

Software Requirements Specification

For **Conversational G-Commerce: Geo Location based Virtual Sales Agent**

Version 1.0 approved

Prepared by:

Muhammad Adnan, Sumbal Tariq, Amna Shafaqat, Misha Zaheer

Department of Computer Science and Engineering, UET Lahore.

Table of Contents

1. Introduction	6
1.1 Purpose	6
1.2 Document Conventions	6
1.3 Intended Audience and Reading Suggestions	6
1.4 Product Scope	6
1.4.1 Objectives	7
1.4.1.1 Industry Objectives	7
1.4.1.2 Research Objectives	7
1.4.1.3 Academic Objectives	7
1.4.2 <i>Business Strategies</i>	7
2. Overall Description	8
2.1 Product Perspective	8
2.2 Product Functions	9
2.3 User Classes and Characteristics	9
2.4 Design and Implementation Constraints	9
2.5 User Documentation	9
2.6 Assumptions and Dependencies	10
3.1 User Interfaces	10
3.2 Software Interface	57
4. System Features	57
4.1 System Feature 1	57
5. Other Nonfunctional Requirements	59
5.1 Performance Requirements	59
5.2 Safety Requirements	59
5.3 Security Requirements	59
5.4 Software Quality Attributes	60
5.5 Business Rules	60
6. Other Requirements	60

List of Figures

Figure 1: Components and Functional Methodology of Conversational G-Commerce	8
Figure 2: Home Page	10
Figure 3: All Shops	14
Figure 4: All Products	16
Figure 5: All Brands.....	17
Figure 6: All Categories.....	18
Figure 7: Market Detail.....	19
Figure 8: Shop Detail	21
Figure 9: Product Detail.....	23
Figure 10: Brand Detail	25
Figure 11: Category Detail.....	27
Figure 12: Sign Up Form	29
Figure 13: Sign In	30
Figure 14: Customer Dashboard	31
Figure 15: Customer Dashboard (Favorite Products)	31
Figure 16: Customer Dashboard (Wishlist)	32
Figure 17: Customer Dashboard (Favorite Shops).....	33
Figure 18: Customer Dashboard (Account Setting).....	34
Figure 19: Customer Dashboard (History).....	35
Figure 20: Admin Dashboard (Category)	36
Figure 21: Admin Dashboard (Create Category)	37
Figure 22: Admin Dashboard (Sub Category)	38
Figure 23: Admin Dashboard (Create Sub Category).....	39
Figure 24: Admin Dashboard (All Brands).....	40
Figure 25: Admin Dashboard (Create Brand).....	41
Figure 26: Admin Dashboard (All Customers).....	42
Figure 27: Admin Dashboard (Advertisement)	43
Figure 28: Admin Dashboard (Statistics).....	44
Figure 1: Admin Dashboard(Complaint Section).....	45
Figure 2: Admin Dashboard(Warning Form)	46
Figure 3: Admin Dashboard(View shops).....	47
Figure 4: Admin Dashboard(Markets View)	48
Figure 5: Admin Dashboard (Products View)	49
Figure 6: Admin Dashboard (Shopkeeper's Detail View)	50
Figure 7: Shopkeeper View (Sign Up form)	51
Figure 8: Shopkeeper's Dashboard(Login form)	52
Figure 9: Shopkeeper Dashboard(Add shops)	53
Figure 10: Shopkeeper Dashboard(Product Description).....	54
Figure 11: Shopkeeper Dashboard (Products Preview).....	55
Figure 12: Shopkeeper Dashboard (Add Product Category Request Form)	56

List of Tables

Table 1: Home.....	12
Table 2: All Markets	14
Table 3: All Shops	15
Table 4: All Products	17
Table 5: All Brands.....	18
Table 6: All Categories	19
Table 7: Market Detail	20
Table 8: Shop Detail	22
Table 9: Product Detail	25
Table 10: Brand Detail.....	27
Table 11: Category Detail.....	28
Table 1: Complaint Section.....	45
Table 2: Claim Form	46
Table 3: Shops View.....	47
Table 4: Market View.....	48
Table 5: Product preview	49
Table 6: Shopkeeper's Detail View.....	50
Table 7: Sign Up form.....	51
Table 8:Login Form.....	52
Table 9: Add Shops	53
Table 10: Product Description.....	54
Table 11: Product Preview.....	55
Table 12: Add Category Request	56

Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

*This document describes the overview and software requirements specifications of **Conversational G-Commerce: Geo Location based Virtual sales agent**. This is the first version of software requirements specifications with no revisions. This SRS covers the following sub modules of the software:*

- Web API
- Web Application
- Chat Bot
- Mobile Application

1.2 Document Conventions

The document uses different conventions to describe the specified requirements. “Virtual Sales agent” refers to the Chat bot which will chat automatically with the customers. “Customers” refer to everyone who purchases, searches or finds or intends to purchase something using the system.

“Product” means everything which is legally allowed to be sold to general public. Every statement has its own priority level. “Modules” in the system refer to the sub systems. “Software” refers to the Web Application or mobile application. And “Hardware” refers to the device which is being used to access the system. It may be referred as a handheld smartphone or a laptop/computer through which the system is being accessed. ‘The system’ refers to the current project title i.e. “Conversational G-Commerce”.

1.3 Intended Audience and Reading Suggestions

This document intends to be read by the project managers, developers, testers and documentation writers. It is organized in a way where high level requirements are mentioned first then wireframes and the logical diagrams to describe the working methodology and data flow of the system then it describes the way of different modules to communicate with each other. To get a deeper understanding of what this system is all about, the reader must read from the beginning to the end the way it is already organized. Just to get an idea of what the system is all about the Functional requirements section can be read directly. If reader is a project manager, then section 2 will be the good point to start. If the developer reads the document then section 2,3,4,5 must be read to get started the development.

1.4 Product Scope

The scope of product is to develop a solution to help shopkeepers to advertise their products and attract maximum customers, thus enhancing their sales and profit. It also includes to develop an AI powered virtual sales agent to help customers in finding their desired products the same way a shopkeeper helps them. Shopkeepers can also manage their inventory under

premium plans provided by the system and can also visualize daily/weekly or yearly statistics of sales for analysis, they can also analyze customers reviews on their products. Customers may search for the products they want, with better recommendations and without visiting the physical market. The system manager would be able to ban shop or product based on customer reviews.

1.4.1 Objectives

1.4.1.1 Industry Objectives

Some Specific Industry objectives are as follows:

- i. *To empower small businesses*
- ii. *To increase sales*
- iii. *Introduce new products in the market*
- iv. *Introduce new shopping trends*

1.4.1.2 Research Objectives

The main objectives of this project are as follows:

- i. *To develop a complete E-Commerce Solution.*
- ii. *To develop an AI powered smart ShopBot specially for customers so that they can easily get products they want.*
- iii. *To develop a ShopBot that can train itself with new given data.*
- iv. *To integrate the ShopBot with the E-Commerce Website.*
- v. *To add navigation guide for each product in the solution.*
- vi. *To develop an Image Based Product Search Engine.*
- vii. *To Integrate Image Based Product Search Agent in the ShopBot.*
- viii. *To develop a complete inventory management system for shopkeepers.*
- ix. *To develop a product recommendation system for customers based on customer reviews.*

1.4.1.3 Academic Objectives

Academic Objectives are measurable specific outcomes that must enhance a student's knowledge. This project will give a chance to excel in the world with its latest technologies being used in development. Students will be able to apply their learned knowledge on it from previous semesters. There will be a chance to learn new technologies trends to compete with the advanced countries.

1.4.2 Business Strategies

The product offers some premium plans for the shopkeepers to advertise and market their products to the right customers the interest-based user profiling will help to target right customers for the right product. Also, Inventory management is premium plan for the shopkeepers to keep track of every ins and outs of their business. Sales offers, coupon codes, sponsored products and third-party advertisement are the sources of income. Shopkeepers will be offered premium plan for free in the first month of their registration. After that it will optional to use the premium plan or just use the free plan selling the products.

2. Overall Description

2.1 Product Perspective

The product belongs to the family of the e-commerce and existing shopping systems, and it is a replacement of the e-commerce partially because it uses some good features of e-commerce like product searching. The project defines the larger system than the existing systems like this. (Figure 1).

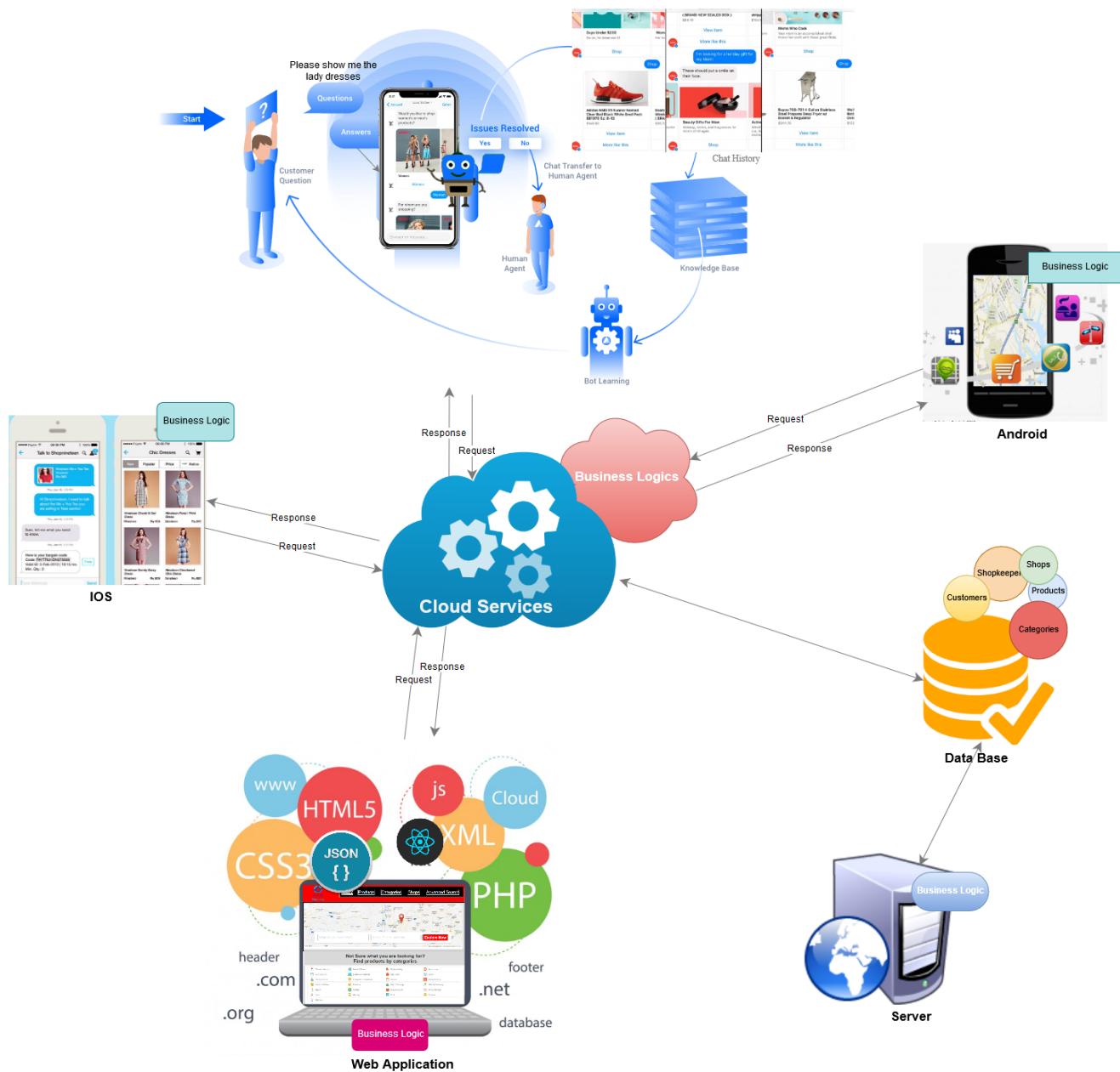


Figure 1: Components and Functional Methodology of Conversational G-Commerce

2.2 Product Functions

The major functions of the product are as followings:

- *The customer must be able to find products with accurate location.*
- *Shopkeeper must be able to manage inventory and generate sales report.*
- *Admin must be able to view all activities and can ban products and will manage complaints.*
- *Machine must be able to behave as virtual sales agent which will be beneficial for customer.*

2.3 User Classes and Characteristics

- *Following is the list of user classes with their description:*
- **Customers:** One of the most important user class that will be using our system frequently. Customers are actual targeted end users which include all youngers, elders, male and female etc.
- **Shopkeepers:** They will be using our system for advertisement of their shop and inventory management.
- **Marketing people:** They will be able for proper marketing of the system.
- **Suppliers:** Suppliers will supply products to the shopkeeper.
- **Investors:** Investors will be investing in market.
- **Shop Employees:** Shop employees will work with shopkeepers for handling their inventory.
- **Developers:** Developers will make this project as they have technical expertise.

Customers, Shopkeepers, Shop Employees and Developers are most important user classes z

2.4 Design and Implementation Constraints

The project has some constraints of design and implementation, some of these are related to demographic while others are technical. First and main constraint is dependency on google maps and Location Tracking sensor of the devices. Since we're trying to connect the local market vendors with the local customers it is necessary to know their current location and that is possible with the help of google maps and the location sensor in the device. Second constraint or limitation is requirement of a dedicated server to run the Web API Services, Virtual Sales agent and the Web Application at the same time to make this project happen. Till now mentioned constraints are some high-level limitations. Now, some technology limitations are not that much limitations what we can try to achieve using one technology same can be achieved using similar other technology. But we are now limited to ASP. Net Core for Web API development, React JS for front end of web application, MS SQL as the database, React Native as the cross platform mobile application development environment. We will be responsible for maintenance of the system and we will be working on the system to add more features later on.

2.5 User Documentation

The documentation of the tech stack being used is available online and the Project will be delivered along with the following documents:

- i. *Feasibility report*

- ii. Project Proposal
- iii. Database design
- iv. Use Cases
- v. SRS
- vi. Developer Documentation for every module or sub system
- vii. User Documentation for every module

2.6 Assumptions and Dependencies

During development phase since there will be no real customer or a shopkeeper so it will be assumed that the system has some existing customers and shopkeepers as test case for the proof of concept and implementation of the logic. Similarly, on the other hand the developers won't have the access to the actual locations of the shopkeepers and the customers, so these locations will be assumed as well. The system is dependent on the Google Maps API to provide the best routes and its free version has some limitations and during development phase developers will work with those limitations to avoid extra budget expenses. The system virtual sales agent will be trained on some third-party website i.e. Api.AI or Recast.ai and that will be integrated with the project. In case the third-party virtual agent service is down temporarily so that feature in this project will also be down temporarily.

3. External Interface Requirements

3.1 User Interfaces

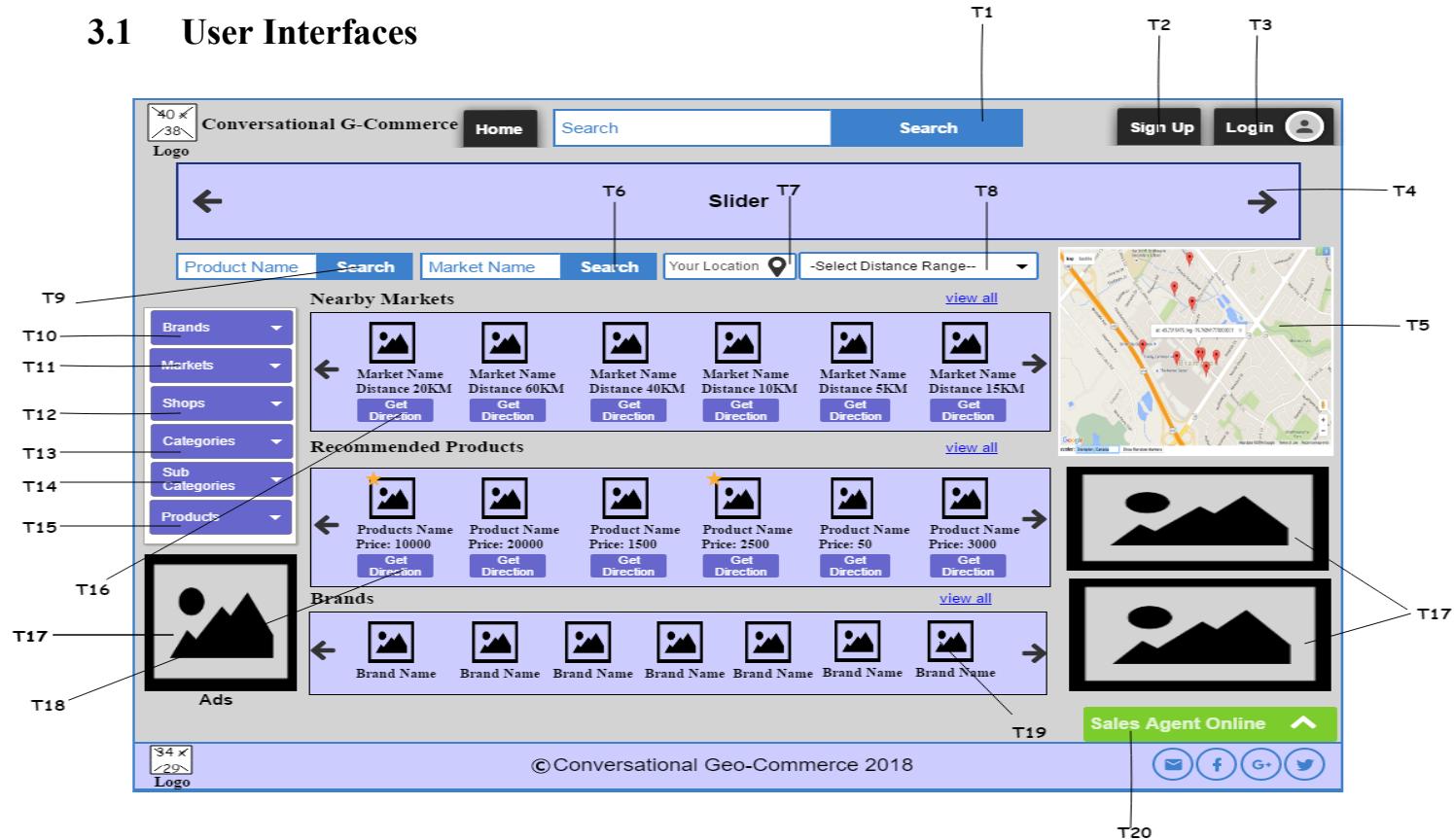


Figure 2: Home Page

Tasks	As a Admin	As a Customer	As a Shopkeeper
T1	<i>I shall be able to add new filters in search button</i>	<i>I shall be able to search markets/shops/products /categories/brands on search button click.</i>	<i>I shall be able to add my new shops for search.</i>
T2	<i>I shall be able to see register page.</i>	<i>I shall be able to see register page.</i>	<i>I shall be able to see register page.</i>
T3	<i>I shall be able to see login page.</i>	<i>I shall be able to see login page.</i>	<i>I shall be able to see login page.</i>
T4	<i>I shall be able to add news ads on slider.</i>	<i>I shall be able to see ads and click on ads.</i>	<i>I shall be able to pay for shop/product advertisement.</i>
T5	<i>I shall be able to add new market for display on map.</i>	<i>I shall be able to see markets on my current place.</i>	<i>I shall be able to add my shops on that market.</i>
T6	<i>I shall be able to show/add filter on market name.</i>	<i>I shall be able to search through market name.</i>	<i>I shall be able to search through market name.</i>
T7	<i>I shall be able to see user current location.</i>	<i>I shall be able to change location.</i>	<i>I shall be able to see user current location.</i>
T8	<i>I shall be able to see user geo fence.</i>	<i>I shall be able to change geo fence.</i>	<i>I shall be able to see user geo fence.</i>
T9	<i>I shall be able to add/show filter on product name.</i>	<i>I shall be able to search through product name.</i>	<i>I shall be able to add new products to show as a filter.</i>
T10	<i>I shall be able to add/view new brands.</i>	<i>I shall be able to see available brands and see products on that brand.</i>	<i>I shall be able to see available brands.</i>
T11	<i>I shall be able to add/view new markets.</i>	<i>I shall be able to see available markets and see shops on choose market.</i>	<i>I shall be able to see available markets.</i>
T12	<i>I shall be able to approve/view new shops.</i>	<i>I shall be able to see available shops and see products on that shop.</i>	<i>I shall be able to add/view new shops.</i>

T13	<i>I shall be able to add/approve/view new categories.</i>	<i>I shall be able to see available categories and see products on that categories.</i>	<i>I shall be able to request/view new category.</i>
T14	<i>I shall be able to add/approve/view new sub-categories.</i>	<i>I shall be able to see available sub-categories and see products on that sub-categories.</i>	<i>I shall be able to request/view new sub-category.</i>
T15	<i>I shall be able to approve/view new products.</i>	<i>I shall be able to see available products.</i>	<i>I shall be able to add/view new product.</i>
T16	<i>I shall be able to add/see new market and market direction.</i>	<i>I shall be able to see market location on map and see market details.</i>	<i>I shall be able to see market location on map and see market details.</i>
T17	<i>I shall be able to add news ads.</i>	<i>I shall be able to see ads and click on ads.</i>	<i>I shall be able to pay for display shop/product advertisement.</i>
T18	<i>I shall be able to approve/see new product and product direction.</i>	<i>I shall be able to see recommended product location on map and see product details.</i>	<i>I shall be able to see/add product location on map and see product details.</i>
T19	<i>I shall be able to add/view brands.</i>	<i>I shall be able to see brand detail.</i>	<i>I shall be able to see brand detail.</i>
T20	<i>I shall be able to train sales agent.</i>	<i>I shall be able to chat with sales agent to find suitable product.</i>	<i>I shall be able to chat with sales agent.</i>

Table 1: Home

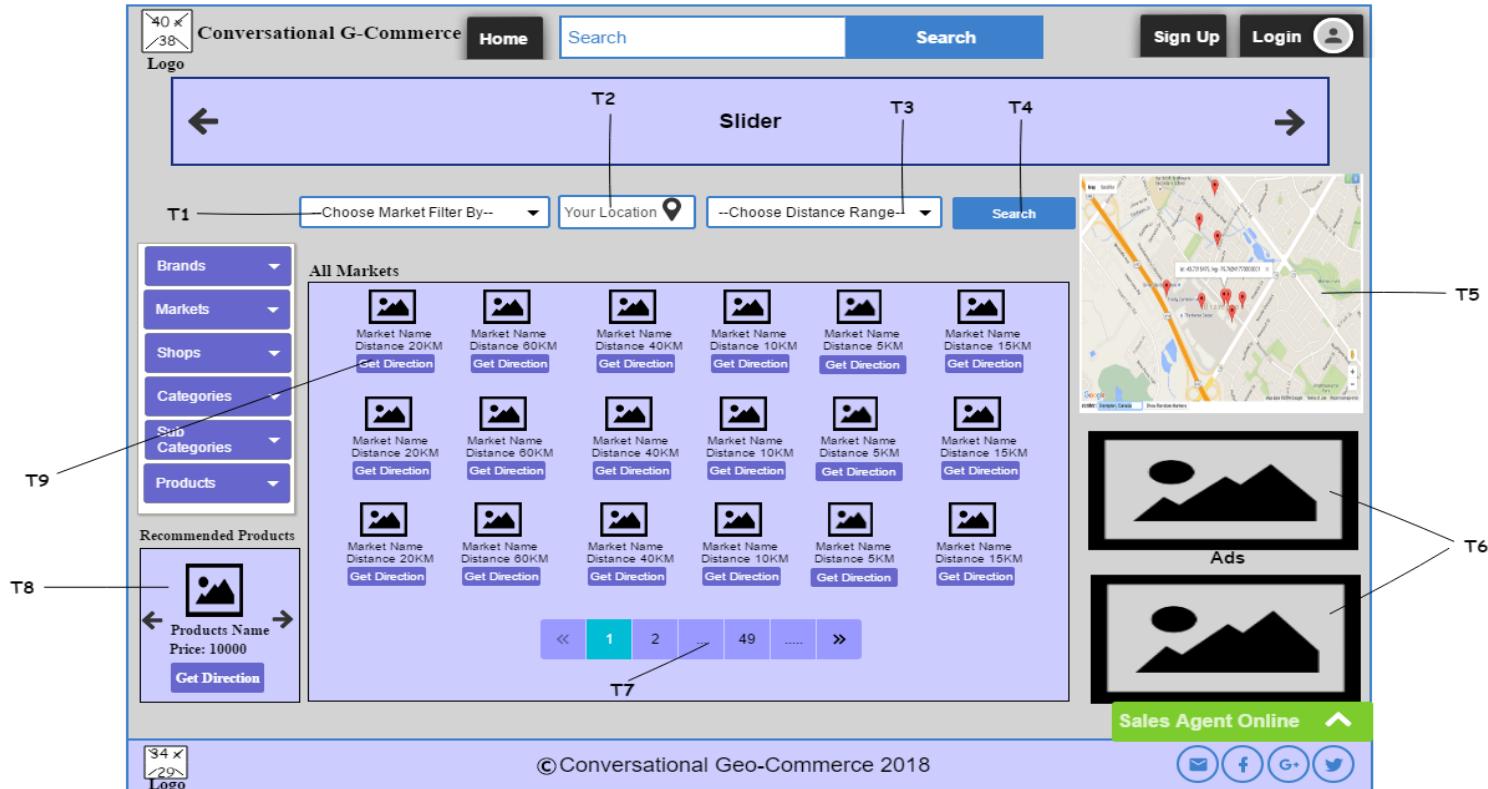


Figure 3: All Markets

Tasks	As a Admin	As a Customer	As a Shopkeeper
T1	I shall be able to add new filters for markets.	I shall be able to select filter of market.	I shall be able to select filter of market.
T2	I shall be able to see user current location.	I shall be able to change location.	I shall be able to see user current location.
T3	I shall be able to see user geo fence.	I shall be able to change geo fence.	I shall be able to see user geo fence.
T4	I shall be able to display markets.	I shall be able to search markets according to filters or location.	I shall be able to search markets according to filters or location.
T5	I shall be able to add new market for display on map.	I shall be able to see markets on my current place.	I shall be able to add my shops on that market.
T6	I shall be able to add news ads.	I shall be able to see ads and click on ads.	I shall be able to pay for display

			<i>shop/product advertisement.</i>
T7	<i>I shall be add new markets.</i>	<i>I shall be able to see more markets on next pages.</i>	<i>I shall be able to see more markets on next pages.</i>
T8	<i>I shall be able to approve/see new product and product direction.</i>	<i>I shall be able to see recommended product location on map and see product details.</i>	<i>I shall be able to see/add product location on map and see product details.</i>
T9	<i>I shall be able to add/see/change new market and market direction.</i>	<i>I shall be able to see market location on map and see market details.</i>	<i>I shall be able to see market location on map and see market details.</i>

Table 2: All Markets

The screenshot shows the 'All Shops' page of the Conversational G-Commerce application. The interface includes:

- Header:** Features a logo with '40 X 38', a 'Conversational G-Commerce' title, a 'Home' button, a search bar, a 'Search' button, a shopping cart icon, a 'Sign Up' button, and a 'Login' button.
- Sidebar:** Contains dropdown menus for 'Brands', 'Markets', 'Shops', 'Categories', 'Sub-Categories', and 'Products'. A callout 'T1' points to the 'Products' menu item.
- Main Content:** A central area titled 'All Shops' displays a grid of 12 shop cards. Each card shows a thumbnail, the shop name, its distance from the user ('Distance 20KM', '60KM', '40KM', '10KM', '5KM', '15KM'), and a 'Get Direction' button. Below the grid is a navigation bar with page numbers (1, 2, ..., 49, ...) and arrows.
- Right Side:** Includes a map showing the locations of the shops, a section for 'Recommended Products' (with a card for 'Products Name' at 'Price: 10000' and a 'Get Direction' button), and two sections labeled 'Ads' containing placeholder images.
- Footer:** Shows a copyright notice '©Conversational Geo-Commerce 2018', social media icons for email, Facebook, Google+, and Twitter, and a 'Sales Agent Online' button.

Figure 3: All Shops

Tasks	As an Admin	As a Customer	As a Shopkeeper
T1	<i>I shall be able to approve new shop.</i>	<i>I shall be able to see shop location on map and see shop details.</i>	<i>I shall be able to see/add/change shop location on map and shop details.</i>
T2	<i>I shall be able to add new filters for shops.</i>	<i>I shall be able to select filter of shop.</i>	<i>I shall be able to select filter of shop and add shops for filter.</i>
T3	<i>I shall be able to see user current location.</i>	<i>I shall be able to change location.</i>	<i>I shall be able to see user current location.</i>
T4	<i>I shall be able to see user geo fence.</i>	<i>I shall be able to change geo fence.</i>	<i>I shall be able to see user geo fence.</i>
T5	<i>I shall be able to display shops.</i>	<i>I shall be able to search shops according to filters or location.</i>	<i>I shall be able to search shops according to filters or location.</i>
T6	<i>I shall be able to display market on box.</i>	<i>I shall be able to write market name.</i>	<i>I shall be able to write market name.</i>
T7	<i>I shall be able to display shops of market.</i>	<i>I shall be able to search shops of market.</i>	<i>I shall be able to search shops of market.</i>

Table 3: All Shops

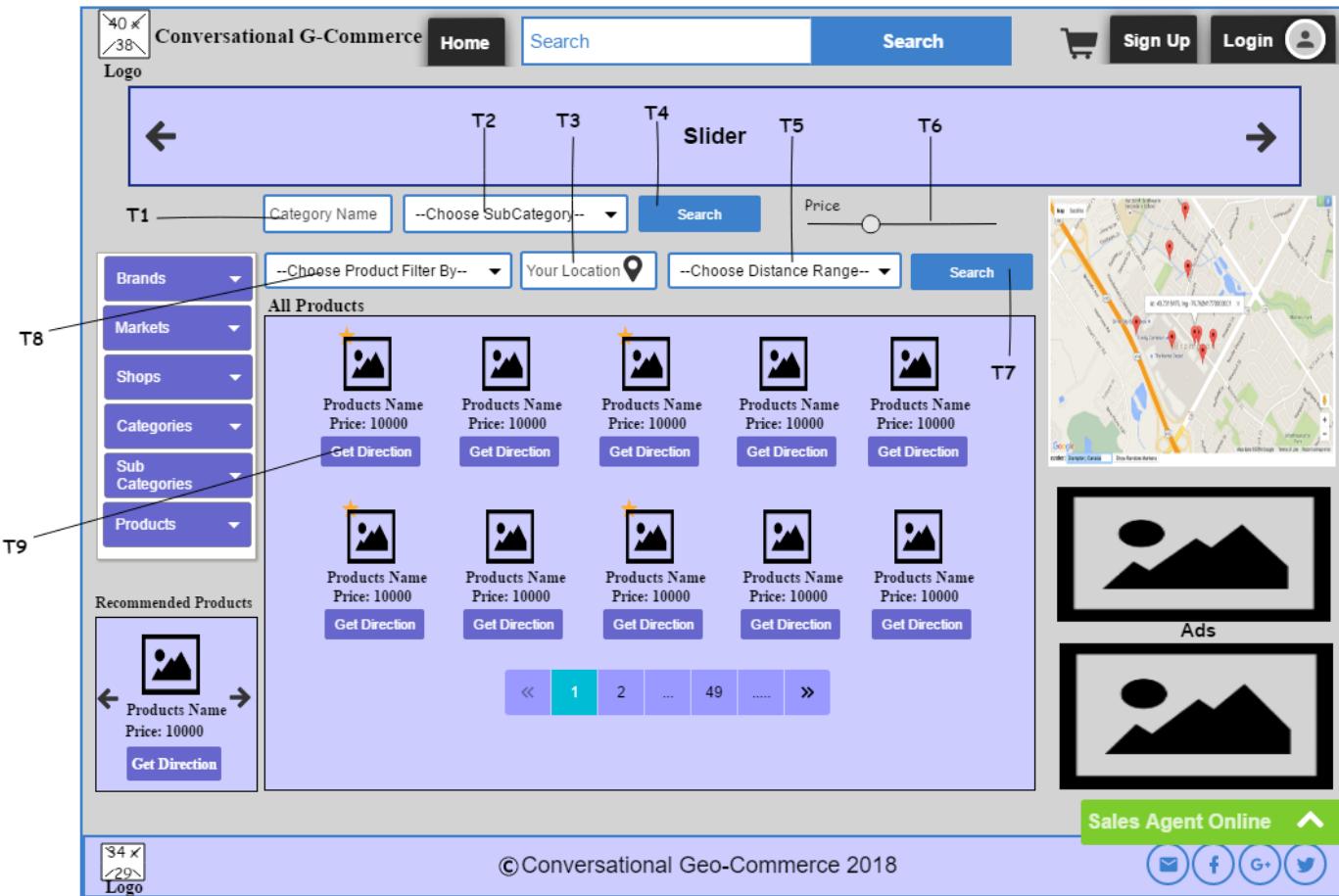


Figure 4: All Products

Tasks	As an Admin	As a Customer	As a Shopkeeper
T1	I shall be able to add/change categories to show on box.	I shall be able to write category name.	I shall be able to write/add category name of his shop.
T2	I shall be able to add/change sub categories to show on box of category.	I shall be able to select sub category name.	I shall be able to write/add sub category name of his shop.
T3	I shall be able to see user current location.	I shall be able to change location.	I shall be able to see user current location.
T4	I shall be able to display products of category and sub-category.	I shall be able to see products of category.	I shall be able to see products of category.
T5	I shall be able to see user geo fence.	I shall be able to change geo fence.	I shall be able to see user geo fence.

T6	I shall be able to add range of product prices.	I shall be able to change range of price to see products of that price range.	I shall be able to see price slider.
T7	I shall be able to display products.	I shall be able to search products according to filters or location.	I shall be able to display products according to filters or location.
T8	I shall be able to add new filters for products.	I shall be able to select filter of product.	I shall be able to select filter of product and add products for filter.
T9	I shall be able to approve new product.	I shall be able to see product location on map and see product details.	I shall be able to see/add/change product location on map and product details.

Table 4: All Products

Figure 5: All Brands

Tasks	As an Admin	As a Customer	As a Shopkeeper
T1	I shall be able to add/change new brand.	I shall be able to see brand details.	I shall be able to see brand details.
T2	I shall be able to add new filters for brands.	I shall be able to select filter of brand.	I shall be able to select filter of brand.
T3	I shall be able to display brands.	I shall be able to search brands according to filters.	I shall be able to search brands according to filters.

Table 5: All Brands

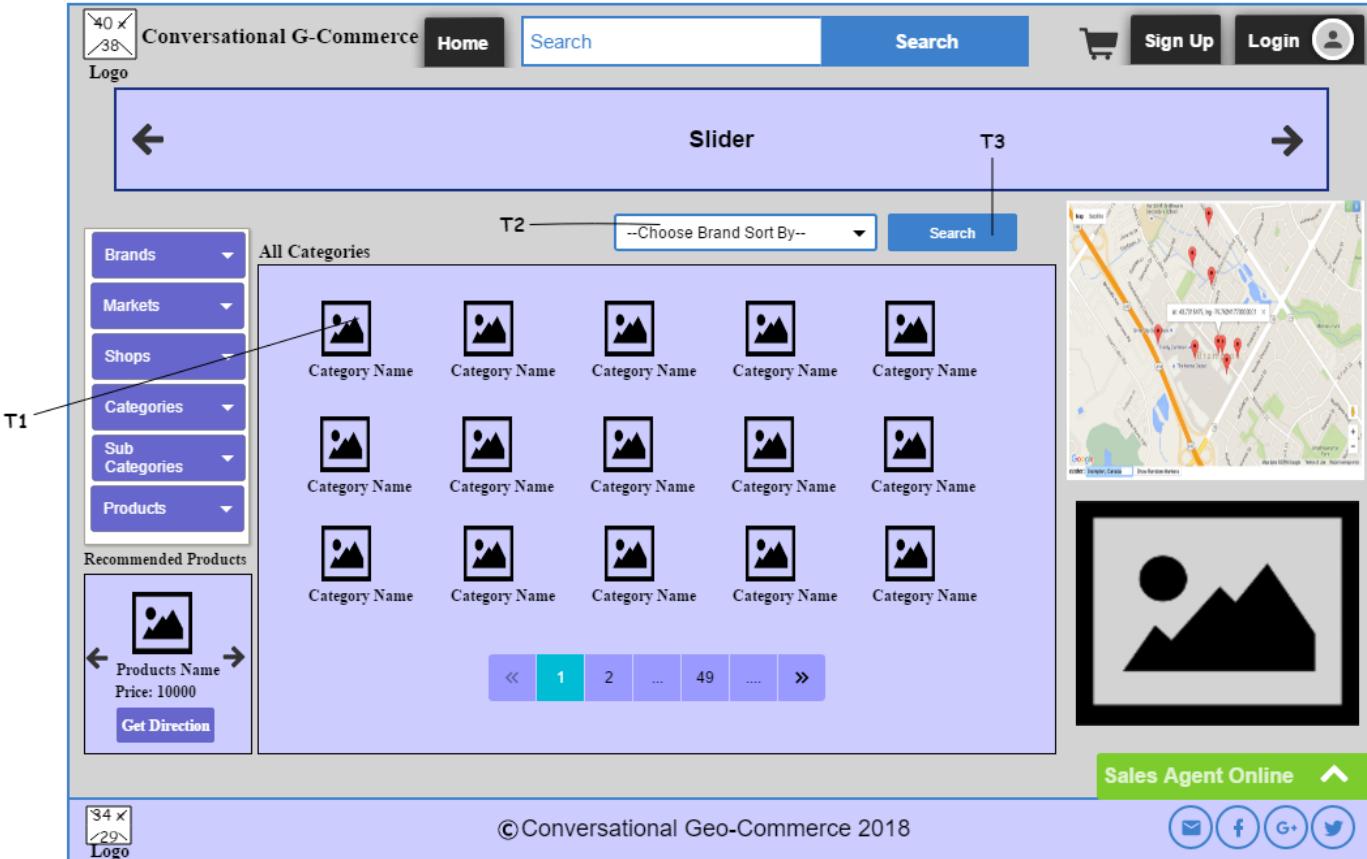


Figure 6: All Categories

Tasks	As an Admin	As a Customer	As a Shopkeeper
T1	I shall be able to add/change new category.	I shall be able to see category details.	I shall be able to see category details.
T2	I shall be able to add new filters for categories.	I shall be able to select filter of category.	I shall be able to select filter of category.
T3	I shall be able to display categories.	I shall be able to search categories according to filters.	I shall be able to search categories according to filters.

Table 6: All Categories

The screenshot displays the conversational G-commerce platform's market detail page. At the top, there is a header with a logo, a search bar, and navigation links for 'Home', 'Search', 'Sign Up', and 'Login'. Below the header is a map showing a location in Brampton, Canada. To the left of the map is a slider featuring a mountain icon. The main content area contains several labeled components:

- T1**: Points to the mountain icon in the slider.
- T2**: Points to the 'Get Location' button below the slider.
- T3**: Points to the 'Market Name' field.
- T4**: Points to the 'Market Description' field.
- T5**: Points to the 'Visited by: 2.7M Customers' statistic.
- T6**: Points to the 'Avg Time Spent by customer: 4 hours' statistic.
- T7**: Points to the '2K Reviews' rating.
- T8**: Points to the 'Avg Rating' (4 stars) and '(1000)' reviews.
- T9**: Points to the 'All Shops' section, which includes a dropdown menu for 'Choose Shop Filter By' and a 'Search' button.
- T10**: Points to a 'Recommended Products' section, which includes a product card with a mountain icon, the product name, price (10000), and a 'Get Direction' button.
- T11**: Points to the sidebar on the left, which contains dropdown menus for 'Brands', 'Markets', 'Shops', 'Categories', 'Sub Categories', and 'Products'.

At the bottom of the page, there is a footer with a 'Sales Agent Online' indicator, social media links (Email, Facebook, Google+, Twitter), and a copyright notice: © Conversational Geo-Commerce 2018.

Figure 7: Market Detail

Tasks	As an Admin	As a Customer	As a Shopkeeper
T1	<i>I shall be able to add/change market picture.</i>	<i>I shall be able to see market picture.</i>	<i>I shall be able to see market picture.</i>
T2	<i>I shall be able to add/change market location.</i>	<i>I shall be able to see market location.</i>	<i>I shall be able to see market location.</i>
T3	<i>I shall be able to add/change market name.</i>	<i>I shall be able to see market name.</i>	<i>I shall be able to see market name.</i>
T4	<i>I shall be able to add/change market description.</i>	<i>I shall be able to see market description.</i>	<i>I shall be able to see market description.</i>
T5	<i>I shall be able to see market customers.</i>	<i>I shall be able to see market customers.</i>	<i>I shall be able to see market customers.</i>
T6	<i>I shall be able to see market visit time hours.</i>	<i>I shall be able to see market visit time hours.</i>	<i>I shall be able to see market visit time hours.</i>
T7	<i>I shall be able to see market reviews.</i>	<i>I shall be able to see market reviews.</i>	<i>I shall be able to see market reviews.</i>
T8	<i>I shall be able to see market ratings.</i>	<i>I shall be able to see market ratings.</i>	<i>I shall be able to see market ratings.</i>
T9	<i>I shall be able to add new filters for shops.</i>	<i>I shall be able to select filter of shop.</i>	<i>I shall be able to select filter of shop.</i>
T10	<i>I shall be able to display shops.</i>	<i>I shall be able to search shops according to filters.</i>	<i>I shall be able to search shops according to filters.</i>
T11	<i>I shall be able to add/change new shop.</i>	<i>I shall be able to see shop details.</i>	<i>I shall be able to see shop details.</i>

Table 7: Market Detail



Figure 8: Shop Detail

Tasks	As an Admin	As a Customer	As a Shopkeeper
T1	I shall be able to see shop picture.	I shall be able to see shop picture.	I shall be able to add/change shop picture.
T2	I shall be able to add/change shop location.	I shall be able to see shop location.	I shall be able to see shop location.
T3	I shall be able to add/change shop name.	I shall be able to see shop name.	I shall be able to see shop name.

T4	<i>I shall be able to add/change shop description.</i>	<i>I shall be able to see shop description.</i>	<i>I shall be able to see shop description.</i>
T5	<i>I shall be able to see shop customers.</i>	<i>I shall be able to see shop customers.</i>	<i>I shall be able to see shop customers.</i>
T6	<i>I shall be able to see shop tags.</i>	<i>I shall be able to see shop tags.</i>	<i>I shall be able to add/change shop tags.</i>
T7	<i>I shall be able to see shop reviews.</i>	<i>I shall be able to see shop reviews.</i>	<i>I shall be able to see shop reviews.</i>
T8	<i>I shall be able to see shop ratings.</i>	<i>I shall be able to see shop ratings.</i>	<i>I shall be able to see shop ratings.</i>
T9	<i>I shall be able to add new filters for products.</i>	<i>I shall be able to select filter of product.</i>	<i>I shall be able to select filter of product.</i>
T10	<i>I shall be able to display products.</i>	<i>I shall be able to search products according to filters.</i>	<i>I shall be able to search products according to filters.</i>
T11	<i>I shall be able to approve new product.</i>	<i>I shall be able to see product location on map and see product details.</i>	<i>I shall be able to see/add/change product location on map and product details.</i>
T12		<i>I shall be able to add shop in favorites.</i>	

Table 8: Shop Detail

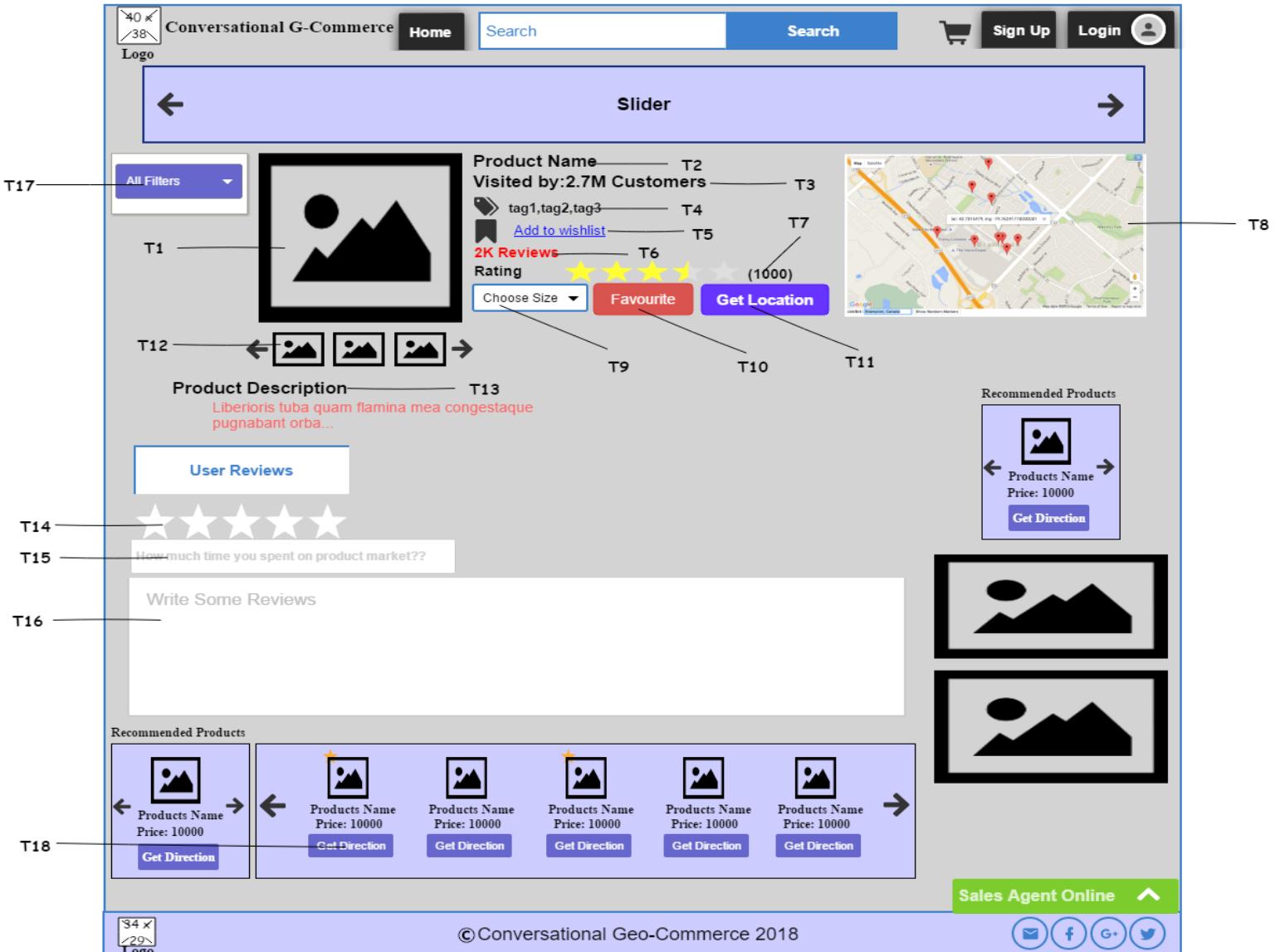


Figure 9: Product Detail

Tasks	As an Admin	As a Customer	As a Shopkeeper
T1	I shall be able to see product picture.	I shall be able to see product picture.	I shall be able to add/change product picture.
T2	I shall be able to see product name.	I shall be able to see product name.	I shall be able to add/change product name.
T3	I shall be able to see visited customers on product.	I shall be able to see visited customers on product.	I shall be able to see visited customers on product.

T4	<i>I shall be able to see product tags.</i>	<i>I shall be able to see product tags.</i>	<i>I shall be able to add/change product tags.</i>
T5		<i>I shall be able to add product in wish list.</i>	
T6	<i>I shall be able to see product reviews.</i>	<i>I shall be able to see product reviews.</i>	<i>I shall be able to see product reviews.</i>
T7	<i>I shall be able to see product ratings.</i>	<i>I shall be able to see product ratings.</i>	<i>I shall be able to see product ratings.</i>
T8	<i>I shall be able to see product location on map.</i>	<i>I shall be able to see product location on map.</i>	<i>I shall be able to see/add/change product location on map.</i>
T9	<i>I shall be able to see size of products.</i>	<i>I shall be able to see/select size of products.</i>	<i>I shall be able to see/add size of products.</i>
T10		<i>I shall be able to add product in favorite.</i>	
T11	<i>I shall be able to see product location.</i>	<i>I shall be able to click to see product location on map.</i>	<i>I shall be able to display product location on map.</i>
T12	<i>I shall be able to see product in every direction.</i>	<i>I shall be able to see product in every direction.</i>	<i>I shall be able to see/add/change product in every direction.</i>
T13	<i>I shall be able to see product description.</i>	<i>I shall be able to see product description.</i>	<i>I shall be able to see/add/change product description.</i>
T14		<i>I shall be able to give rating on product.</i>	
T15		<i>I shall be able to give time spent on buy product.</i>	
T16		<i>I shall be able to give reviews on product.</i>	
T17	<i>I shall be able to see filters on products.</i>	<i>I shall be able to see filters on products.</i>	<i>I shall be able to see/add/change filters on products.</i>

T18	<i>I shall be able to approve new product.</i>	<i>I shall be able to see product location on map and see product details.</i>	<i>I shall be able to see/add/change product location on map and product details.</i>
-----	--	--	---

Table 9: Product Detail

The screenshot shows a web-based application interface for 'Conversational G-Commerce'. At the top, there's a header with a logo, 'Conversational G-Commerce', 'Home', 'Search' (with a dropdown), 'Search' (button), a shopping cart icon, 'Sign Up', 'Login', and a user profile icon. Below the header is a purple banner with left and right arrows labeled 'Slider'. Underneath is a large image of a mountain with a sun, labeled T13. To its right are 'Brand Name' (T12) and 'Brand Description' (T11). Below the image are '2K Reviews' (T10) and 'Avg Rating' (T9, showing 4 stars out of 1000). A vertical line labeled T4 points from the rating area down to a search bar. To the left of the image is a sidebar with dropdown menus for 'Brands', 'Markets', 'Shops', 'Categories', 'Sub Categories', and 'Products' (T1). A horizontal line labeled T2 connects the 'Products' menu to the search bar. Another line labeled T3 connects the search bar to the price filter. On the right side, there's a map showing several red location markers with callouts. Below the map is a section for 'Recommended Products' with two examples: one with a mountain image and another with a sun and mountain. In the center, there's a grid of 10 product cards, each showing a thumbnail, product name, price (all 10000), and a 'Get Direction' button. Lines labeled T5 and T14 point to the 'Products' menu and the 'Get Direction' button respectively. At the bottom, there's a footer with a logo, '© Conversational Geo-Commerce 2018', social media icons (email, Facebook, Google+, Twitter), and a 'Sales Agent Online' button.

Figure 10: Brand Detail

Tasks	As an Admin	As a Customer	As a Shopkeeper
T1	<i>I shall be able to add/change categories to show on box.</i>	<i>I shall be able to write category name.</i>	<i>I shall be able to write/add category name of his shop.</i>

T2	<i>I shall be able to add/change sub categories to show on box of category.</i>	<i>I shall be able to select sub category name.</i>	<i>I shall be able to write/add sub category name of his shop.</i>
T3	<i>I shall be able to display products of category and sub-category.</i>	<i>I shall be able to see products of category.</i>	<i>I shall be able to see products of category.</i>
T4	<i>I shall be able to add range of product prices.</i>	<i>I shall be able to change range of price to see products of that price range.</i>	<i>I shall be able to see price slider.</i>
T5	<i>I shall be able to add new filters for products.</i>	<i>I shall be able to select filter of product.</i>	<i>I shall be able to select filter of product and add products for filter.</i>
T6	<i>I shall be able to see user current location.</i>	<i>I shall be able to change location.</i>	<i>I shall be able to see user current location.</i>
T7	<i>I shall be able to see user geo fence.</i>	<i>I shall be able to change geo fence.</i>	<i>I shall be able to see user geo fence.</i>
T8	<i>I shall be able to display products.</i>	<i>I shall be able to search products according to filters or location.</i>	<i>I shall be able to display products according to filters or location.</i>
T9	<i>I shall be able to see ratings on brand.</i>	<i>I shall be able to see ratings on brand.</i>	<i>I shall be able to see ratings on brand.</i>
T10	<i>I shall be able to see reviews on brand.</i>	<i>I shall be able to see reviews on brand.</i>	<i>I shall be able to see reviews on brand.</i>
T11	<i>I shall be able to see/add/change description of brand.</i>	<i>I shall be able to see description of brand.</i>	<i>I shall be able to see description of brand.</i>
T12	<i>I shall be able to see/add/change name of brand.</i>	<i>I shall be able to see name of brand.</i>	<i>I shall be able to see name of brand.</i>
T13	<i>I shall be able to see/add/change picture of brand.</i>	<i>I shall be able to see picture of brand.</i>	<i>I shall be able to see picture of brand.</i>
T14	<i>I shall be able to approve new product.</i>	<i>I shall be able to see product location on</i>	<i>I shall be able to see/add/change</i>

		<i>map and see product details.</i>	<i>product location on map and product details.</i>
--	--	-------------------------------------	---

Table 10: Brand Detail

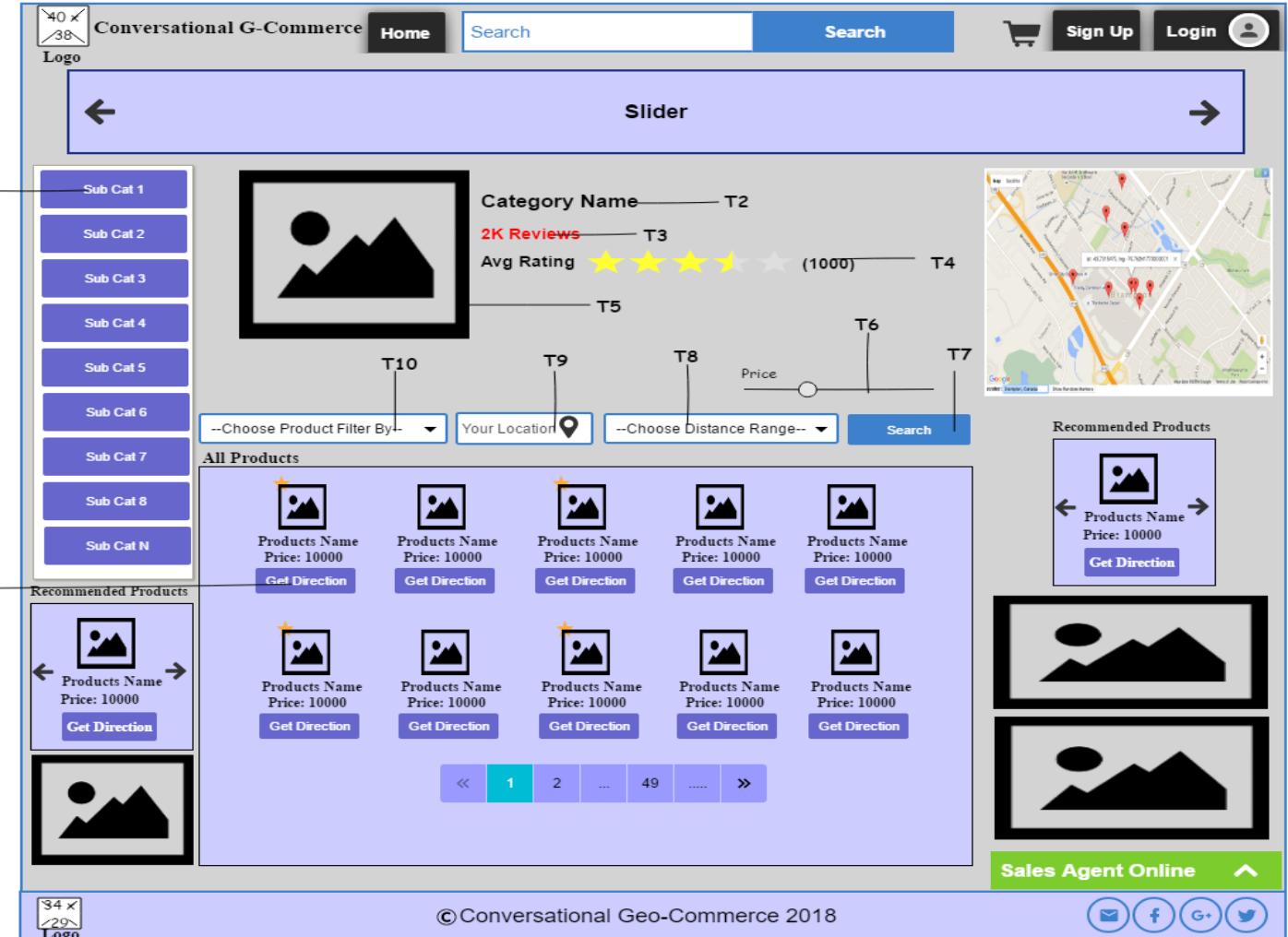


Figure 11: Category Detail

Tasks	As an Admin	As a Customer	As a Shopkeeper
T1	<i>I shall be able to add/change sub categories of category.</i>	<i>I shall be able to see sub categories of category.</i>	<i>I shall be able to see sub categories of category.</i>
T2	<i>I shall be able to see/add/change name of category.</i>	<i>I shall be able to see name of category.</i>	<i>I shall be able to see name of category.</i>

<i>T3</i>	<i>I shall be able to see reviews on brand.</i>	<i>I shall be able to see reviews on brand.</i>	<i>I shall be able to see reviews on brand.</i>
<i>T4</i>	<i>I shall be able to see ratings on brand.</i>	<i>I shall be able to see ratings on brand.</i>	<i>I shall be able to see ratings on brand.</i>
<i>T5</i>	<i>I shall be able to see/add/change picture of brand.</i>	<i>I shall be able to see picture of brand.</i>	<i>I shall be able to see picture of brand.</i>
<i>T6</i>	<i>I shall be able to add range of product prices.</i>	<i>I shall be able to change range of price to see products of that price range.</i>	<i>I shall be able to see price slider.</i>
<i>T7</i>	<i>I shall be able to display products.</i>	<i>I shall be able to search products according to filters or location.</i>	<i>I shall be able to display products according to filters or location.</i>
<i>T8</i>	<i>I shall be able to see user geo fence.</i>	<i>I shall be able to change geo fence.</i>	<i>I shall be able to see user geo fence.</i>
<i>T9</i>	<i>I shall be able to see user current location.</i>	<i>I shall be able to change location.</i>	<i>I shall be able to see user current location.</i>
<i>T10</i>	<i>I shall be able to add new filters for products.</i>	<i>I shall be able to select filter of product.</i>	<i>I shall be able to select filter of product and add products for filter.</i>
<i>T11</i>	<i>I shall be able to approve new product.</i>	<i>I shall be able to see product location on map and see product details.</i>	<i>I shall be able to see/add/change product location on map and product details.</i>

Table 11: Category Detail

The screenshot shows the 'Sign Up' page of the Conversational G-Commerce application. The page has a light blue header with the title 'Conversational G-Commerce' and a 'Logo'. Below the header is a search bar with two search buttons. On the right side of the header are 'Sign Up' and 'Login' buttons, along with a user profile icon.

The main content area is titled 'Sign Up' with a pencil icon. It contains several input fields with icons: 'First Name' (person), 'Last Name' (person), 'Email' (envelope), 'User Name' (person), 'Password' (lock), 'Confirm Password' (lock), 'Gender' (radio buttons for Female and Male), 'Phone Number' (phone receiver), and 'Date of Birth' (calendar icon). A date picker calendar is displayed, showing the month of August 2016. At the bottom of the form is a 'Register' button.

At the bottom of the page, there is a green bar with the text 'Sales Agent Online' and a small upward arrow icon. Below this bar are social media sharing icons for email, Facebook, Google+, and Twitter. The footer also includes a copyright notice: '© Conversational Geo-Commerce 2018' and a logo.

Figure 12: Sign Up Form

Tasks	As an Admin	As a Customer	As a Shopkeeper
T1	I shall be able to see/approve customers.	I shall be able to register myself.	I shall be able to see customers of my shop.

Table 12: Sign Up



Figure 13: Sign In

Tasks	As an Admin	As a Customer
T1	<i>I shall be able to send confirmation email on forget password.</i>	<i>I shall be able to change password.</i>
T2	<i>I shall be able to check authorize customers.</i>	<i>I shall be able to login myself after registration.</i>
T3		<i>I shall be able to register myself through external sources e.g. Facebook, Skype and Gmail.</i>

Table 13: Sign In

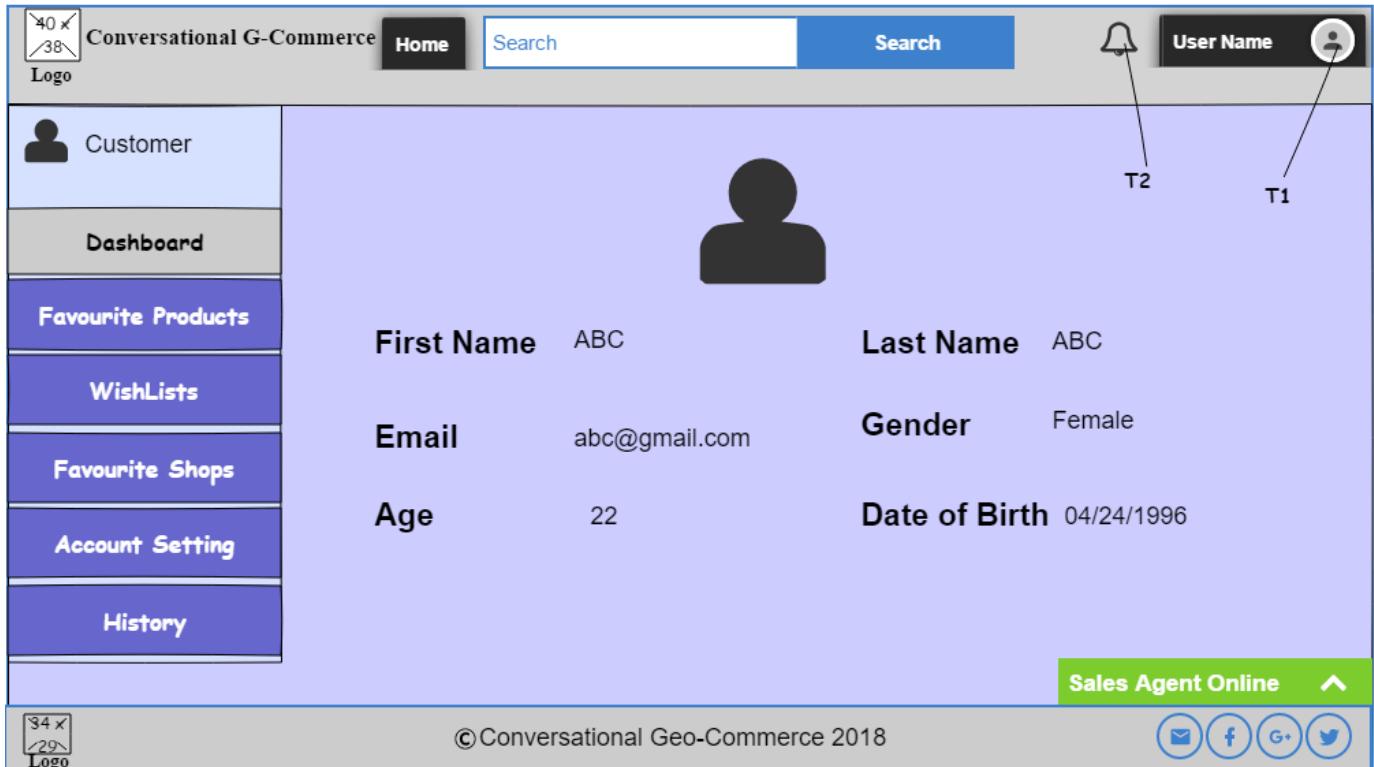


Figure 14: Customer Dashboard

Tasks	As a Customer
T1	I shall be able to logout of myself and see my account settings.
T2	I shall be able to see new sales notifications.

Table 14: Customer Dashboard

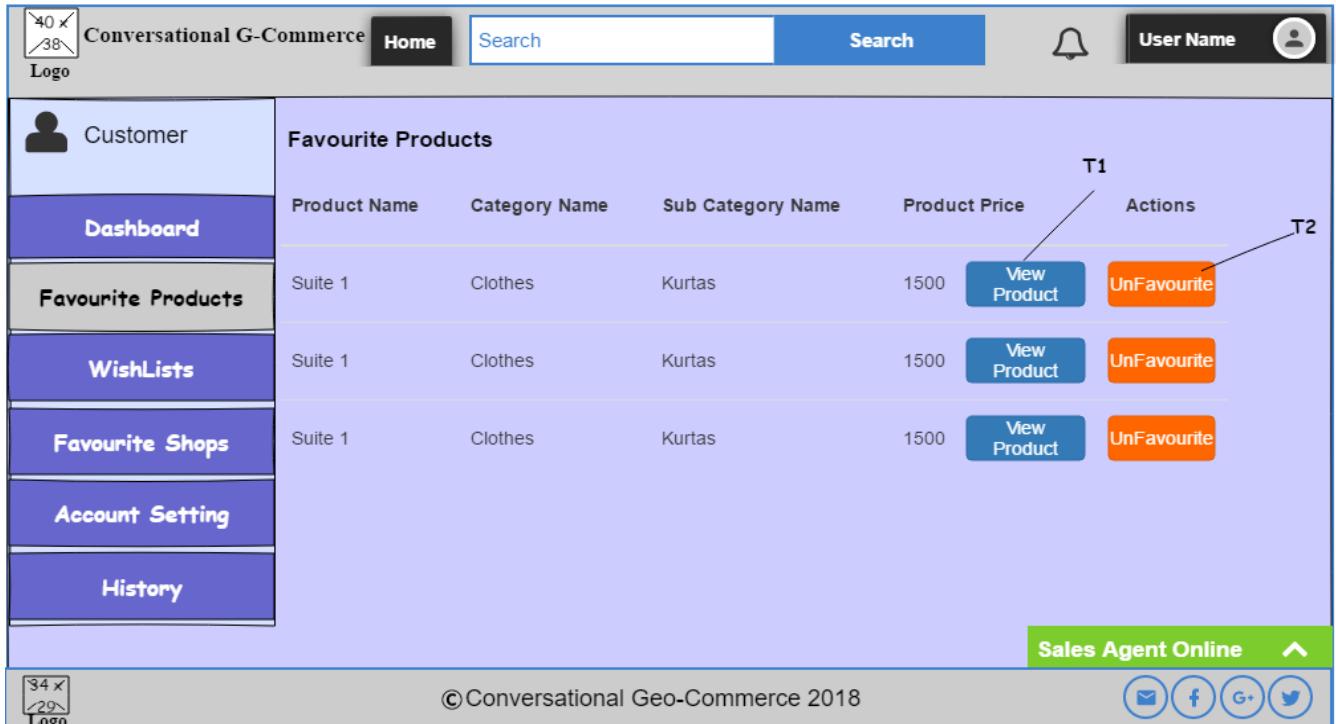


Figure 15: Customer Dashboard (Favorite Products)

Tasks	As a Customer
T1	I shall be able see my favorite product detail.
T2	I shall be able to un favorite product.

Table 15: Customer Dashboard (Favorite Products)

The screenshot shows the Customer Dashboard interface. On the left is a vertical sidebar with icons and labels: Customer (User icon), Dashboard (blue bar), Favourite Products (blue bar), WishLists (grey bar), Favourite Shops (blue bar), Account Setting (blue bar), and History (blue bar). The main content area is titled "Wish Products". It contains a table with columns: Product Name, Category Name, Sub Category Name, Product Price, and Actions. There are three rows of data:

Product Name	Category Name	Sub Category Name	Product Price	Actions
Suite 1	Clothes	Kurtas	1500	<button>View Product</button> → T1
Suite 1	Clothes	Kurtas	1500	<button>View Product</button>
Suite 1	Clothes	Kurtas	1500	<button>View Product</button>

At the bottom of the dashboard, there is a footer with the text "© Conversational Geo-Commerce 2018" and social media icons for email, Facebook, Google+, and Twitter. A green banner at the top right says "Sales Agent Online" with an upward arrow icon.

Figure 16: Customer Dashboard (Wishlist)

Tasks	As a Customer
T1	I shall be able to see my wish list products.

Table 16: Customer Dashboard (Wishlist)

The screenshot shows the Customer Dashboard for 'Conversational G-Commerce'. The left sidebar has a 'Customer' icon and links to 'Dashboard', 'Favourite Products', 'WishLists', 'Favourite Shops' (which is selected), 'Account Setting', and 'History'. The main area is titled 'Favourite Shops' and lists three entries:

Shop Name	Market Name	Market Distance	Products	Action T1	Action T2
Abc	Abc	500m	5K	View Shop	UnFavourite
Abc	Abc	500m	5K	View Shop	UnFavourite
Abc	Abc	500m	5K	View Shop	UnFavourite

A green bar at the bottom right says 'Sales Agent Online' with a small upward arrow. The footer includes a logo, copyright notice '© Conversational Geo-Commerce 2018', and social media icons for email, Facebook, Google+, and Twitter.

Figure 17: Customer Dashboard (Favorite Shops)

Tasks	As a Customer
T1	I shall be able see my favorite shop detail.
T2	I shall be able to un favorite shop.

Table 17: Customer Dashboard (Favorite Shops)

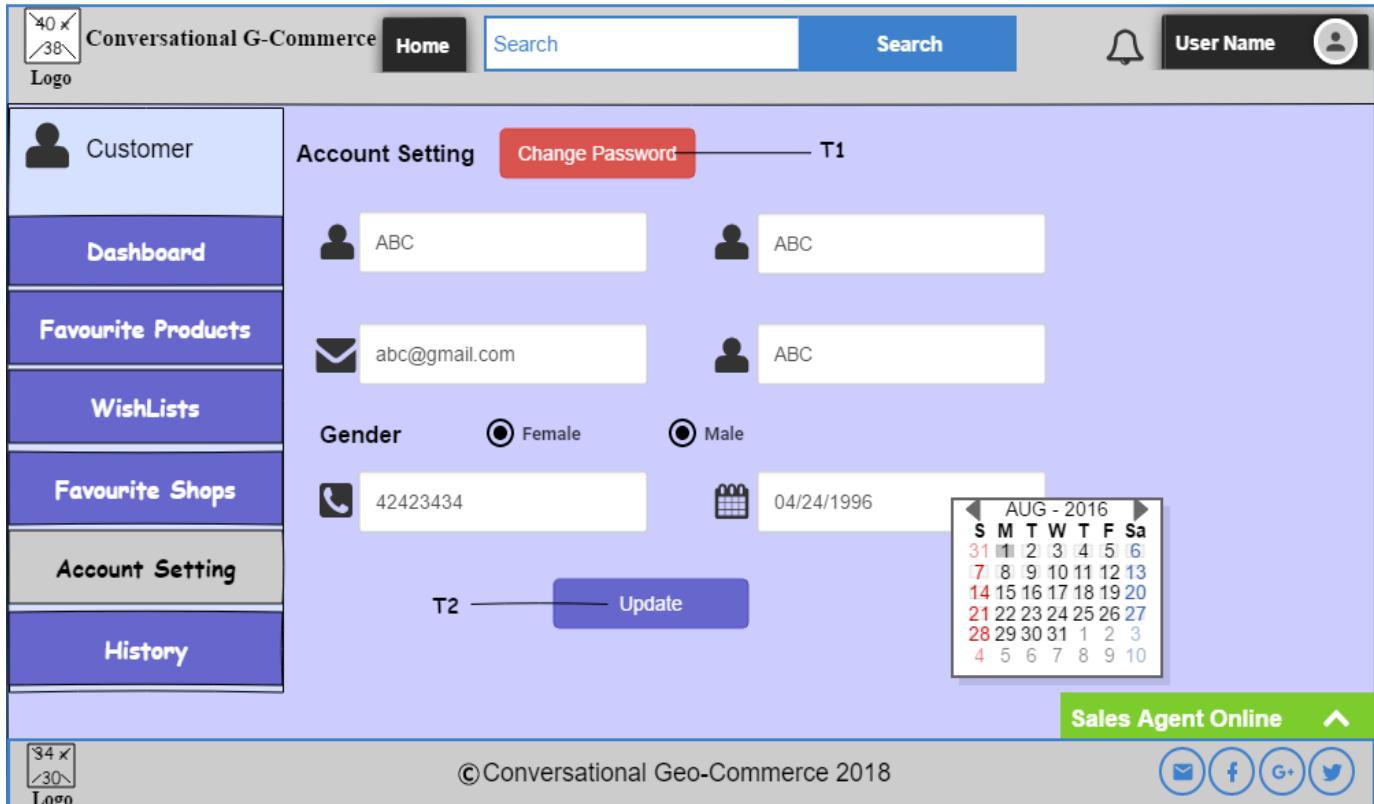


Figure 18: Customer Dashboard (Account Setting)

Tasks	As a Customer
T1	I shall be able to change my password.
T2	I shall be able to change my account info.

Table 18: Customer Dashboard (Account Setting)

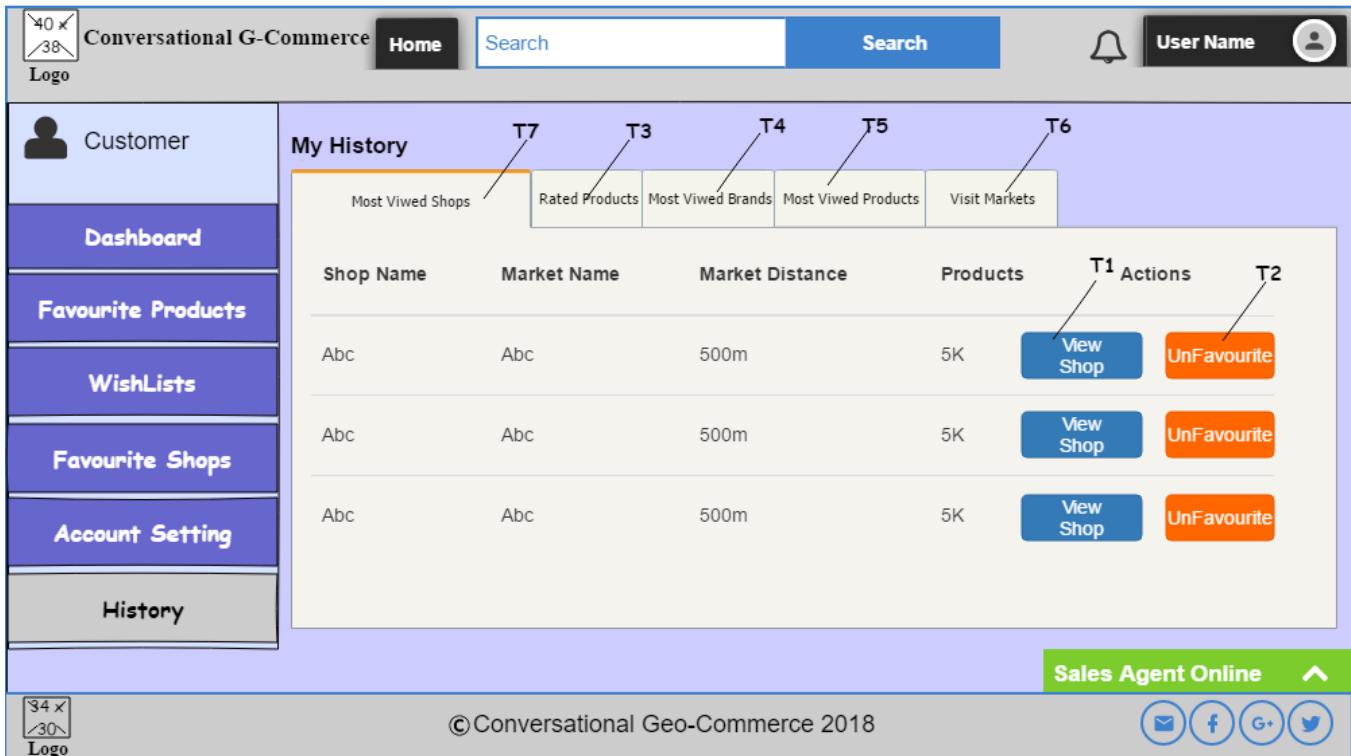


Figure 19: Customer Dashboard (History)

Tasks	As a Customer
T1	I shall be able see my favorite shop detail.
T2	I shall be able to un favorite shop.
T3	I shall be able to see my most rated products.
T4	I shall be able to see my most viewed brands.
T5	I shall be able to see my most viewed products.
T6	I shall be able to see my most visited markets.
T7	I shall be able to see my most viewed shops.

Table 19: Customer Dashboard (History)

The screenshot shows the Admin Dashboard for the 'Category' section. On the left, a sidebar lists navigation options: Admin, Dashboard, All Markets, All Shops, All Brands, Categories, Sub Categories, All Customers, All Shopkeepers, Advertisements, and Statistics. The main area is titled 'Category' and contains a table of categories. The table has columns for 'Category Name' (Abc), 'Created Date' (10/13/2018 10:52 PM), and 'Actions'. The 'Actions' column includes buttons for 'Edit' (T1), 'Delete' (T2), 'View All Sub Categories' (T3), 'View All Products' (T4), and 'Approved' (T5). Above the table, there are tabs for 'All Categories' (highlighted), Draft, Deleted, Approve Categories (T9), Disapprove Category (T10), and Pending (T11). A 'Search' bar is at the top right, along with a bell icon and 'User Name'. A note 'T13' points to the 'User Name' field.

Figure 20: Admin Dashboard (Category)

Tasks	As an Admin
T1	I shall be able to edit category.
T2	I shall be able to delete category.
T3	I shall be able to view sub categories of specific category.
T4	I shall be able to see products of specific category.
T5	I shall be able to approve category requested by shopkeeper.
T6	I shall be able to add category.
T7	I shall be able to see all categories.
T8	I shall be able to see draft categories.
T9	I shall be able to see delete categories.
T10	I shall be able to see all approve categories.

T11	I shall be able to see all disapprove categories.
T12	I shall be able to see all pending categories and approve or disapprove them.
T13	I shall be able to see all complaint notifications.

Table 20: Admin Dashboard (Category)

The screenshot shows the Admin Dashboard interface. On the left, there is a vertical sidebar with various menu items: Admin, Dashboard, All Markets, All Shops, All Brands, Categories, Sub Categories, All Customers, All Shopkeepers, Advertisements, and Statistics. The 'Categories' item is currently selected and highlighted in grey. The main content area is titled 'Create Category'. It contains three input fields: 'Category Name' (empty), 'Category Description' (empty), and 'Category Image' (with an 'Upload' button). Below these fields is a green 'Create' button. The top navigation bar includes a logo, 'Conversational G-Commerce', 'Home', 'Search' (twice), a notification bell icon, 'User Name', and a user profile icon. The bottom of the page features a footer with social media icons (Email, Facebook, Google+, Twitter) and the text '© Conversational Geo-Commerce 2018'. A green bar at the bottom right says 'Sales Agent Online' with a checkmark icon.

Figure 21: Admin Dashboard (Create Category)

Tasks	As an Admin
T1	I shall be able to upload category pic.
T2	I shall be able to create category.

Table 21: Admin Dashboard (Create Category)

The screenshot shows the Admin Dashboard for 'Conversational G-Commerce'. The left sidebar contains links for Admin, Dashboard, All Markets, All Shops, All Brands, Categories, Sub Categories, All Customers, All Shopkeepers, Advertisements, and Statistics. The main content area is titled 'Sub Category' and displays a table of sub categories. The table columns are Sub Category Name, Created Date, Category Name, and Actions. The Actions column includes buttons for Edit, Delete, View All Products, and Pending/Approved. Above the table, there is a toolbar with 'Add Sub Category' and 'Search' buttons, and a status bar with 'Sales Agent Online' and social media icons.

Figure 22: Admin Dashboard (Sub Category)

Tasks	As an Admin
T1	I shall be able to add sub category.
T2	I shall be able to see all sub categories.
T3	I shall be able to see draft sub categories.
T4	I shall be able to see delete sub categories.
T5	I shall be able to see all approve sub categories.
T6	I shall be able to see all disapprove sub categories.
T7	I shall be able to see all pending sub categories and approve or disapprove them.

T8	I shall be able to edit sub category.
T9	I shall be able to delete sub category.
T10	I shall be able to see products of specific sub category.
T11	I shall be able to approve or disapprove category requested by shopkeeper.

Table 22: Admin Dashboard (Sub Category)

The screenshot shows the Admin Dashboard interface for creating a sub-category. On the left, a vertical sidebar lists various administrative tasks: Admin, Dashboard, All Markets, All Shops, All Brands, Categories, Sub Categories (which is the active tab), All Customers, All Shopkeepers, Advertisements, and Statistics. The main content area is titled "Create Sub Category". It contains several input fields: "Sub Category Name" (empty), "Category Name" (a dropdown menu currently showing "XYZ", annotated with T1), "Sub Category Description" (an empty text area with a resize handle), "Category Image" (a section with an "Upload" button and a file input field, annotated with T2), and a green "Create" button (annotated with T3). At the bottom right of the dashboard, there's a "Sales Agent Online" status indicator and some social media sharing icons. The top navigation bar includes a logo, a search bar, and user authentication options (User Name and a profile icon).

Figure 23: Admin Dashboard (Create Sub Category)

Tasks	As an Admin
T1	I shall be able to select added category.

T2	I shall be able to upload picture of sub category.
T3	I shall be able to create sub category.

Table 23: Admin Dashboard (Create Sub Category)

The screenshot shows the Admin Dashboard for Conversational G-Commerce. The left sidebar contains a vertical menu with the following items:

- Admin
- Dashboard**
- All Markets
- All Shops
- All Brands
- Categories**
- Sub Categories**
- All Customers
- All Shopkeepers
- Advertisements
- Statistics

The main content area is titled "Brand". It features a table with the following columns:

Brand Name	Created Date	Actions				
Abc	10/13/2018 10:52 PM	Edit (T8)	Delete (T9)	View All Shops (T10)	View All Products (T11)	Approved (T12)
Abc	10/13/2018 10:52 PM	Edit	Delete	View All Shops	View All Products	DisApprove

Below the table, there is a navigation bar with page numbers (1, 2, ..., 49, 50, >>).

At the bottom of the dashboard, there is a footer with the text "© Conversational Geo-Commerce 2018" and social media icons for email, Facebook, Google+, and Twitter.

Figure 24: Admin Dashboard (All Brands)

Tasks	As an Admin
T1	I shall be able to add new brand.
T2	I shall be able to see all brands.
T3	I shall be able to see draft brands.

T4	<i>I shall be able to see delete brands.</i>
T5	<i>I shall be able to see all approve brands.</i>
T6	<i>I shall be able to see all disapprove brands.</i>
T7	<i>I shall be able to see all pending brands and approve or disapprove them.</i>
T8	<i>I shall be able to edit brand.</i>
T9	<i>I shall be able to delete brand.</i>
T10	<i>I shall be able to see all shops of specific brand.</i>
T11	<i>I shall be able to see all products of specific brand.</i>
T12	<i>I shall be able to approve or disapprove brand.</i>

Table 24: Admin Dashboard (All Brands)

The screenshot shows the Admin Dashboard interface for creating a new brand. On the left, there is a vertical sidebar with a user icon and the text "Admin". Below this are several menu items: "Dashboard", "All Markets", "All Shops", "All Brands" (which is highlighted in grey), "Categories", "Sub Categories", "All Customers", "All Shopkeepers", "Advertisements", and "Statistics". At the bottom of the sidebar is a logo icon with the text "Logo".

The main content area has a light purple background. It features a "Create Brand" header. Below it are two input fields: "Brand Name" and "Brand Description", each with a white input box. To the right of "Brand Description" is a small icon of three horizontal lines. Below these fields is a section for "Brand Logo" with an "Upload" button containing an upward arrow icon and a file input field. A green "Create" button is positioned below the logo upload area. At the bottom right of the main content area is a green bar with the text "Sales Agent Online" and a small upward arrow icon.

At the very bottom of the page, there is a footer bar with a logo icon and the text "Logo" on the left, and "© Conversational Geo-Commerce 2018" in the center. On the right side of the footer are four social media icons: email, Facebook, Google+, and Twitter.

Figure 25: Admin Dashboard (Create Brand)

Tasks	As an Admin
T1	<i>I shall be able to upload brand logo.</i>
T2	<i>I shall be able to create brand.</i>

Table 25: Admin Dashboard (Create Brand)

The screenshot shows the Admin Dashboard for 'Conversational G-Commerce'. The sidebar on the left contains links for Admin, Dashboard, All Markets, All Shops, All Brands, Categories, Sub Categories, All Customers, All Shopkeepers, Advertisements, and Statistics. The main content area is titled 'Customers' and includes a search bar and two search buttons. Below this is a table with columns: User Name, Email, Gender, Age, Phone Number, and Actions. The table shows two rows: one for user 'Abc' with status 'Banned' (highlighted by a red box, T5) and one for user 'XYZ' with status 'Approved' (highlighted by a green box, T6). Navigation arrows at the bottom indicate page 1 of 50. The footer includes a 'Sales Agent Online' button and social media icons for email, Facebook, Google+, and Twitter.

Figure 26: Admin Dashboard (All Customers)

Tasks	As an Admin
T1	<i>I shall be able to see all customers.</i>
T2	<i>I shall be able to see banned customers.</i>
T3	<i>I shall be able to see approved customer accounts.</i>

T4	<i>I shall be able to see pending customers.</i>
T5	<i>I shall be able to ban the customer.</i>
T6	<i>I shall be able to approve the customer account.</i>

Table 26: Admin Dashboard (All Customers)

The screenshot shows the Admin Dashboard interface. On the left is a sidebar with a logo, navigation links like Home, Search, User Name, and a bell icon. The main area has a light blue header with 'Conversational G-Commerce' and a search bar. Below is a table titled 'Ads' with columns: Product Name, Image, Link, and Actions. The 'Actions' column contains buttons for Pending (red) and Paid (green). The table includes a footer with page numbers (1, 2, ..., 49, 50, >>). The interface is styled with a light purple header and a light gray body.

Figure 27: Admin Dashboard (Advertisement)

Tasks	As an Admin
T1	<i>I shall be able to see all ads.</i>
T2	<i>I shall be able to see those ads for which shopkeeper has paid.</i>
T3	<i>I shall be able to see those ads for which shopkeeper has not paid.</i>
T4	<i>I shall be able to see pending ads.</i>

T5	I shall be able to mark paid when shopkeeper will pay.
----	--

Table 27: Admin Dashboard (Advertisement)



Figure 28: Admin Dashboard (Statistics)

Tasks	As an Admin
T1	I shall be able to select filter for view different statistics.
T2	I shall be able to click button to see statistics.

Table 28: Admin Dashboard (Statistics)

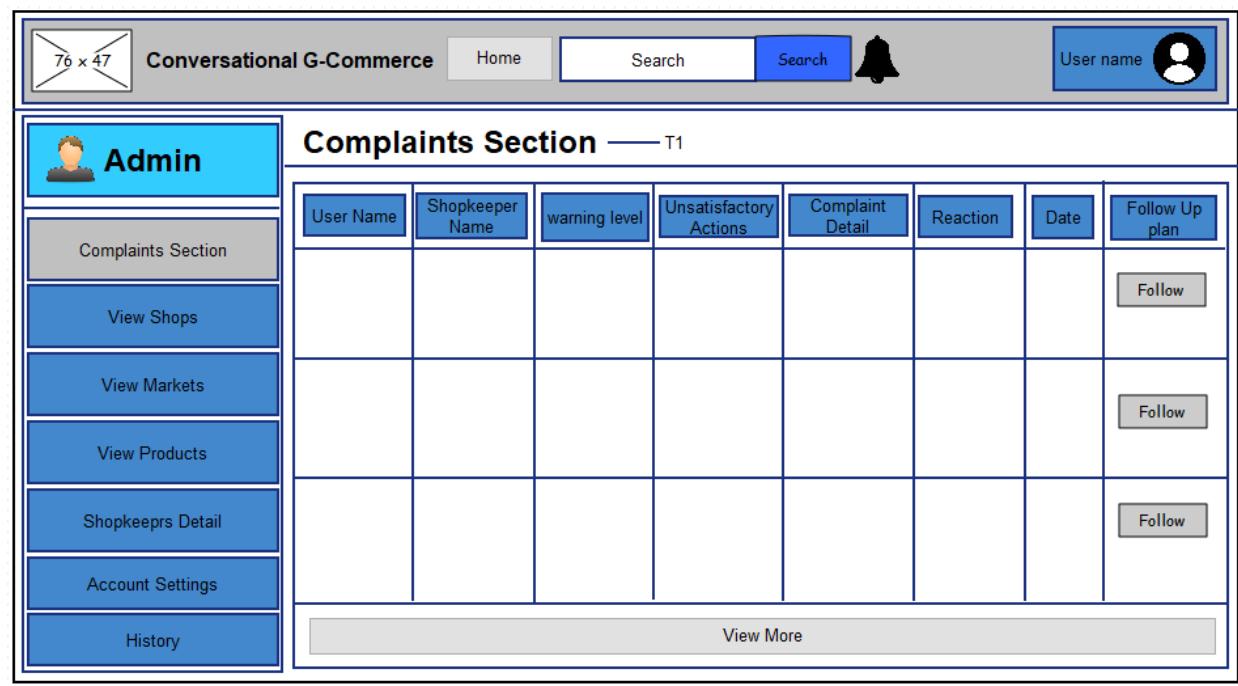


Figure 29: Admin Dashboard(Complaint Section)

Tasks	As an Admin
T1	As an admin, I shall visit this page and see complaints submitted by shopkeepers or users. I shall follow a meet up plan to find a solution for both opponents.
T2	As an admin, I shall change my user name and can upload image. I shall search about the specific complaints and get notify about new complaints through notification.
T3	As an admin, I shall visit complaint Section, view all shops, all products, all markets and shopkeeper details. I shall manage my account setting and can view my history work that I have done in past.

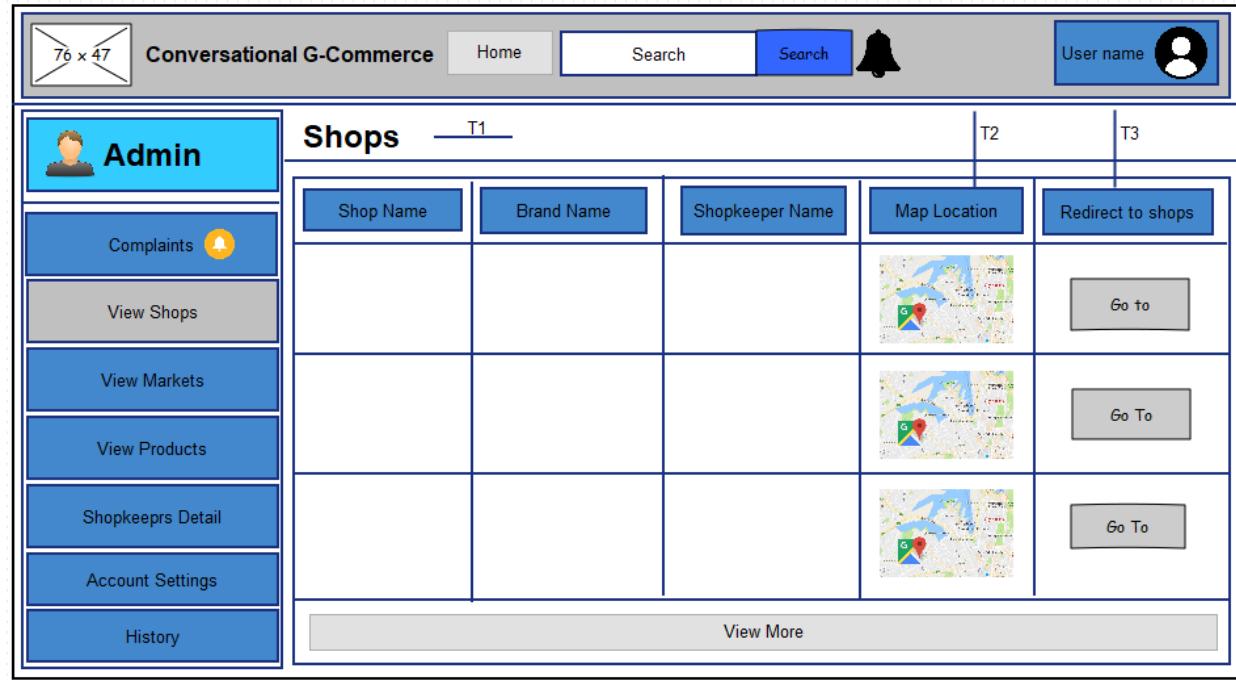
Table 12: Complaint Section

The screenshot shows the 'Warning Form' section of the Admin Dashboard. On the left is a sidebar with a user icon and the title 'Admin'. Below it are several buttons: 'Complaints Section', 'View Shops', 'View Markets', 'View Products', 'Shopkeepers Detail', and 'Account Settings'. The main area has a header 'Warning Form'. It contains fields for 'User Name:', 'Shopkeeper Name:', and 'date'. There are three radio buttons for 'First warning', 'Second Warning', and 'Other', with 'First warning' selected and labeled 'T1'. To the right is a field 'List Previous Discipline meeting (s) held:' with two empty lines. Below this is a field 'Recommendation in detail' with three empty lines, labeled 'T3'. At the bottom, there are two rows of buttons for 'Action should be Taken by User' and 'Action should be Taken by shopkeeper'. The first row has 'T2' and 'T4' with 'Block' buttons. The second row has 'T5' and 'Admin Name:' followed by a text input field. A 'Footer Section' is at the bottom.

Figure 30: Admin Dashboard(Warning Form)

Tasks	As an Admin
T1	As an admin I shall take an action for opponents. I shall judge who's right and who's on wrong side. I shall write about their previous meeting if they had in past. I shall mark their warning level based on how many times this is going to be happen.
T2	As an admin I shall write some better recommendation for their betterment.
T3	As an admin I shall write a brief note on conflicts between shopkeeper and user.
T4	As an admin I shall decide who's should block. Whose shop must be block.
T5	As an admin I shall submit necessary fields and at the end write down my name and one-line reason for their blockage.

Table 13: Claim Form

*Figure 31: Admin Dashboard(View shops)*

Tasks	As an Admin
T1	As an admin I shall view all shops registered under the system.
T2	As an admin I shall view shops exact location using a map.
T3	As an admin I shall redirect on shopkeeper's shop info that he added while registering his shop.

Table 14: Shops View

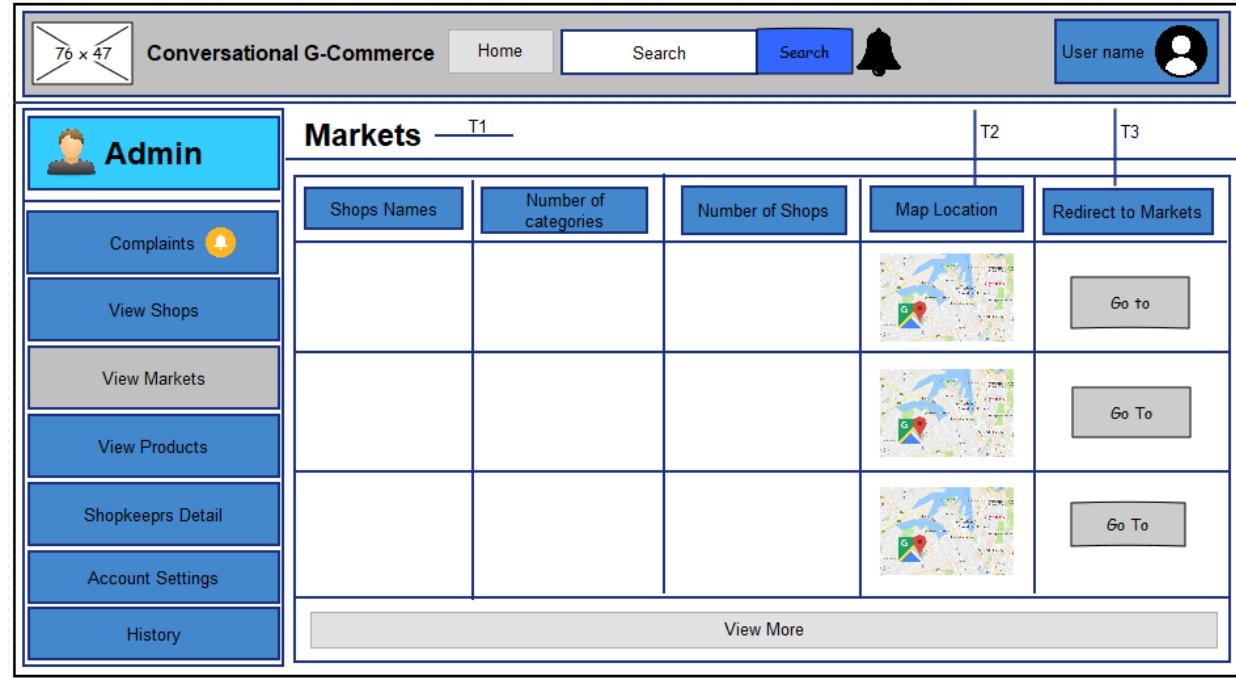


Figure 32: Admin Dashboard(Markets View)

Tasks	As an Admin
T1	As an admin I shall view all shops registered under a Market.
T2	As an admin I shall view market exact location and shops within the market using a map.
T3	As an admin I shall redirect on Markets info that has been formed by adding nearby shops.

Table 15: Market View

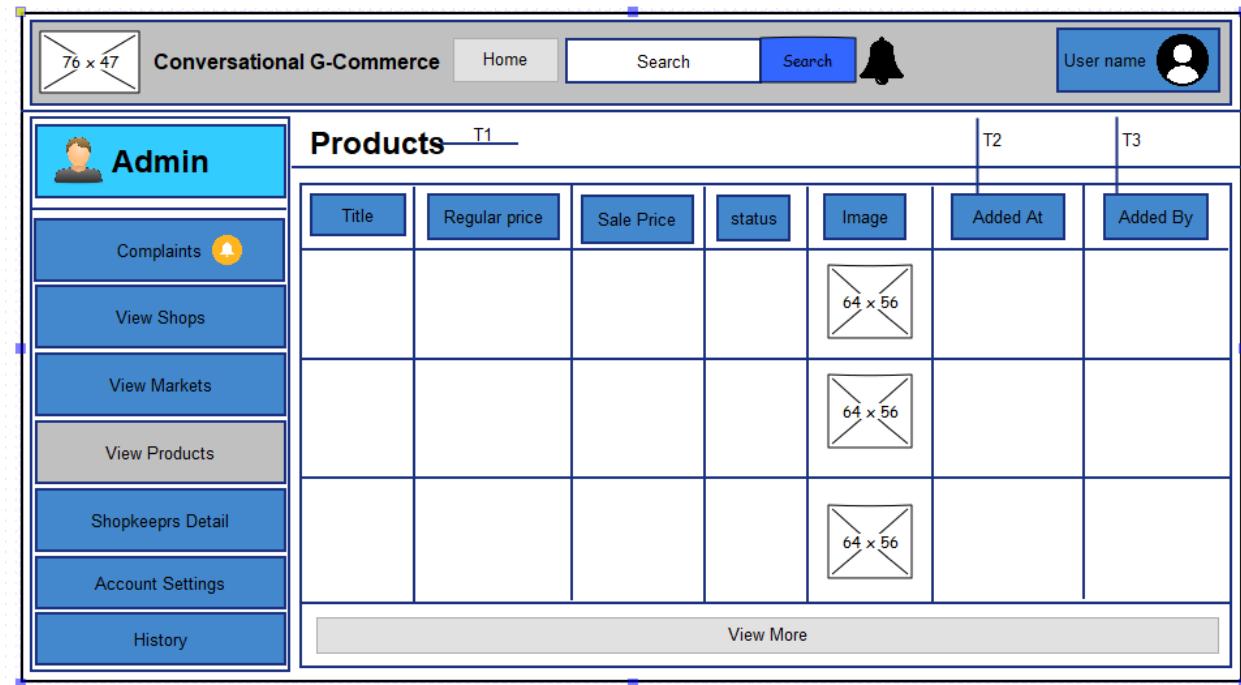


Figure 33: Admin Dashboard (Products View)

Tasks	As an Admin
T1	As an admin I shall view all added products under a shop.
T2	As an admin I shall view products image and can order to change that image.
T3	As an admin I shall redirect on Products info that has been given by shopkeeper while adding products into his shop.

Table 16: Product preview

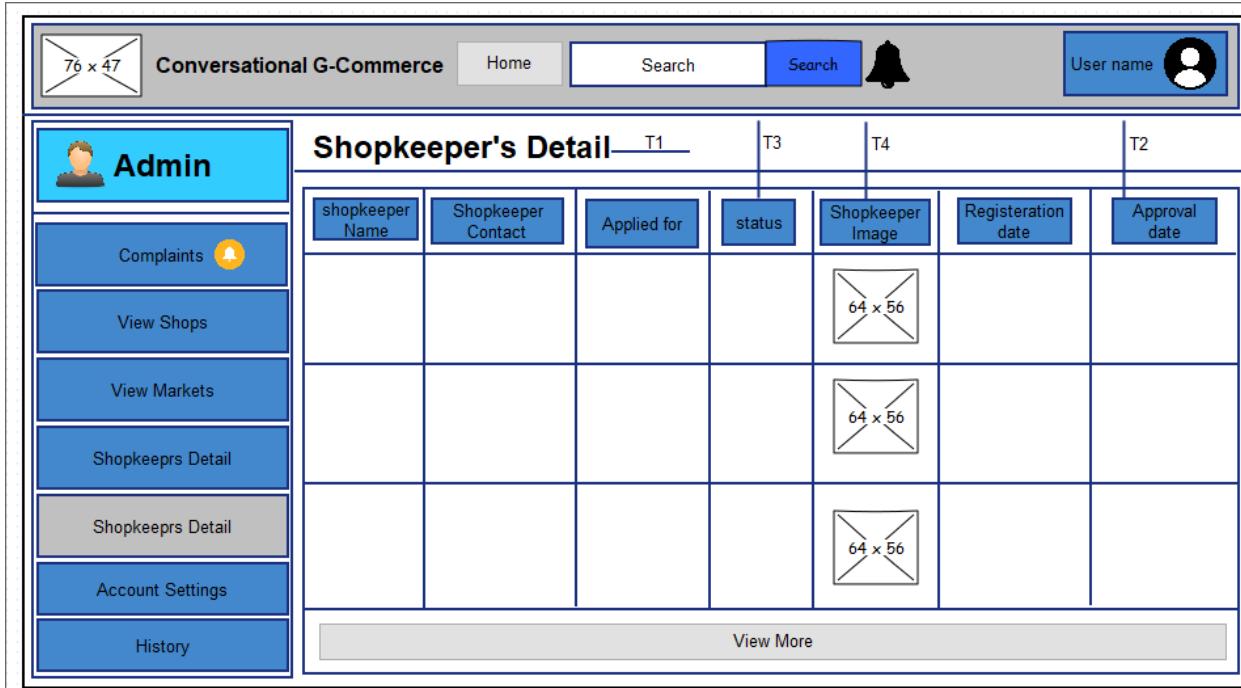


Figure 34: Admin Dashboard (Shopkeeper's Detail View)

Tasks	As an Admin
T1	As an admin I shall view a shopkeeper information added on registering himself.
T2	As an admin I shall view shopkeeper's request approval date.
T3	As an admin I shall take an action if shopkeeper is not an active member. I shall warn him or block his shop.
T4	As an admin I shall redirect to shopkeeper account by clicking on shopkeeper's profile image.

Table 17: Shopkeeper's Detail View

Shopkeeper Interface

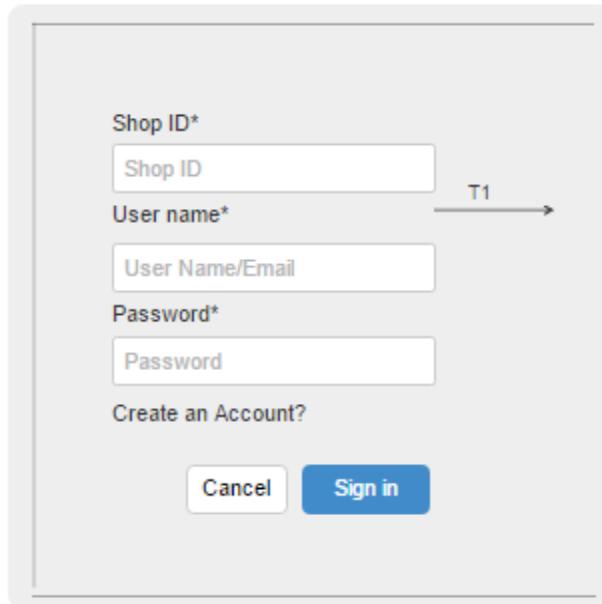
The screenshot shows a sign-up form for shopkeepers. The form is divided into several sections:

- Personal Information:** Fields include First Name*, Middle Name*, Last name, Address 1*, Address2, City*, State, Zip Code, Fax, and Phone.
- Brief introduction:** A text area labeled "Brief introduction" with the identifier T1.
- Personal Information (highlighted):** A section containing Email, Password, Confirm Password, Choose a Security Question?, and Answer.
- Buttons:** "Cancel" and "Sign Up".

Figure 35: Shopkeeper View (Sign Up form)

Tasks	As a shopkeeper
T1	As a shopkeeper I shall fill these necessary fields to be a member of the G-commerce website. I shall submit my personal information.

Table 18: Sign Up form



The image shows a login form titled "Shopkeeper's Dashboard". It contains four input fields: "Shop ID*" (with placeholder "Shop ID"), "User name*" (with placeholder "User Name/Email"), "Password*", and "Create an Account?". Below the form are two buttons: "Cancel" and a blue "Sign in" button. A blue arrow labeled "T1" points from the "User name*" field towards the "Sign in" button.

Figure 36: Shopkeeper's Dashboard(Login form)

Tasks	As a shopkeeper
T1	As a shopkeeper I shall fill these necessary fields to login into the system
T2	As a shopkeeper I shall remember the key value of shop given by Admin at the time of registering his shop.

Table 19:Login Form

Add Shop

G_Commerce		Home	Menu item 1	Menu item 2
Add Shop Location Product Category View Products Statistics Reports Add Products	<h3>Add Shop</h3> <p>Shop Name*</p> <input type="text"/> <p>City/Town*</p> <input type="text"/> <p>Country</p> <input type="text"/> <p>Post Code</p> <input type="text"/> <p>Region</p> <input type="text"/> <p>Address</p> <input type="text"/> <p>Brand Tag*</p> <input type="text"/> <p>Contact Number</p> <input type="text"/>			
	 <p>Latitude</p> <input type="text"/> <p>Langitude</p> <input type="text"/> <input type="button" value="Search location"/>			
	<input type="button" value="Upload Image"/> <input type="button" value="Cancel"/> <input type="button" value="Save Changes"/> <input type="button" value="Submit"/>			
	Footer			

Figure 37: Shopkeeper Dashboard(Add shops)

Tasks	As a shopkeeper
T1	As a shopkeeper I shall fill these necessary fields to add a shop in market.
T2	As a shopkeeper I shall handle menu featured tasks. I shall add shops in market, products in a shop, categories in a shop and can generate statistical reports.

Table 20: Add Shops

The screenshot shows a web-based application interface titled "Add Shop". The main menu bar includes "G_Commerce", "Home", "Menu item 1", and "Menu item 2". On the left sidebar, there are links for "Add Shop Location", "Product Category", "View Products", "Statistics Reports", and "Add Products", with "Add Products" being highlighted. A vertical arrow labeled "T2" points down from the sidebar to the main content area. The main content area is titled "Product Description" and contains the following fields:

- Product Title***: An input field with placeholder "Title".
- Department Name**: A dropdown menu.
- Category**: A dropdown menu with an arrow pointing to it labeled "T1".
- Manufacturer**: An input field with placeholder "Name".
- Price**: An input field with value "1" and a dropdown arrow.
- Discount Price**: An input field with value "1" and a dropdown arrow.
- Quantity**: An input field with value "1" and a dropdown arrow.
- Product Status**: A dropdown menu.
- Product Description**: An input field with placeholder "type here".
- Add Attribute**: A button with a plus sign and a dropdown menu containing "RAM" and "Memory". An arrow labeled "T4" points to this section.

On the right side of the form, there is a large image of a smartphone and a "Browse Images" button with a blue arrow pointing to it. Below the "Browse Images" button are three circular arrows (left, right, up) and three buttons: "Cancel" (red), "Save Changes" (blue), and "Done" (green). An arrow labeled "T3" points to the "Browse Images" button. Arrows labeled "T5" and "T6" point upwards from the "Save Changes" and "Done" buttons respectively. An arrow labeled "T7" points upwards from the "Cancel" button. At the bottom of the page is a footer area.

Figure 38: Shopkeeper Dashboard(Product Description)

Tasks	As a shopkeeper
T1	As a shopkeeper I shall fill these necessary fields to add product in a shop.
T2	As a shopkeeper I shall handle menu featured tasks. I shall add shops in market, products in a shop, categories in a shop and can generate statistical reports.
T3	As a shopkeeper I shall browse new images of products from all sides.
T4	As a shopkeeper I shall add attributes for new upcoming features.
T5	As a shopkeeper I shall left filled fields to submit another time. all these changes would be save in this form.
T6	As a shopkeeper I shall submit form with all the necessary fields.
T7	As a shopkeeper I shall cancel whenever I don't want to add my shop in a market.

Table 21: Product Description

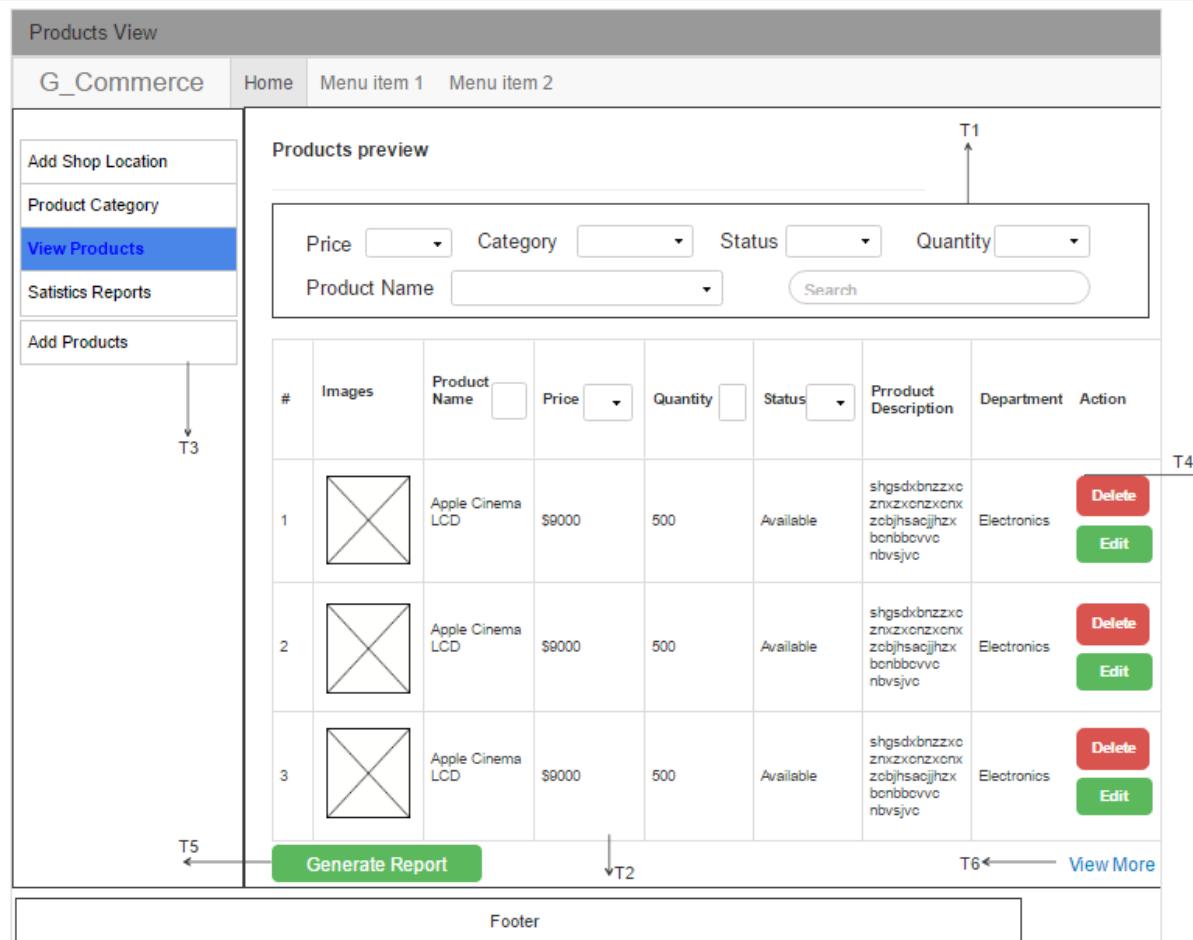


Figure 39: Shopkeeper Dashboard (Products Preview)

Tasks	As a shopkeeper
T1	As a shopkeeper I shall make search on these filters. Simple search can also be done through entering text into search bar.
T2	As a shopkeeper I shall view all the entered products in shop. I shall order products in ascending or descending, alphabetically and numerically. Search bar also helps to make search faster.
T3	As a shopkeeper I shall handle menu featured tasks. I shall add shops in market, products in a shop, categories in a shop and can generate statistical reports.
T4	As a shopkeeper I shall edit or delete any product.
T5	As a shopkeeper I shall generate statistical report of products being entered in system.
T6	As a shopkeeper I shall view more items available in a shop.

Table 22: Product Preview

The screenshot shows a web-based application interface for adding a product category. The top navigation bar includes links for G-Commerce, Home, Menu item 1, Menu item 2, Menu item 2, Help, Contact, Register, and Login. A sidebar on the left lists various administrative tasks under 'Product Category', with 'Electronics' expanded to show 'Action Sport 1', 'Team Sports' (with sub-options like 'Base ball', 'Basket Ball', 'Volley ball'), 'More', 'Action Sports' (with sub-options like 'Action Sport 1'), 'Action Sports' (with sub-options like 'Action Sport 1'), and 'More Items' (with sub-options like 'Action Sport 1'). The main content area is titled 'Product Category Request' and contains fields for Name, Code, Active status, and Import Status (linked to T1). Below this is a 'General Description' section with fields for Created Date, Created By (Name), Modified Date, Modified By (Name), and Visible in website (checkbox). To the right, there are four sections: 'Product Description' (text area 'type here'), 'Friendly Name' (text area 'Name'), 'Key words search' (text area 'Type something...'), and 'Customers Visited product' (text area 'Customers purchase product'). Arrows labeled T1 through T4 indicate dependencies between the Import Status field and the 'Customers Visited product' section, and between the 'Visible in website' checkbox and the 'Key words search' field. The footer of the page is labeled 'Footer'.

Figure 40: Shopkeeper Dashboard (Add Product Category Request Form)

Tasks	As a shopkeeper
T1	As a shopkeeper I shall make search on these filters. Simple search can also be done through entering text into search bar.
T2	As a shopkeeper I shall request new category addition. I shall fill all the required fields when it is created and requested to Admin.
T3	As a shopkeeper I shall add some keywords on which base products search can be meet.
T4	As a shopkeeper I shall view products that are more visited by customers, products purchased by customers and his shop visited by how many customers and how much time.

Table 23: Add Category Request

3.2 Software Interface

Following software interfaces are part of the project as external dependencies:

- i. Google Maps API
- ii. Dialogue flow API or recast.ai API for Chatbot

The working mechanism of these API's is as follows:

The customer will open the application on his/her device and the location will be accessed using the device GPS hardware and the google maps. That location will try to match the coordinates of the nearby stores whose location is already stored in the system. And that location will provide the nearby stores and the products in those stores.

Similarly, if the user wants to search some products using the virtual sales agent, the Dialog flow API will parse the user query string and it will be finding the relevant entities the user is looking for. After parsing it will return a response back to the application which will pass the response to the Web API of the project to search for the relevant products from the nearby stores and that response will be displayed to the customer.

4. System Features

<This template illustrates organizing the functional requirements for the product by system features, the major services provided by the product. You may prefer to organize this section by use case, mode of operation, user class, object class, functional hierarchy, or combinations of these, whatever makes the most logical sense for your product.>

4.1 System Feature 1

System features of our system can be categorized as follows:

Admin

- Admin can login in a system
Description: Admin must be able to login in the system.
- Admin can manage (approve, disapprove registrations of) all the shop keepers.
Description: Only Admin is authorized to approve or disapprove registrations of all shopkeepers.
- Admin can approve Categories requested by shopkeeper and manage (add, edit, view) all other categories.
Description: Only admin can add or approve categories in the system.
- Admin can approve Brands requested by shopkeeper and manage (add, edit, view) all other brands.
Description: Only admin can add or approve brands in the system.
- Admin can manage (view, block, keep location) products details of every shop. Admin can block any product.

Description: Only admin can ban or un-ban products of the system. And can also see details of every shop.

- Admin can view record of all the stocks. (inventory system).

Description: Only admin is authorized and can see details of every shop including their inventory. And inventory is authorized and managed by shopkeepers only.

- Admin can manage the complaints of shopkeepers and customers and in return he may warn them or block them (he can block customer, shopkeeper or shop).

Description: Only admin can manage complaints and can block or warn shop, customer or shopkeeper.

- Admin can see the top selling sellers, top selling locations and trending categories and products.

Description: Admin can see statistical analysis of popular locations, categories on high demand in popular locations and popular people visiting time.

- Admin can train virtual sales agent through our provided platform.

Description: Only admin is authorized to train virtual sales agent with the gathered data.

- Admin can see shops in all province, country, city (Filters).

Description: Admin can see shop locations.

Shopkeeper

- Shopkeeper can login in a system after approval of administrator and selection of package.

Description: Shopkeeper can register and login in the system after approval from admin.

- Shopkeeper can manage details of his/her shop (location, tags).

Description: Shopkeeper is responsible for the location and tags management of his/her shop.

- Shopkeeper can request new product category.

Description: Shopkeeper can request new category to include in the system to admin through our interface.

- Shopkeeper can request new brand.

Description: Shopkeeper can request new brand to include in the system to admin through our interface.

- Shopkeeper can manage stock (Inventory) and products details.

Description: Shopkeeper is responsible for the management of his/her shop.

- Shopkeeper can generate report of daily/weekly/yearly basis that how many items has been sold and how many products are left.

Description: Shopkeeper must be able to generate reports related to inventory. These reports can be daily bases, weekly bases or yearly bases.

- Shopkeeper can generate report of customer's statistics searching for his/her shop.

Description: Shopkeeper can see statistical analysis of his/her shop. These statistics will be helpful in targeting the customers of interests/age group/ location.

- Shopkeeper can view the review of customers on products.

Description: Shopkeeper can view the reviews of customer and can manage or update his shop accordingly.

- Shopkeeper can keep the record of his customer and can maintain their order history.

Description: Shopkeeper can keep all records and maintain history of his/her customers.

Customers

- Customer can login in a system.

Description: Customer can login in the system.

- Customer can search product/shops based on Geo Fence.

Description: Customer must be able to search shop or product with location.

- Customer can provide feedback about shop/product.
Description: Customer can provide feedback related to shop or product.
- Customer can see other customer reviews.
Customer can see other customer's reviews which will help them in their decisions.
- Customer can maintain his/her Wish list.
Description: Customer can maintain Wish list for the product he is interested in.
- Customer can see statistical analysis of shops.
Description: Customer can see statistical analysis of shops which will help him in making decisions.

Machine

- Machine learn from customer reviews and recommend products to customer on basis of cost, distance and quality.
Description: Machine must be able to learn from customer reviews. Based on this learning it can recommend products to customers according to their cost, distance and quality demands.
- Machine can advertise popular and recommended products to customer.
Description: Machine must be able to advertise recommended and popular products to customer.
- Machine can block or ban products based on natural language processing of products banned by admin.
Description: Machine must be able to ban products which are same products banned by admin.
- Machine can calculate the automatic bill of each customer according to list.
Description: Machine must be able to automatically calculate the bill of customers.
- A virtual sales agent will help customer to find the desired product.
Description: A virtual sales agent will be responsible to help customers in finding products they desire.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

Performance Requirements of the system mainly depends on these points:

- I. Related query answer within seconds.
- II. Save data of customers and shopkeepers within seconds.
- III. Give location of shops within seconds.
- IV. Give location of products within seconds.

5.2 Safety Requirements

As there is no hardware involved so the required Safety Requirement of the system is just to handle all exceptions affectionately that can occur while using the system.

5.3 Security Requirements

Security Requirements of the system are as follows:

- I. Only authorized shopkeepers can change their shop details and products details.

- II. Only admin can add categories and brands in the system.
- III. Only admin can train virtual sales agent.

5.4 Software Quality Attributes

Quality attributes of the software for customer, shopkeeper are as follows:

- I. Availability when they need.
- II. Provision of correct information
- III. Flexible for user changing requirements
- IV. Easy to use and easy to maintain
- V. Trustworthy
- VI. Ready for unexpected testing
- VII. Meet the desired possible requirements

Availability and the provision of correct information has more preference over other attributes. Since it is possible that results are a bit slow due to the slow hardware of the user or the internet connection. However, system will still be available with correct information.

5.5 Business Rules

Some important business rules of the project are as follows:

- I. A shopkeeper can have more than one shops
- II. One Shop belongs to one shopkeeper only
- III. Multiple shops can have same name
- IV. Multiple Shopkeepers can have same name
- V. One Customer can get directions to one shop at a time
- VI. One Shop directions can be provided to multiple customers at a time
- VII. One product can have multiple categories
- VIII. One Category can have multiple products
- IX. One product belongs to one and only one brand at a time
- X. One product Brand can have multiple products in it.
- XI. One Shop can have multiple products
- XII. One product belongs to multiple shops at the same time
- XIII. A customer can favorite the multiple products
- XIV. One favorite product belongs to only customer
- XV. Virtual Sales Agent can deal with multiple customers at a time

6. Other Requirements

The under-consideration project may evolve with the passage of time with new features, currently under consideration features for future are as follows:

- I. Feature to order online with cash on delivery option within short distance
- II. Visual Product Searches using image processing and computer vision
- III. Partnership and integration with Uber, Careem, Bykea, Cheetah for home delivery services.
- IV. Adding nearby services like, repairer, plumber, engineer, driver etc.
- V. Making it marketing platform like Facebook to show the products to right target audience on the basis of interest.