

SourceZero

Project aim and description

SourceZero is a mobile application designed to serve as an online store for organic products. The app promotes environmental sustainability and high-quality living by offering carefully curated organic groceries that cater to all dietary needs. Combining convenience with ecological responsibility, the platform enables users to make informed and sustainable food choices.

The application features a user-friendly interface that allows customers to easily navigate through a wide selection of organic items, using filters and search tools to personalize their shopping experience. A key aspect of the project is the implementation of a flexible subscription model, where users can sign up for recurring deliveries based on their preferred frequency. This not only supports consistent access to healthy food but also helps reduce food waste through planned consumption.

To enhance customer experience, the app also includes real-time chat support, enabling users to receive prompt assistance whenever needed.

Overall, *SourceZero* combines practicality, affordability, and sustainability in one seamless mobile shopping solution.

Functional and non-functional requirements

Functional requirements

- User account management, that includes user registration, login and logout, and user profile edition.
- Product catalog, to display a catalog of organic products, including searching and filtering and viewing detailed product information.
- Shopping cart and checkout, with functions of adding/removing products, reviewing order summary before placing an order, and checking out with choice of payment method and delivery address.

- Subscription management, allowing users to subscribe to recurring deliveries, with options to pause, edit or cancel active subscriptions.
- Order history, to allow users to view past orders and purchase history.
- Chat support, for real-time customer support, integrated with AI chatbot.
- Admin features, exclusively for admin permissions, to manage product listings and inventory and view users activities.

Non-functional requirements

- Security, with data encryption for sensitive information, like passwords.
- Usability, being mobile-first, with an intuitive interface design.
- Portability, with a responsive layout for various screen sizes.
- Maintainability, with a well-documented codebase.
- Scalability, which is supported by the use of Firebase as backend infrastructure.

User stories

As a new user, I want to sign up with my email and password so that I can create an account to start shopping.

As a user, I want to sign up or login using my Google or Facebook account so that I can access the app with minimal effort.

As a user, I want to log in securely so that I can access my profile and order history.

As a user, I want to see a clear option to log in via social media on the login screen so that I can choose my preferred method easily.

As a user, I want to update my personal information and delivery address so that my orders are sent to the right location.

As a customer, I want to browse a catalog of organic products so that I can explore what's available.

As a customer, I want to filter products by dietary needs so that I can quickly find suitable options for me.

As a customer, I want to search for a product by name so that I can find what I'm looking for faster.

As a customer, I want to add multiple products to a shopping cart so that I can review and purchase them together.

As a customer, I want to remove items from my cart so that I can adjust my order before checking out.

As a customer, I want to see a summary of my order and total cost so that I know exactly what I'm paying for.

As a customer, I want to pay using my preferred payment method so that I can complete my purchase easily.

As a customer, I want to subscribe to recurring deliveries for specific products so that I don't have to re-order them manually every time.

As a subscriber, I want to pause or cancel my subscription so that I have control over when I receive products.

As a customer, I want to view my past orders so that I can re-order items or check previous purchases.

As a customer, I want to receive a notification when my order is confirmed so that I know my purchase was successful.

As a customer, I want to receive notifications about special offers or discounts so that I don't miss out on deals.

As a customer, I want to ask questions through a chat so that I can resolve issues quickly without leaving the app.

Test cases

Test Case ID	Description	Steps	Expected Result
UA-001	Register new user with email/password	Enter email, password, submit registration form	Account is created
UA-002	Login with valid email/password	Enter registered email and correct password	User login successfully, redirected to home page
UA-003	Login with Google	Enter Google email and password	User login successfully, redirected to home page
UA-004	Login with Facebook	Enter Facebook email and password	User login successfully, redirected to home page
UA-005	Add a new product	Enter product name, price and quantity	Product is added to Firestore/inventory
UA-006	Delete a product	Click delete button	Product is deleted from Firestore/inventory
UA-007	Edit a product	Click edit button. Edit product name, price and quantity.	Product info is updated in Firestore/inventory
UA-008	Read product info	Click Manage Inventory in admin dashboard	View product name, price and quantity.

Individual's role and responsibilities

Deliverable 0

All three of us worked on the design of the app using Canva. Then we created a PowerPoint presentation and all three of us presented it to the class.

Deliverable 1

Farhat:

Created Google account to use with Firebase for this project. Connected Firebase to Login and Registration pages. CRUD operations on admin dash to add, read, delete and update products so that they will be stored on Firestore.

Zero:

Built the app skeleton for the project, the main version 1.0 of the UI including the list implementation of ListView. Comprehensively this following tree: — app.dart

```
|  └─ firebase_options.dart
|  └─ main.dart
|  └─ models
|    └─ product.dart
|    └─ product_service.dart
|  └─ routes.dart
|  └─ screens
|    └─ admin
|      └─ admin_dashboard_screen.dart
|      └─ product_form_dialog.dart
|      └─ product_management_screen.dart
|    └─ customer_service_screen.dart
|    └─ home_screen.dart
|    └─ login_screen.dart
|    └─ orders_screen.dart
|    └─ product_detail_screen.dart
```

```
| | |— products_screen.dart
| | |— settings_screen.dart
| | |— signup_screen.dart
| | |— subscriptions_screen.dart
| | |— support_chat_screen.dart
| | |— welcome_screen.dart
| |— widgets
| |— bottom_navigation.dart
```

Taina:

Landing page.

Deliverable 2

Farhat:

Added sign-in with Google function to the app using Firebase and Google Cloud. Added sign-in with Facebook function to the app using Firebase and Meta for Developers. Authentication using email/password is also functional.

Zero:

-Added location awareness to the app using the Geolocator package and Google Maps APIs (Places Autocomplete and Place Details). Users can search for addresses, autofill address fields, and use their current location.

-Added notification management using the flutter_local_notifications package. Users can enable or disable notifications, send immediate notifications, schedule notifications with a custom delay, and cancel all active notifications.

-Updated the UI across the app with custom theming, Google Fonts, consistent layout components, and visual enhancements to improve overall user experience.

Taina: