

Graduation project of DEPI

Track: Mobile App Development

Project Name: Campus Trade

Instructor: Eng/Marwa Talaat

Team Members:

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Description:

This app allows students to sell or donate their unused college supplies easily. Users can upload pictures of their items, set a price, add descriptions, and specify whether they want to sell or donate. To ensure secure transactions, the app includes a built-in chat feature, allowing buyers and sellers to communicate directly within the platform.

Feature:

1- Database & Storage

- Firebase Firestore: For storing products, users, and chat data in real time.
- Firebase Storage: For uploading and retrieving images.
- Cloud Functions (Optional): For automating tasks like notifications.

2- User Authentication

- Firebase Authentication: Supports login via email, Google, or phone.

3- Image Uploading & Optimization

- Image Picker: To capture or select images.
- Image Compression: For reducing image size before uploading.

4- Chat System

- Firestore/Realtime Database: For real-time messaging.
- Push Notifications (FCM): To notify users of new messages.

5- Search & Filtering

- Firestore Queries: For filtering by price, category, or location.

6- User Interface (UI/UX)

7- Security & Reporting

- Firebase Rules: For access control.
- Reporting System: To flag inappropriate listings.

Functional Requirements:

1. User Authentication & Profile Management

- 1.1 The user must be able to sign up using email or Google authentication.
- 1.2 The user must be able to log in and log out securely.
- 1.3 The user must be able to edit their profile (name, profile picture, contact details).

2. Product Listing & Management

- 2.1 The user must be able to upload images of college supplies.
- 2.2 The user must be able to enter product details (title, description, price).
- 2.3 The user must be able to specify whether the item is for sale or donation.
- 2.4 The app must allow users to view all available products in a structured layout.

3. Search & Filtering

- 3.1 The user must be able to search for products by name or keyword.
- 3.2 The user must be able to filter products based on price, category, or availability (for sale/donation).

4. Payment Integration (Future Feature)

- 4.1 Users should be able to make secure payments through the app.
- 4.2 The app should support different payment methods like PayPal, Stripe, or local gateways.

5. App Deployment & Accessibility

- 5.1 The app must be available on both Android and iOS platforms.
- 5.2 The app must have a user-friendly interface with clear navigation

UnFunctional Requirements:

1. Security & Data Protection

- 1.1 Firebase Authentication should be used to prevent unauthorized access.
- 1.2 Users' personal information should not be shared with other users except through chat.

2. Scalability & Reliability

2.1 Firebase services should automatically scale based on user demand.

3. Maintainability & Updates

3.1 The codebase should follow **clean architecture** and be easy to update.

4. Compatibility & Platform Support

4.1 The app should be optimized for both **dark mode and light mode**.

GitHub Rebo: [Campus Trade](#)