

PLATFORM DEVELOPMENT FOR HAWKERS

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ABSTRACT

We are developing the Developing a mobile app that allows hawkers and peddlers to share their location in real-time: This could help customers to easily locate hawkers in their area and get information about the products or services they offer. Overall, sharing the live location of hawkers can be a useful tool for supporting these small scale businesses and helping them to reach new customers. It can also help to promote the diversity and vibrancy of a community and provide more options for local resident. small scale businesses and street shops are typically owned and operated by a single individual or a small group of people, and are often located in areas with high foot traffic, such as street corners, markets, or shopping districts. These types of businesses can include a wide range of products and services, such as food stalls, retail stores, barbershops, and more One of the main advantages of small scale businesses and street shops is their ability to be flexible and adaptable to the needs and preferences of their local customers. These businesses may also be able to offer personalized service and build strong relationships with their customers, which can help to differentiate them from larger, more impersonal businesses Despite these challenges, small scale businesses and street shops can play an important role in the local economy and community They can provide employment and income for individuals and families, and can also contribute to the vibrancy and diversity of a neighborhood or community. Using xml for the UI, java for the back-end, firebase for the database, and APIs for the location can be a good solution for building a platform to support small scale businesses.

Keyword : - Hawkers, Small Scale Businesses, Technological Advancement, Platform development, B2C support.

1. INTRODUCTION

In an app for hawkers, it would be important for the hawkers to be able to show customers what products or services they are offering. This could be done in a number of ways: Displaying a list of products or services: The app could include a list or menu of the products or services that the hawker is offering, along with descriptions and pricing information. This could be presented in a clear and easy-to-navigate format, such as a scrolling list or tabbed interface. Providing images or videos: The app could include images or videos of the products or services being offered, which can help customers to get a better sense of what they are looking at. For example, a food hawker could include photos of their dishes, while a clothing hawker could include images of their items. Allowing customers to place orders: If the hawker is offering products that can be purchased through the app, the app could include a feature for customers to place orders. This could involve selecting items from a list, inputting payment information, and selecting a pickup or delivery option. Overall, it is important for an app for hawkers to provide customers with clear and detailed information about the products or services being offered, in order to make it easy for them to understand what is available and make informed decisions. Use xml to build the UI of the app: xml rich set of customizable widgets and tool scan be used to create a visually appealing and user- friendly interface for the app. This could include features such as a list or menu of products or services, images or videos of the products, and a shopping cart or order placement functionality.java can be used to build the server-side functionality of the app, including the APIs that allow the app to communicate with the database.

Firestore can be used to store and manage the data for the app, such as information about the products or services being offered, orders, and customer Data.use APIs to allow the app to access and display the location data The app can use APIs to request and receive location data from the back-end server.

2. IMPLEMENTATION

The Hawker app is built using a combination of Java and Firebase for the back-end, and XML for the front-end. Java is a widely used programming language that is well-suited to building complex applications such as the Hawker app. It offers a range of features and tools that make it easy to develop robust, scalable applications that can handle large volumes of data and traffic. In the Hawker app, Java is used to manage data storage, perform calculations, and execute complex algorithms to provide users with a smooth and seamless experience.

The mobile application which connects hawkers/street vendors with customers. There are two parts in the application, for Hawker and user.

2.1 Hawker/Vendor mode:

- The Hawker/Vendor can share their live location, which will be visible to the customers, making it easy for customers to access their location.
- Using GPS for a long time can drain the battery of a vendor, so they have an option to lock their location (to set their location on a specific spot and switch GPS off).
- A status feature which would be visible to the customers which the vendor can update (example: will be on this location till 6pm).
- A profile section where the vendor can add photos, menu , description of items they are selling. These details will be visible to the customer.

2.2 Customer mode:

- The customer would have access to all the street vendor’s location who are near to them.
- The customer can view status of the Vendor, profile, menu of the vendor.
- The customer can click on ‘directions’ which would redirect to goggle maps to take the user to hawker.
- The customers have an exclusive rating feature using which they can rate their experience with the hawker and also review them, which would reflect at the hawker’s profile.

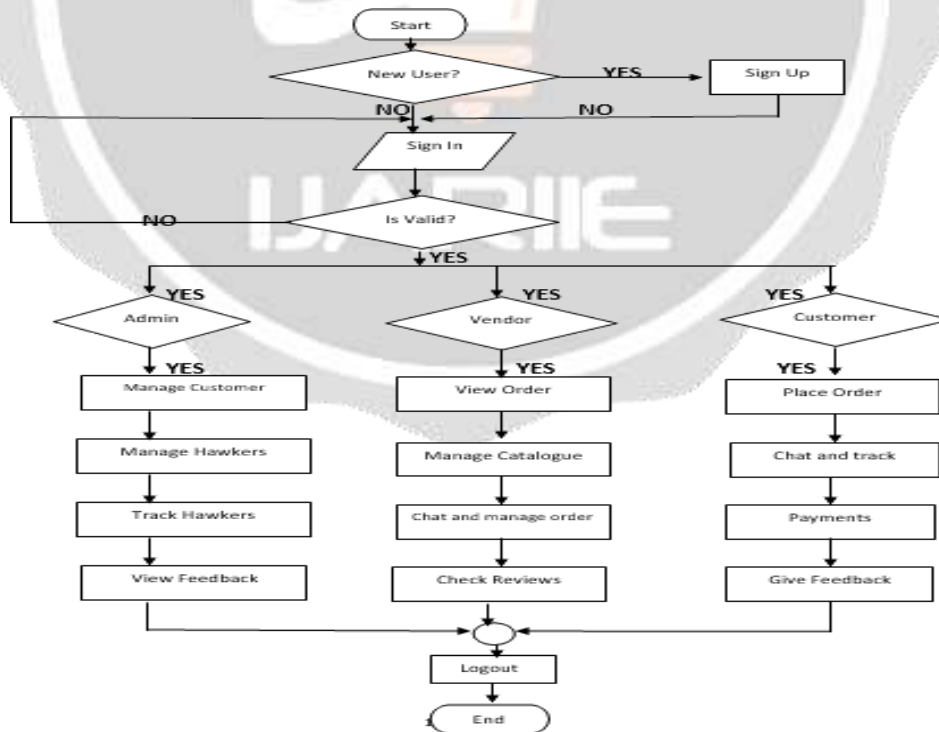


Fig 1. Flowchart of Hawkers System

3. ARCHITECTURE DESIGN

As we have seen in the system architecture design below, there is a user, android device, firebase, vendor. Android device is where data is viewed by the user and it can be fetched from the firebase geo-location API. The vendor has control over the accuracy of the location shared to the user and the catalogue. The application allows user and the vendor to contact each other. Here is the conceptual layout of data structures and data bases is looked at in more detail.

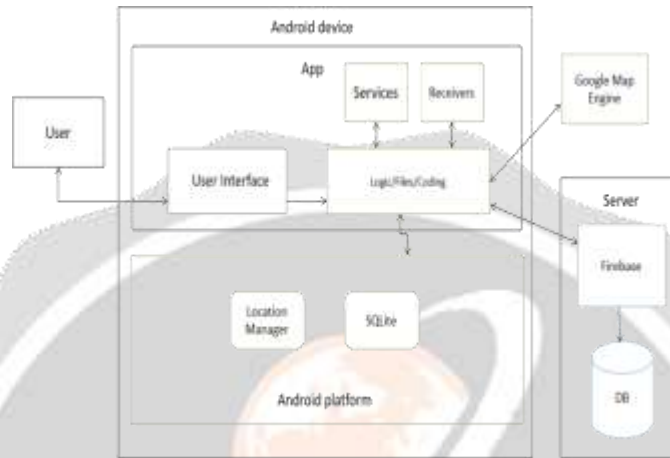


Fig 2. System Architecture Design.

4. Results and Discussion

The app contains these activities/pages to connect the both the vendors and their customers:

4.1 Sign Up Page:

The Hawker app is designed to facilitate food vendors and customers in connecting with each other seamlessly. The app comes equipped with a login feature that caters to the unique needs of both vendors and customers. To access the app, users can log in using their email addresses and set a password to keep their accounts secure.

For vendors, the app provides a specialized login that allows them to access a range of features specifically tailored to their needs. They can use their login credentials to upload and manage their menus, receive and process orders, and communicate with customers in real-time and also they can receive the reviews on their products.



Fig 3. Sign in Page.

4.2 Login Page:

The Hawker app's sign-up feature enables vendors and customers to create new accounts easily. To sign up, vendors and customers will be prompted to enter their name, email address, and create a password.

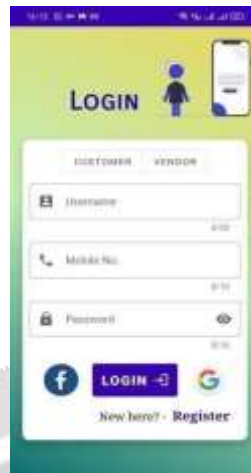


Fig 4. Login Page.

4.3 Verification Page:

To ensure the security and authenticity of its users, the Hawker app may require users to verify their accounts. The app may use various methods to verify users, such as sending a verification code to their email address or phone number.



Fig 5. Verification Page.

4.4 Home Page:

The home page of the Hawker app is designed to provide users with an easy way to browse and discover vendors based on different categories. Users can choose from various categories such as food, clothing, accessories, and more.



Fig 6. Home Page.

4.5 Vendor Location Page:

The Hawker app features a location marker for vendors that shows their exact location on a map. The marker is designed to help customers easily locate vendors and determine their proximity to the vendor's physical location. The marker will also display a circle around the vendor's location if the customer is within 150 meters of the vendor.



Fig 7. Vendor Location Page.

4.6 Vendor Information Page:

When a customer taps on the location marker for a vendor on the Hawker app, it will display the details of the vendor. The details may include the vendor's name, menu items, prices, operating hours, ratings, reviews, and contact information. This feature enables customers to learn more about the vendor and their offerings, helping them make informed decisions when choosing where to place an order.



Fig 8. Vendor Information Page.

4.7 Product Menu Page:

The Hawker app allows vendors to easily add products to their menu, enabling them to keep their offerings up-to-date and relevant. Vendors can add product details such as name, description, price, and a photo. This information will be displayed to customers who are browsing the vendor's menu.



Fig 9. Product Menu Page.

4.8 review Page:

The Hawker app's review feature allows customers to leave feedback and rate the vendors they have ordered from. Customers can rate vendors on a scale of one to five stars and leave a written review. These reviews can be viewed by other customers who are considering ordering from the vendor, helping them make informed decisions



Fig 10. review Page.

4.9 Customized Location Option Page:

The Hawker app includes a feature that allows vendors to close their location when they stop moving. This feature is particularly useful for vendors who operate from a fixed location and do not move around frequently.



Fig 11. Customized Location Option Page.

5. CONCLUSIONS

In conclusion, the Hawker app offers a range of useful features for both vendors and customers. From the ability to easily add and manage products to the option to leave reviews and ratings, the app provides a comprehensive platform for users to browse, order, and manage their business. The location on/off option provides users with flexibility and control over their location information, while the ability for vendors to close their location when they stop moving helps to prevent confusion and improve the accuracy of the app's location information. Overall, the Hawker app is a valuable tool for vendors and customers alike, helping to simplify the ordering process and improve the overall customer experience. In addition to the features mentioned above, the Hawker app offers a number of other benefits for both vendors and customers. For example, the app provides a platform for vendors to reach a wider audience and promote their business to potential customers. This can be particularly valuable for small, independent vendors who may not have the resources to invest in traditional advertising or marketing. Similarly, customers can benefit from the convenience and flexibility of ordering food, clothing, or accessories directly through the app. They can browse menus, compare prices, and read reviews from other customers to help them make informed decisions.

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