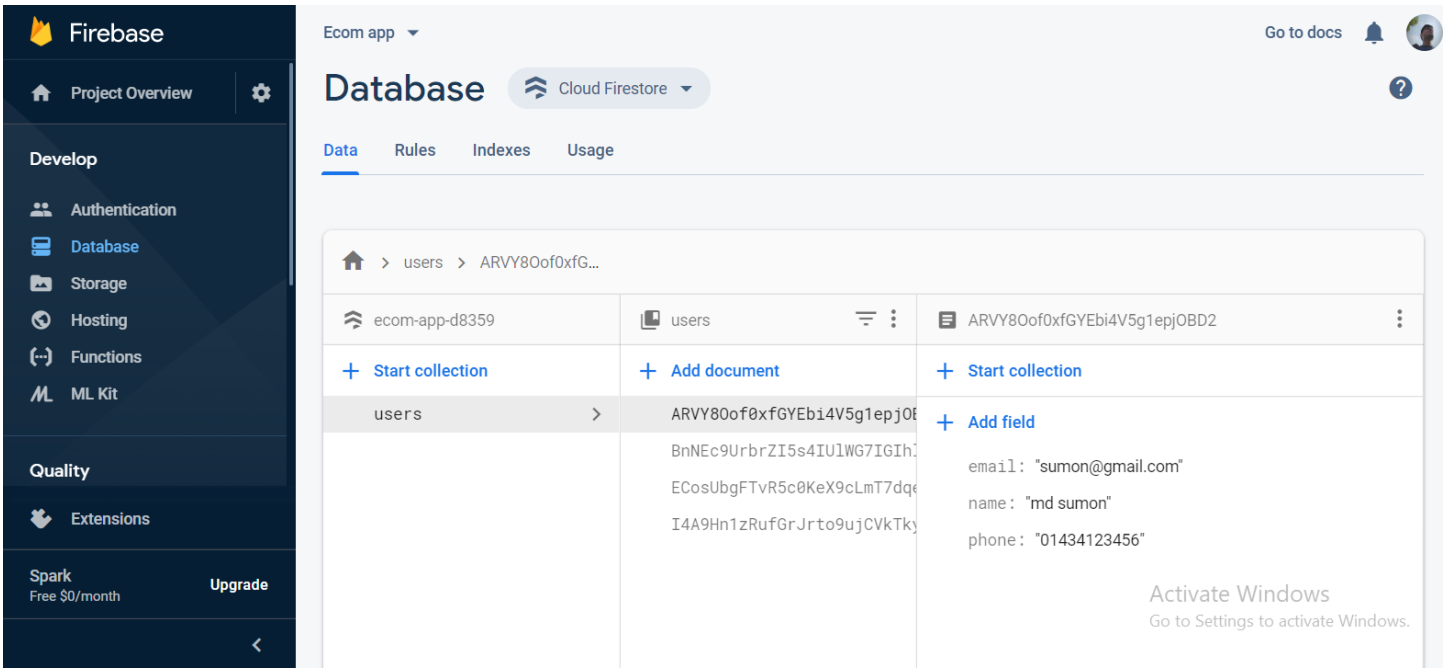


**Figure-6.2: Firebase cloud firestore**

## Firebase real time database

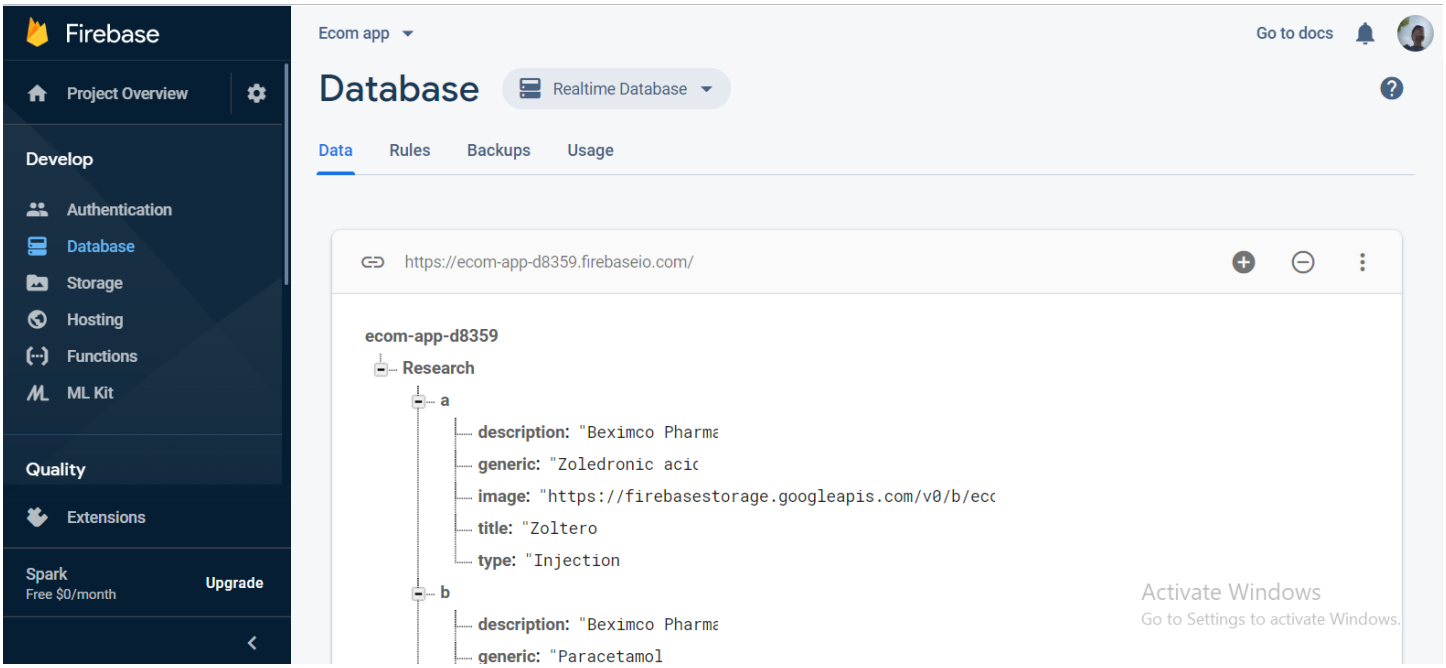


**Figure-6.2: Firebase real time database**

# Chapter – 6

# Project Summary

## 7.1 Github Link

https://github.com/smam-shanto/MedicineShoppingApplication

## 7.2 Limitations

- Sometimes products are not available in the store house
- Delivery time should be delay in various causes
- Server problem the system will be down

## 7.3 Future Scope

In future the system are more scope increasing. Medicine home delivery to the customer not to the pharmacy owner. Right now, medicine ecommerce are not happen in Bangladesh. Customer seat in their home to order medicine and after few moment delivery man come to home with medicine.