



# Mobile Computing and Application

Mobile App Development Project

Application: E-Biti Mobile Shopping

Developed by

Lati Tibabu

Nigat Geletu

Solan Bahiru

Milkesa Kasaye

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## Introduction

The E-Biti mobile app is a semester project developed for the course Mobile Computing and Application. The app aims to provide a convenient platform for users to engage in buying and selling activities. By leveraging the power of mobile technology, E-Biti offers a user-friendly interface and efficient features to facilitate seamless transactions.

## Purpose

The primary purpose of the E-Biti app is to enable users to buy and sell various items within a virtual marketplace. It serves as a platform for individuals to showcase their products, connect with potential buyers, and make secure transactions. The app aims to provide a convenient and efficient shopping experience for users.

## Target Audience

The target audience for the E-Biti app includes individuals who are interested in buying or selling various items online. It caters to users who prefer the convenience of mobile platforms for their shopping needs. The app is designed to accommodate users with different levels of technical expertise, ensuring accessibility for a wide range of users.

## Key Features

The E-Biti mobile app offers the following key features:

### User Authentication

The app provides a secure login system where users can create accounts or log in with their existing credentials. This authentication process ensures that only authorized individuals can access the buying and selling functionalities of the app.

### Buying and Selling

Users have the ability to both buy and sell items on the platform. The app provides separate sections for buyers and sellers to facilitate these activities. Buyers can browse through available items, view detailed information, and make purchases. Sellers can create listings, manage their inventory, and track sales.

### Item Listing

Sellers can create detailed listings for their products, including information such as title, description, price, quantity, and item condition. This allows potential buyers to make informed decisions based on the available information.

## Inventory Management

Sellers can easily manage their inventory through the app. They can edit existing listings, delete items that are no longer available, or upload new items for sale. This feature ensures that sellers have full control over their products and can keep their inventory up to date.

## Transaction Tracking

The app maintains a record of all purchases made by users. This transaction history allows users to review their past purchases and track their buying activity. It provides transparency and helps users keep track of their spending and the items they have acquired.

## Session Management

E-Biti incorporates session management to ensure a seamless user experience. Once users log in, their session is maintained, allowing them to access their account and perform actions without having to repeatedly log in. This feature enhances convenience and usability.

## Database Integration

The app utilizes a MySQL server and WAMP server for database management. PHP is used to integrate the app with the database, enabling smooth communication and efficient storage and retrieval of data.

## Technology Stack

The E-Biti mobile app is developed using Java programming language for the Android platform. The app leverages the capabilities of a MySQL database for data storage, and the WAMP server provides a local development environment for testing and hosting the database. PHP is used for server-side scripting to facilitate database integration.

The E-Biti mobile app is a semester project that aims to provide a user-friendly platform for buying and selling items. By incorporating essential features such as user authentication, item listing, inventory management, and transaction tracking, E-Biti strives to offer a convenient and efficient shopping experience for users. With its intuitive interface and robust functionality, the app holds the potential to enhance the mobile shopping landscape.

## Detailed Explanation of Features

### User Authentication

User authentication is a crucial feature of the E-Biti app that ensures only authorized users can access the platform. Upon launching the app, users are presented with a login page where they can enter their credentials, including a username and password, to log into their existing account. Additionally, users who don't have an account can sign up for a new account by providing the required information. User authentication enhances security and personalization by allowing each user to have a unique account and profile.

### BuyOrSell Page

Once users successfully log in, they are directed to the BuyOrSell page, which serves as the main hub for accessing buying and selling functionalities. The page presents users with two prominent options: "I Want to Sell" and "Buy." This intuitive interface allows users to easily navigate between buying and selling activities, depending on their preferences and intentions.

### Selling Items

When a user selects the "I Want to Sell" option from the BuyOrSell page, they are taken to a dedicated form where they can provide detailed information about the item they wish to sell. The form includes various fields to capture essential details, such as the title (name) of the item, a brief description, the price at which the item is being sold, the quantity available for sale, and the condition or state of the item. By filling out this form, sellers can effectively communicate the key attributes of their product to potential buyers.

### Manage My Items

After a seller submits an item for sale, they gain access to the "Manage My Items" functionality. This feature empowers sellers by providing them with control over their listed items. Sellers can edit the details of their listed items, such as updating the title, description, price, quantity, or condition. They can also choose to delete items that are no longer available for sale. Furthermore, the "Manage My Items" feature allows sellers to upload new items to the platform, enabling them to expand their product offerings and reach a wider audience.

## Buying Items

When a user selects the "Buy" option from the BuyOrSell page, they are presented with a list of available items from the app's database. Only items with a quantity greater than zero are displayed, ensuring that users can browse and purchase items that are currently in stock. Each item in the list is accompanied by two buttons: "View Item" and "Buy Now." Clicking the "View Item" button provides users with additional details about the item, including a more comprehensive description, images, and any other relevant information. Users can then make an informed decision about whether they want to proceed with the purchase. If they decide to buy the item, they can click the "Buy Now" button. Upon clicking this button, the app initiates the purchase process, which includes reducing the quantity of the item by one in the database and recording the purchase transaction in the purchase history table.

## Session Management

To enhance user experience and streamline navigation, the E-Biti app incorporates session management. Once a user successfully logs in, their session is maintained throughout their interaction with the app. This means that users can access their account and perform various actions without having to repeatedly log in for each activity. Session management ensures convenience and efficiency, as users can seamlessly move between different sections of the app without interruption.

## Database Integration

The E-Biti app utilizes a MySQL server and WAMP server for effective database management. MySQL is a popular and reliable database management system that provides robust features for storing and retrieving data. The WAMP server, which stands for Windows, Apache, MySQL, and PHP, offers a local server environment for hosting the MySQL server and integrating it with the app. PHP (Hypertext Preprocessor) is used as the server-side scripting language to facilitate communication between the app and the database. PHP enables the execution of database operations, such as inserting, updating, and retrieving data, ensuring seamless integration between the app's frontend and the MySQL backend.

## Technology Stack

The E-Biti mobile app is developed using the Java programming language, specifically targeting the Android platform. Java is a versatile and widely used language for Android app development, known for its robustness and extensive

libraries. The app leverages the capabilities of a MySQL database for efficient data storage and retrieval. The WAMP server provides a local development environment for testing the app and hosting the MySQL server. PHP serves as the server-side scripting language, facilitating database integration and executing database operations. This technology stack ensures a robust, secure, and efficient app implementation.

The E-Biti mobile app offers a range of features and functionalities to create a seamless buying and selling experience for users. From user authentication and item listing to inventory management and secure transactions, the app incorporates essential components to support a thriving online marketplace. By integrating a session management system and leveraging a MySQL database with the help of the WAMP server and PHP scripting, the app ensures efficient data handling and a smooth user experience. The E-Biti app holds great potential in the realm of mobile shopping, empowering users to engage in hassle-free transactions and connect with a diverse community of buyers and sellers.



## Conclusion

In conclusion, the E-Biti mobile app developed for the Mobile Computing and Application course project offers a user-friendly and efficient platform for buying and selling items. The app's features, including user authentication, item listing, item management, and secure purchase functionality, enable users to engage in seamless transactions. The intuitive interface and session management enhance the overall user experience, making it convenient for both buyers and sellers to navigate and interact with the app. E-Biti serves as a practical and practical solution for individuals looking to participate in online shopping and selling activities.

## Future Enhancements:

### Implement a Rating and Review System:

- Introduce a rating and review system where users can provide feedback on sellers and their products.
- Allow buyers to rate their experience with sellers and leave comments or reviews to help other users make informed decisions.
- Implement a robust system that encourages genuine feedback and provides an overall rating for sellers based on their performance and customer satisfaction.

### Search Functionality:

- Integrate a search feature to enable users to easily find specific items based on their preferences.
- Implement filters such as category, price range, location, or item condition to refine search results.
- Enhance search algorithms to deliver accurate and relevant search results in a timely manner.

### Payment Gateway Integration:

- Integrate a secure and convenient payment gateway to facilitate seamless transactions.
- Offer various payment options, such as credit cards, digital wallets, or other popular payment methods.
- Ensure the integration complies with industry standards and follows best practices for secure transactions.

### Platform Expansion (iOS Support):

- Extend the app's platform support to include iOS devices, in addition to Android.
- Develop a version of the app compatible with iOS devices, considering the specific design guidelines and requirements of the platform.
- Conduct thorough testing and optimization to ensure a smooth and consistent experience across both Android and iOS platforms.

### User Interface Enhancements:

- Continuously improve the app's user interface to enhance the overall user experience.
- Incorporate user feedback and conduct usability testing to identify areas for improvement.

- Focus on creating a visually appealing and intuitive design that promotes easy navigation and efficient usage.
- Add more interactive features, animations, and visual cues to engage users and make the app more enjoyable to use.

### Personalization and Recommendations:

- Implement personalized recommendations based on user preferences and browsing history.
- Use machine learning algorithms to analyze user behavior and suggest relevant items or sellers.
- Allow users to customize their preferences and receive tailored recommendations to enhance their shopping experience.

### Social Sharing and Integration:

- Integrate social media sharing capabilities to allow users to share their favorite items or their listings on various platforms.
- Enable users to sign in or connect their social media accounts to enhance social interactions and sharing within the app.

### Analytics and Insights:

- Incorporate analytics tools to track user behavior, engagement, and app performance.
- Gather data on popular items, user preferences, and buying patterns to generate insights that can inform business decisions and improve the app's functionality.

### Localization and Internationalization:

- Implement localization support to cater to users from different regions, allowing them to use the app in their preferred language.
- Consider currency conversions, local payment methods, and cultural nuances to provide a seamless experience for international users.

### Continuous Bug Fixes and Performance Optimization:

- Regularly update and maintain the app, addressing any bugs or issues reported by users.
- Optimize the app's performance, including loading times, responsiveness, and overall stability.

By incorporating these future enhancements, the E-Biti mobile app can evolve into a more comprehensive and feature-rich platform, providing an enhanced experience for users and fostering growth within the online marketplace.