# “Local Store”

**(Android App)**

## A PROJECT REPORT

***Submitted as course project for***

## Principles of Information Security

**CS814**

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# ABSTRACT

This project entitled “Local Store” is an application which is designed on ANDROID platform. Purpose behind the development of this application is saving the TIME and Reducing the COST of material or product and expand the market of retailer. So, there are two side of this project one is Consumers / Customers second one is Shop Owner / Retailers.

1st USER/ Consumer side in which the user will register first and then search the shop and then products as its requirement. 2nd Retailers are the main entity of this application they can create their account and fill up the details related to its marketing area and also describe the price of product. Admin update the functions and apply that same in this application. The overall benefits of this application are as described, easily search your required products and its price. And the best thing is that the users are decide the shopping place easily and so they do not need to go outside and search the products. In short, we build the dictionary application for easy effective and efficient performance of market. And users are saving its time and money


# 1. INTRODUCTION

Nowadays shopping with retail market is very difficult activity for many of consumer. We experience that we have enlarged size of market around us. Second thing is that people have different choice and condition. Some peoples are using online shopping application to purchase home appliances, clothes and electronics etc. but its time overwhelming. The problems of physical distribution and channel administration adversely affect the service as well as the cost aspect. The current market structure consists of primary Retail market and retail sales outlet. The construction involves stock points in feeder towns to service these retail outlets at the village levels. But it becomes difficult to maintain the required service level in the rescue of the product at retail level. The proposed system deals with overcoming the problems stated above. The system is an Android application that gives necessary information about retailers and their products. Android is a user-friendly platform, thereby enabling ease of access for all the users.

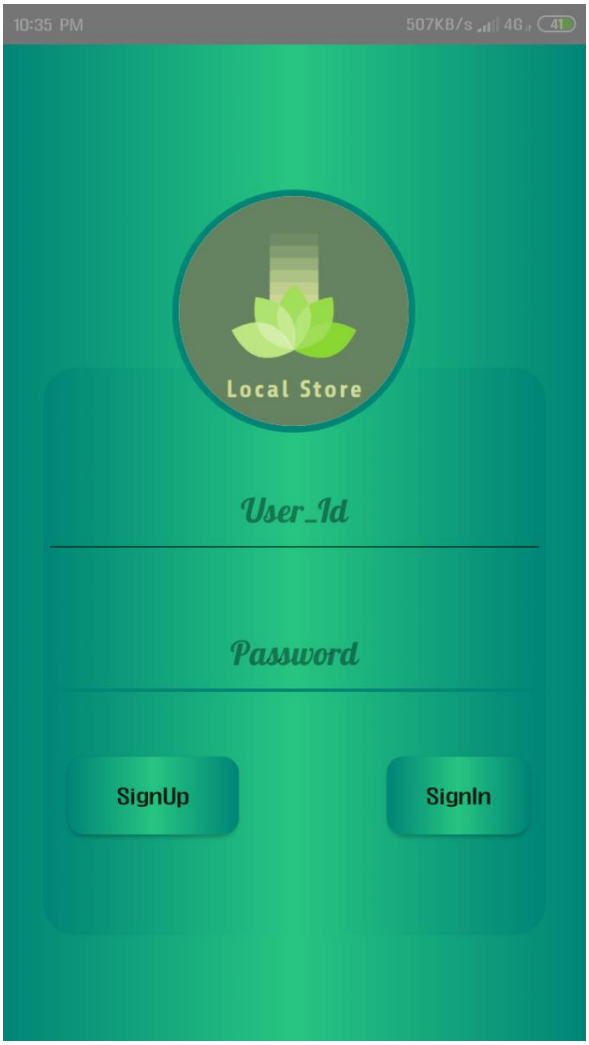
# 2. IMPLEMENTATION

## 2.1 Functional Specification

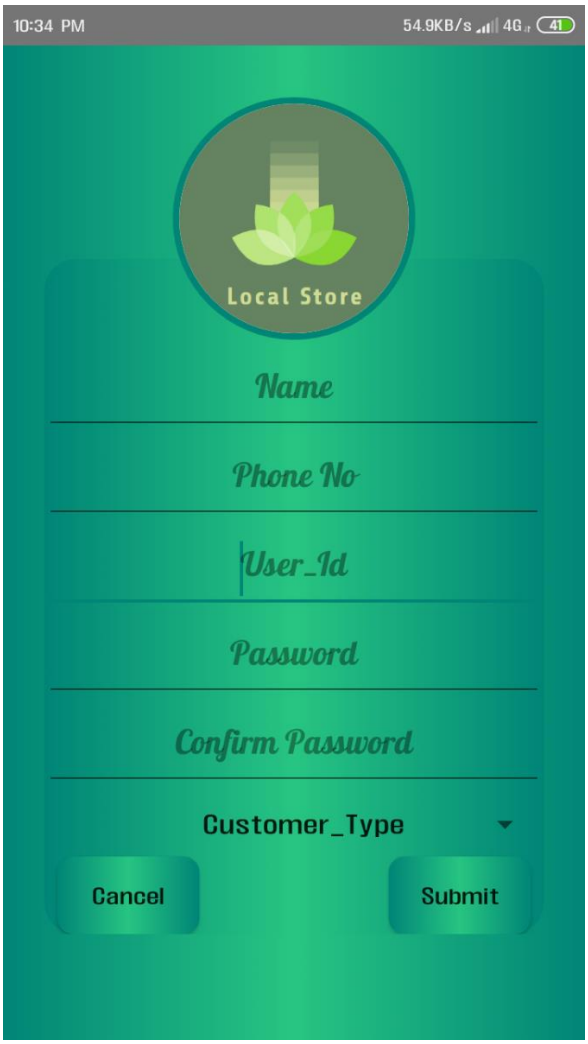
### 2.1.1 Login / Sign Up

Every time a user of the mobile application sees the log-in page when he/she opens the application, If the user has not registered, he/she should be able to do that on the SignUp page. If the user is not a first-time user, he/she will be able to SignIn using his credentials and navigate to see the home page directly when the application is opened. Here, the user chooses the type of Shop he/she wants. Every user has a profile page where they can see their Name e-mail address, phone number.

Every first-time user of the application needs to register themselves to use the application. During registration Name, phone number User_Id (email id) Password and Type of User needs to be provided.



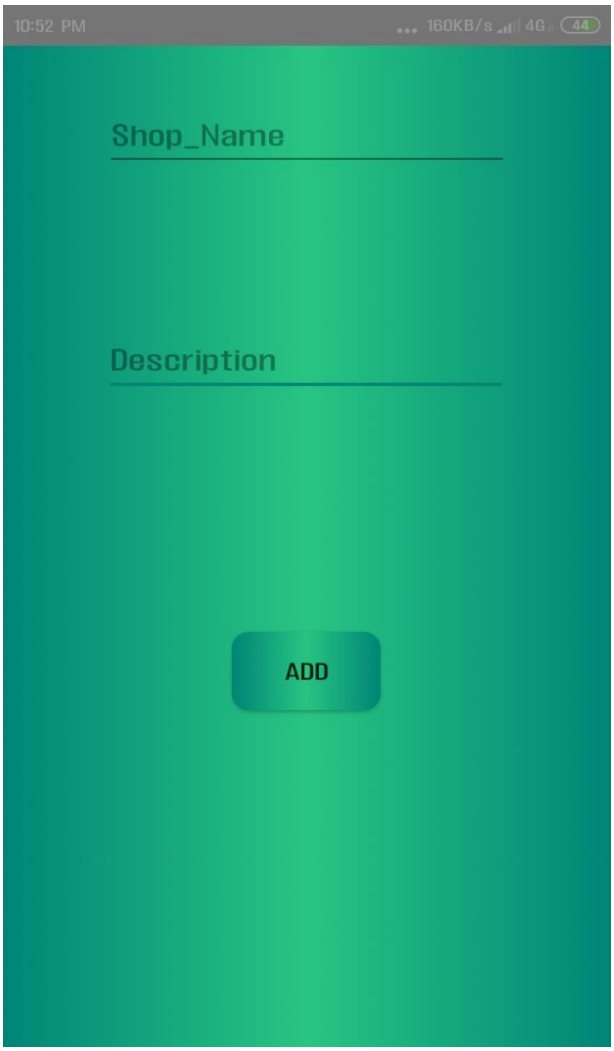

Login Page



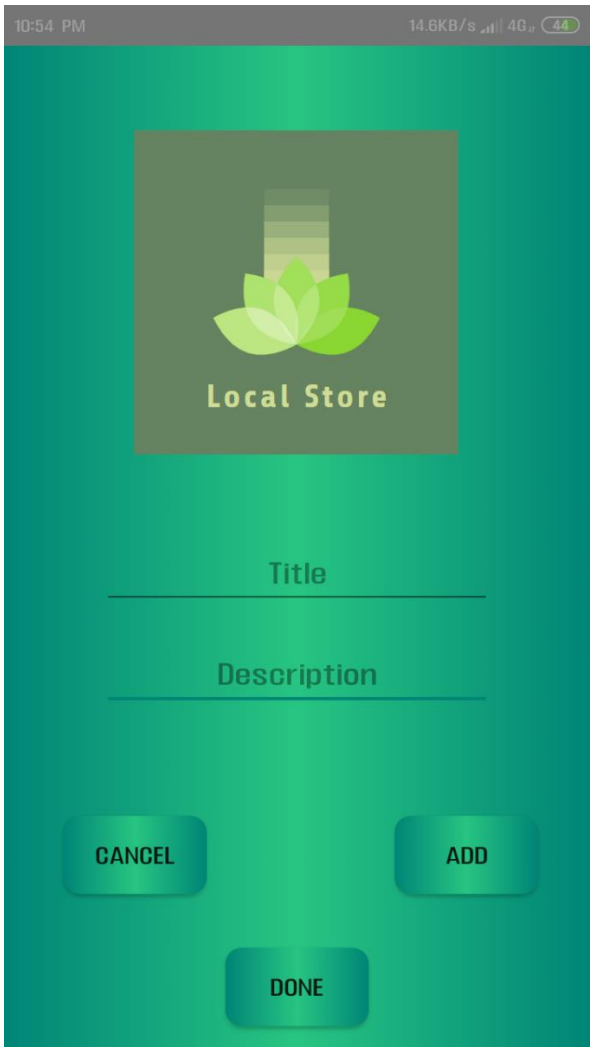

SignUp Page

### 2.1.2 Shop Registration and Item Addition

When a user register himself by selecting Customer Type as a Shop Owner User will be redireced to register the shop he ownes. If the user fails to register the shop information , that user will be registered as a Customer and not as a Shop Owner and the User will be redirected to the Home Page.If the User successfully register his Shop Information then User will be redirected to add Items for his Shop.



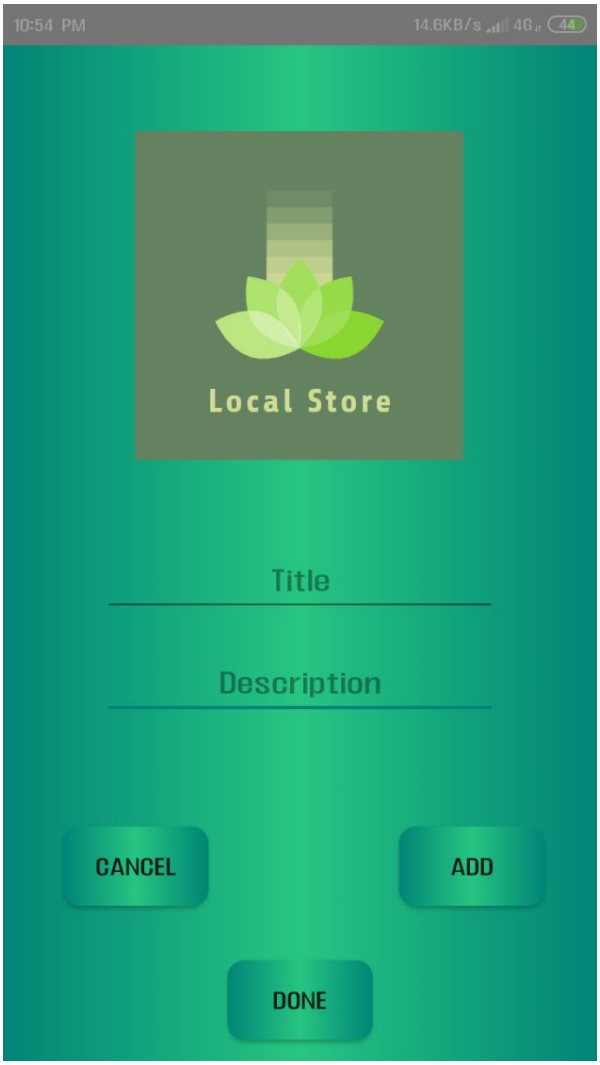

**Shop Addition**




**Item Addition**

### 2.1.3 Home Page

On Home Page every type of user (Customer / Shop Owner) will be able to see all the shops which are registered. A user can now will be able to select any shop to which he wants to buy items. When a user selects a shop, he/she will be able to see all the items available to the that shop only.

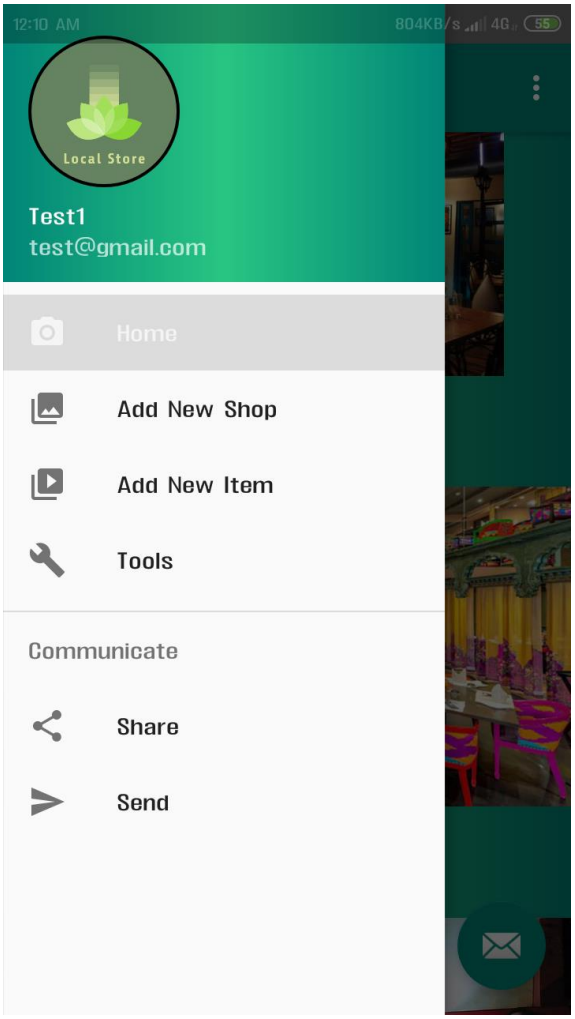



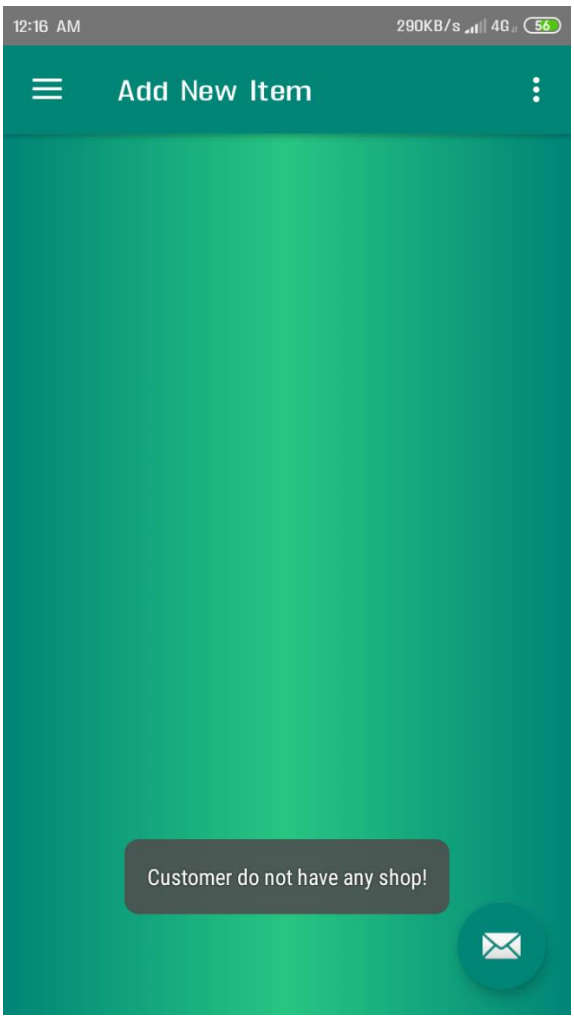

**2.1.4 Navigation Drawer**

On Home Page there are some other options available for Shop Owner as well as to Customers. a Shop Owner can add more items to his shop by selecting Add New Item option from the navigation drawer. Also, a shop owner can register a new shop by selecting Add New Shop option available there and then he can add new items to his shops.

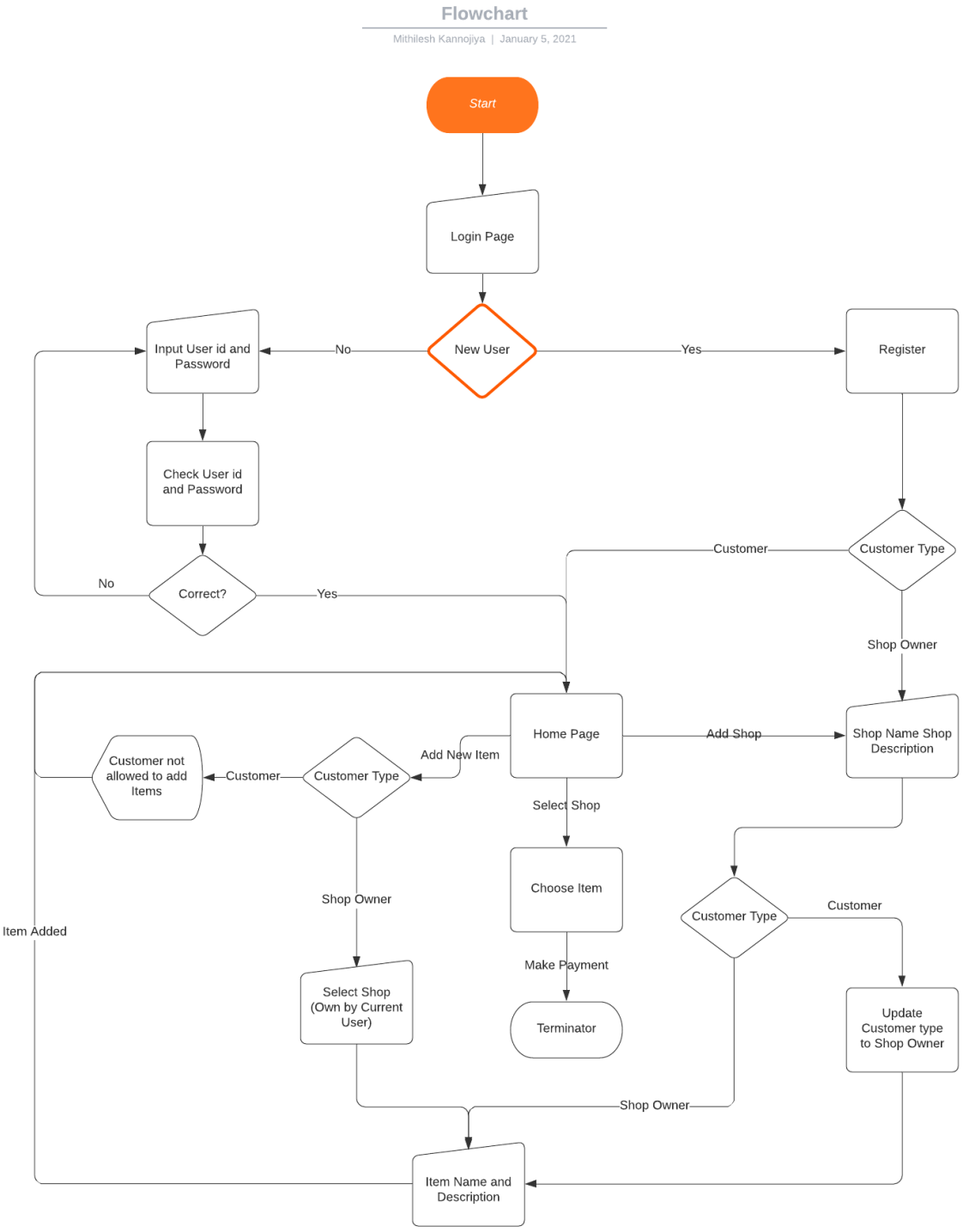
If a user (Customer) wants to be a Shop Owner, he can do this by registering a new Shop and adding Items to his shop. At this time the User Type will be updated from a Customer to a Shop Owner.

If a user (Customer) tries to add new item option from the Navigation Drawer he will not be able to add since he does not own any shop.

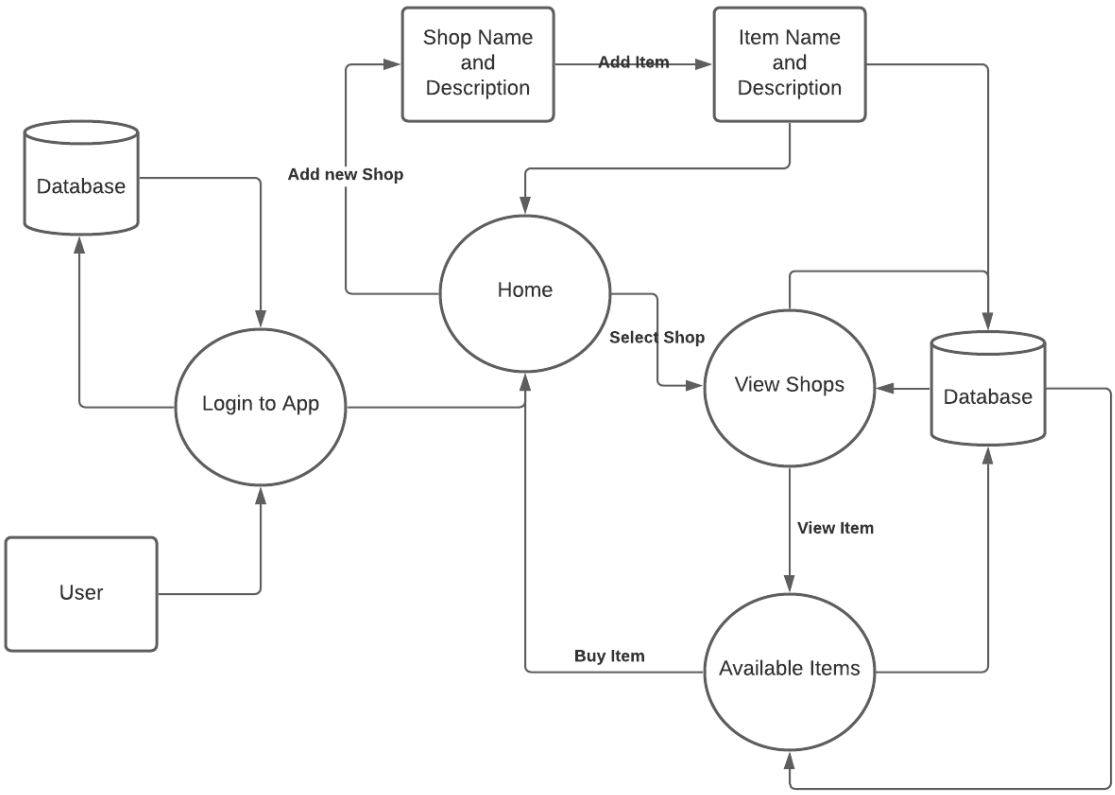



The working of this application (functional ) can be understand by the flow chart and the data flow diagram give below.




**Control flow Diagram**




**Data Flow Diagram**

## 2.2 Technical Specification

### 2.2.1 Security and privacy:

To maintain the security and privacy of the user of this application authentication of every user is required. A user can authenticate himself by providing the correct user_id and password. No one can use this application if he/she is not authenticated.

Also, the Role Base Access Control (RBAC) is implemented in this application. **RBAC** grants access to users on objects through roles. A role represents the set of activities that users can perform in an organization. Each user can be associated with one or more roles either directly or through a role hierarchy. Role hierarchy is a partial order defined on the set of roles that specifies which roles are junior to which other roles. In RBAC, a right on an object is known as a permission. Permissions are assigned to roles, and roles are assigned to users. Thus, RBAC consists of U, R, P, RH, UA and PA representing the set of users, the set of roles, the set of permissions, role hierarchy, users to roles assignments and permissions to roles assignments, respectively.

## Specification of RBAC policies

the relations User, Role, Permission, User_role_assignment, Permission_role_assignment and Permission_object_assignment are used to specify RBAC policies. The relation Permission_object_assignment captures the permissions in the form of rights on the objects. The user role assignment (UA) and permission role assignment (PA) components of RBAC are represented by the User_role_assignment and Permission_role_assignment relations, respectively. In RBAC, each user can be associated with one or more roles and each role can have one or more permissions. A single permission can correspond to one or more rights on different objects. The relations User_role_assignment, Permission_role_assignment and Permission_object_assignment act as the fact tables. The relation Role_hierarchy represents the partial order relation defined on the set of roles called the role hierarchy.

**User** everyone, who is going to use this application is referred to as a User of this application.

**Role** There are two roles defined in this application

1. Customer

2. Shop Owner

**Permission** There are four types of permission allowed in this application

1.read (View)

2.write (Add)

3.Update

4.Delete

**User_Role_Assignment** In this application every user has his role assigned. A user can either be a Customer or a Shop Owner.

**Permission_role_assignment** Permissions are assigned to roles in this application. A Shop Owner has the permission to add new items to his shop. A Customer has permission to add a new shop. Only the Shop Owner has permission to update or delete the details of his shop.

**Permission_object_assignment** In this application Shop and Items are two types of objects. Each object have all four permission assigned.

**Role hierarchy** The concept of role hierarchy is also implemented in this application. A Shop Owner inherits the role of a Customer. that is why a Shop Owner who can read write update or delete the details of his shop and items in his shop, also can see all other shop and items available there.

**2.2.2 Scalability:** According to the Google firebase there are 100 queries can be performed at a time for free version. Also the google place API usage limit is with one API key 1000 requests can be performed in 24 hour period. The no of queries can be increased by paying some amount of money to Google firebase. So the intention is for the system to be able to serve 100 queries at a time for free version in the initial stage.

# 3. CONCLUSION

After completion of development this application provide the data regarding market around you also details are available like shop name, Price, Item description, name of retailer, phone number etc. which is helpful to connect consumer to any retailer so this is an app which is work like retailer dictionary for any consumer.

## 3.1 Advantages

- More comfortable for marketing.
- Easy use and simple interface.
- Provide the various choices.
- Large amount of data accessing.
- Fast and improved use of the mobile technology.

## 3.2 Disadvantages

- Internet connection is necessary for updating the application.
- Data retrieving is depends on connection.
- Chances to found incorrect information

# 4. FUTURE SCOPE

Application also provide the Google maps for tracking the correct location of the retailer.
Payment mode can be enabled.

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