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PROJECT REPORT

Snack Squad: A Customizable Snack Ordering and Delivery App

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A project report submitted to:

SmartInternz

In fulfillment of the requirements for the course of

Android Development in Kotlin

TABLE OF CONTENTS

1. INTRODUCTION

1.1 Overview:

This project aims to demonstrate how to create a snack squad app using Android Jetpack Compose, a cutting-edge UI toolkit. The Snack Squad app is a straightforward e-commerce tool that lets users browse and buy snacks. The project showcases a number of Android Compose features, including handling user input, maintaining state, and generating interactive UI components.

To access the home page, users must register and log in to the app. After logging in, customers can view a list of snacks and hit the "Add to Cart" button to add them to their shopping cart. Users can continue to checkout to finish the transaction after viewing the list of selected products in the cart. An admin login additionally permits

1.2 Purpose:

This project's main goal is to teach developers how to use Android Jetpack Compose to create a useful and aesthetically pleasing user interface (UI) for a mobile application. Developers will learn how to integrate a database into their app and acquire practical experience with Android Studio by working on this project.

The following are the precise learning objectives for this project:

• Being aware of Android Jetpack Compose's foundations and advantages over conventional UI frameworks.

• Adding user registration and login features to the app to protect access.

• Using the declarative syntax of Compose to design and build the home page's menu.

• Enabling user participation by letting users choose snacks and put them in their cart.

• Managing and modifying the app's state to take into account user behaviors.

• Including a shopping cart function to show the things you've chosen and start the checkout process.

• Including a database integration to save and retrieve user data and order information.

• Setting up an admin login so that you can see the orders users have placed

2. SOLUTION OVERVIEW

2.1 Problem Statement:

The current issue in the snack ordering and delivery sector is the absence of a centralized platform that provides clients with a seamless and practical experience. The current methods, which can be time-consuming, ineffective, and opaque, include manual phone calls, disjointed online ordering systems, and third-party delivery apps.

The fragmented and ineffective character of the current approaches is the current issue in the field of ordering and delivering snacks. Customers frequently have to place orders manually over the phone, explore menus on several restaurant websites or apps, and follow their orders using different delivery applications. This disjointed procedure can cause delays, misunderstandings, and a lack of transparency, which can negatively impact the customer experience.

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2.2 Solution to the Problem:

The development of the Snack Squad app in Kotlin is the suggested remedy.

- The app promises to solve the issue by offering a centralized platform that makes ordering and delivering snacks easier. Customers may explore menus from multiple snack providers through the app, choose their preferred foods, personalize their orders based on preferences and dietary requirements, and conveniently submit their orders.

- The Snack Squad app streamlines and improves the overall consumer experience by combining the ordering and delivery of snacks into a single platform. Multiple apps and phone calls are no longer necessary, and it offers convenience and customization.

3. SYSTEM DESIGN

3.1 Block Diagram:

The block diagram gives a summary of the Snack Squad project and illustrates its key elements and relationships.

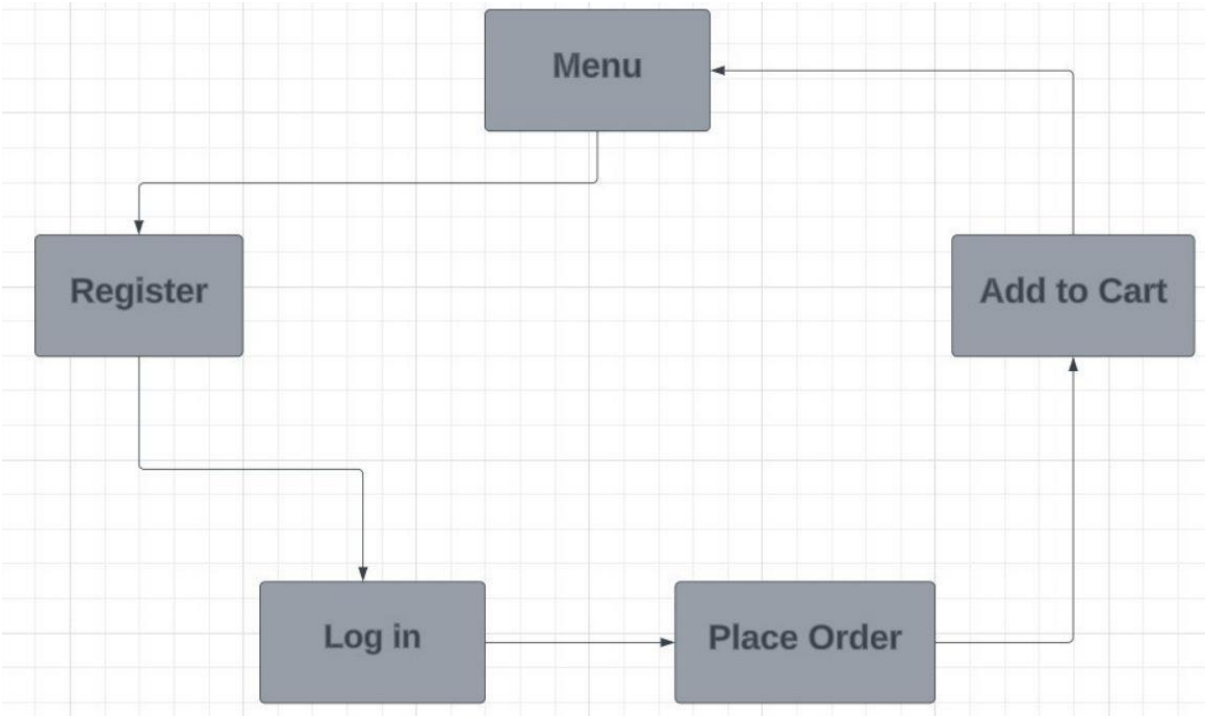


Figure: Block Diagram of Snack Squad

3.2 Tools Required:

- Smartphones or tablets (iOS or Android) for user access to the Snack Squad app.
- GPS-enabled devices for tracking deliveries accurately.

Software Requirements (SRS):

- Kotlin programming language for app development.
- Android Studio for the development environment.
- Database management system such as Room Database for storing and retrieving data.
- Development frameworks and libraries for user interface design and app functionality.

4. ANALYSIS AND FINDINGS

To assure the efficacy and efficiency of the solution, numerous research and analyses were carried out during the development of the Snack Squad app. These inquiries included:

• User Testing and Feedback: In order to get opinions and insights from possible app users, user testing sessions were held. This made it easier to spot usability problems, comprehend user preferences, and improve the user interface as a whole.

• Performance Testing: Performance testing was done to assess how responsive and effective the app was. This includes evaluating the app's loading times, user interaction response times, and capacity to efficiently manage multiple concurrent user requests.

- Integration Testing: Integration testing was carried out to make sure that the app's many components communicate and share data in an error-free manner. To ensure efficient coordination and data synchronization, this required evaluating the user interface's connectivity with the order management system, the delivery management system, and the restaurant interface.

- The Snack Squad app's functionality, performance, security, and user experience have all been improved as a result of the useful insights gathered from these experimental research. Before the solution was implemented, the investigations were essential for validating its efficacy and dependability.

5. FLOWCHART

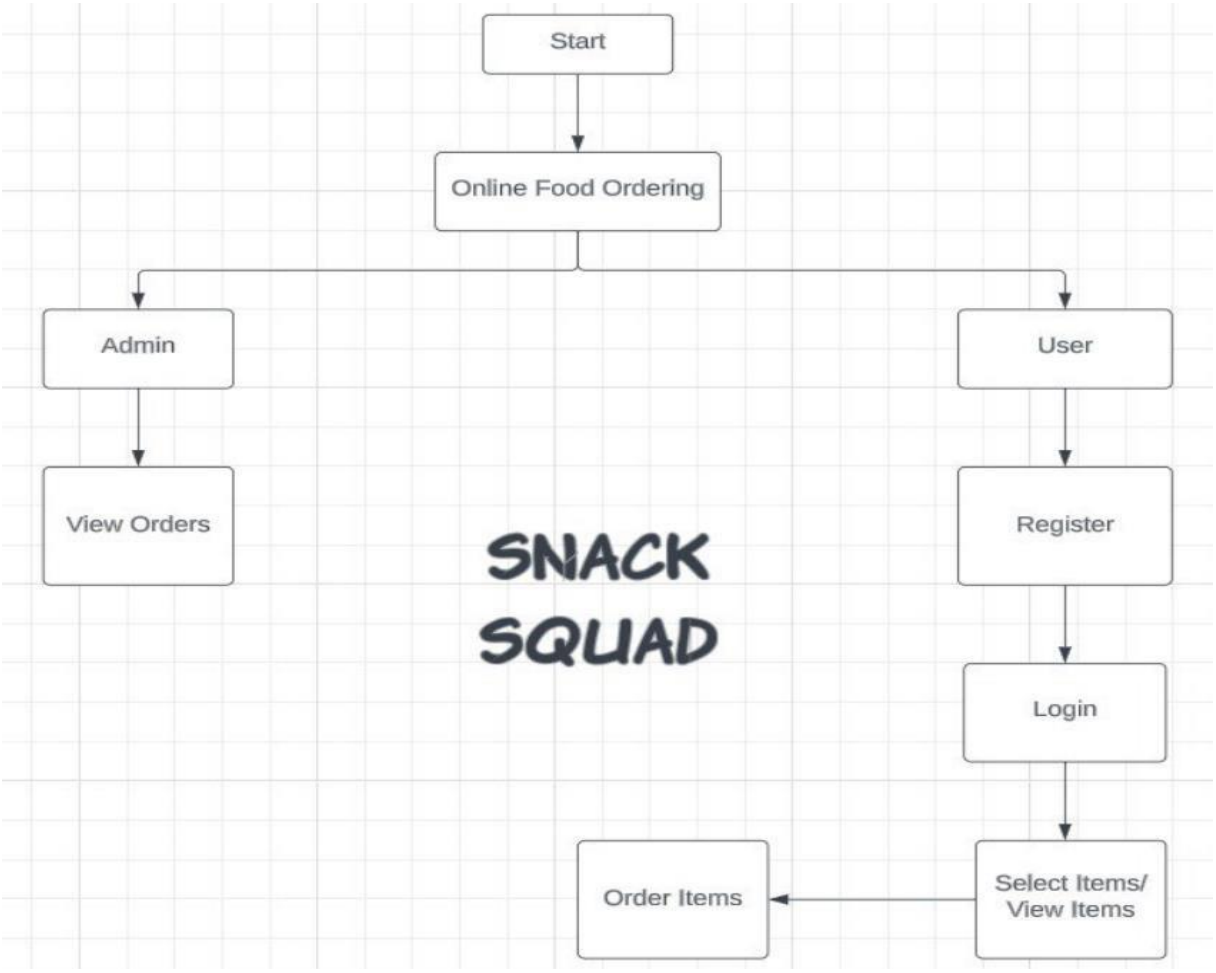


Figure: Flowchart of Snack Squad

The flowchart of the Snack Squad describes the flow which the user can follow easily to order the food. The user can log in into the app or sign-up using credentials. Further, user can create his cart and place the order.

6. RESULT and OUTPUT

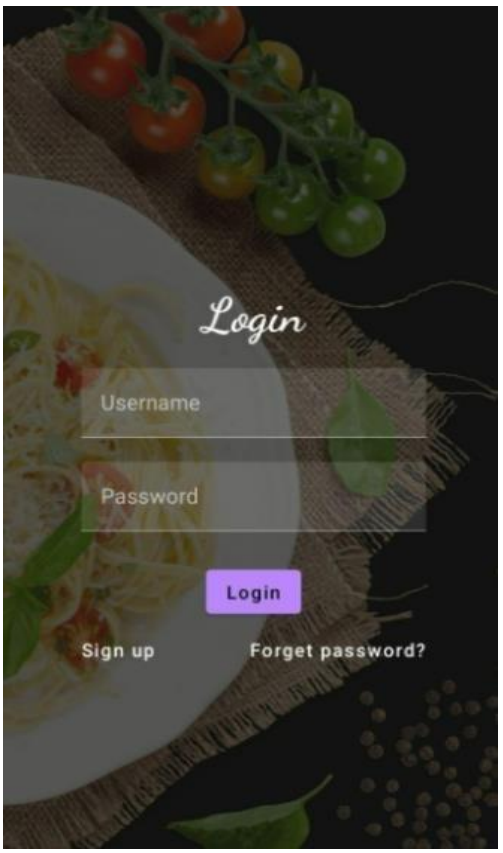
The result of the project is a functional Snack Squad app built using Android Jetpack Compose. The app successfully demonstrates the use of Compose's powerful UI toolkit to create an intuitive and visually appealing user interface for an e-commerce application. Users can register and log into the app, ensuring secure access to the main page. On the main page, they can browse a list of snacks and easily add items to their cart by tapping the "Add to Cart" button. The app effectively manages the state, providing real-time updates and feedback to the user as they interact with the interface. The cart feature allows users to view and manage the items they have selected, making it convenient for them to proceed to checkout and complete their purchase. The integration of a database enables the storage and retrieval of user information and order details, ensuring that the app maintains accurate and up-to-date records.

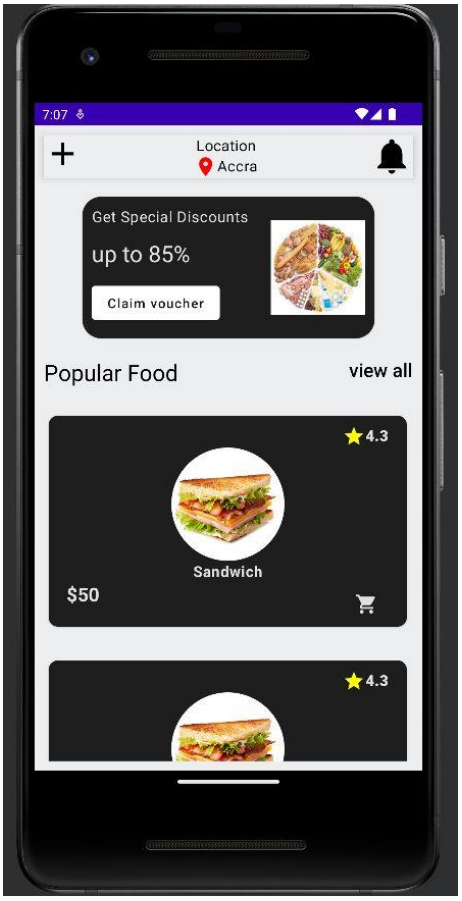
Additionally, the app includes an admin login functionality that allows administrators to view the orders placed by users. This feature provides efficient order management and tracking capabilities, enabling administrators to fulfill orders and keep track of the app's inventory.

Overall, the result of the project is a fully functional Snack Squad app that showcases the capabilities of Android Jetpack Compose. The app provides a seamless and engaging user experience, demonstrating the potential of Compose as a modern UI toolkit for Android app development.

SCREENSHOTS OF EACH OF THE PAGE:


Register
Username
Email
Password
Register
Have an account? Log in


Login
Username
Password
Login
Sign up
Forget password?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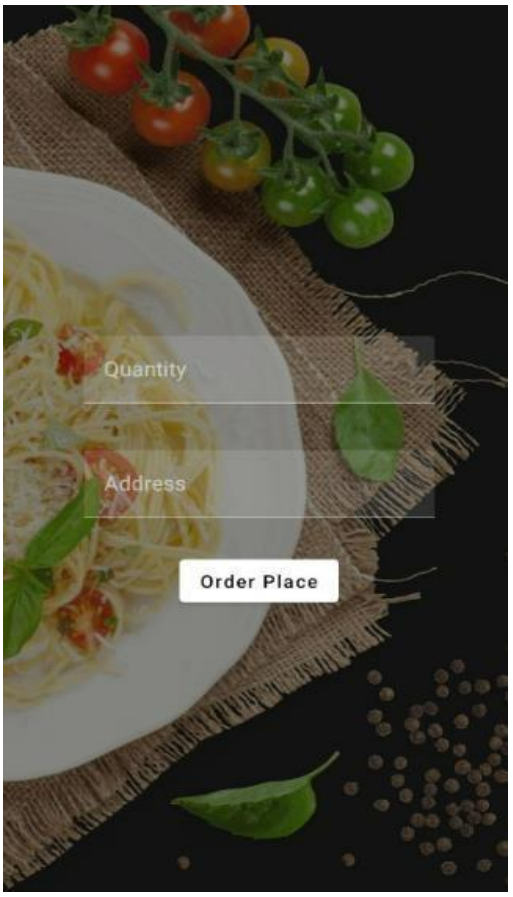
Location
Accra
Get Special Discounts
up to 85%
Claim voucher
Popular Food
view all
4.3
Sandwich
$50
4.3


Quantity
Address
Order Place

7. BENEFITS AND DRAWBACKS

Benefits:

• Convenience: Customers can explore menus, personalize orders, follow deliveries, and leave comments all in one spot using the app's user-friendly and easy platform.

• Improved Efficiency: The consolidated platform streamlines the ordering and distribution of snacks by cutting down on human phone calls and consolidating all pertinent data into a single app.

• Broad Range of Options: The app gives users access to a number of snack suppliers, allowing them to browse a broad selection of snacks and select from a variety of menus.

Drawbacks:

• Technology Dependence: The app's functionality depends on cellphones, internet access, and GPS services being readily available and functioning properly. Problems with these technologies may affect how users interact with them.

• Limited-Service Availability: The Snack Squad app's availability and reach may be restricted to particular snack vendors or geographic regions, which would prevent users from using it outside of those locations.

• Potential Technical Problems: Like any software-based solution, the app may face technical problems that interfere with the user experience, such as bugs, crashes, or system failures.

The Snack Squad app offers a number of benefits, including convenience, personalisation, enhanced effectiveness, and a large range of selections. However, drawbacks could include reliance on technology, a lack of services, potential technical problems, reliance on third parties for delivery, and privacy issues.

8. CONCLUSION

The project's goal was to create a Snack Squad app using Android Jetpack Compose and demonstrate the potential of this cutting-edge UI framework. The app's creation provided the developers with invaluable practice using Android Studio and integrating a database into their program.

The project's successful completion allowed developers to learn several important lessons. They obtained a thorough understanding of Android Jetpack Compose's foundations and advantages over conventional UI frameworks. In order to provide secure access to the app, they also learned how to build user registration and login functions.

Additionally, programmers discovered how to build and construct the home page using Compose's declarative vocabulary, giving consumers a simple and enticing way to browse and choose snacks. They improved their ability to control and maintain the status of the app, enabling real-time feedback and communication.

The project also underlined how crucial it is to incorporate a database inside the app so that user data and order specifics can be stored and retrieved. This connection improved the app's functionality by giving users a smooth and effective experience and enabling efficient order administration from the admin's point of view.

Overall, this project gave developers (us) a great chance to increase their understanding of and proficiency with Android app development. It offered a useful illustration of how to construct a fully functional online application with Android Jetpack Compose.

user authentication, product browsing, cart management, and order tracking are all key components of a commerce software.

By mastering these ideas and methods, developers are now prepared to use Android Jetpack Compose on their own applications, producing dynamic and captivating user interfaces with improved usability and interactivity.

9. FUTURE SCOPE

There are several potential enhancements that can be made to further improve the Snack

Squad app:

- Expansion of Service: The app can be expanded to include a wider range of snack providers, increasing the variety of options available to users.
- Loyalty Programs: Implementing loyalty programs or reward systems within the app can encourage customer retention and engagement.
- Advanced Analytics: Incorporating advanced analytics capabilities can provide valuable insights into customer preferences, ordering patterns, and popular snack choices, enabling data-driven business decisions.
- Integration with Payment Gateways: Integrating the app with popular payment gateways can offer users more flexibility in choosing their preferred payment methods.
- Social Features: Adding social features such as sharing snack recommendations or allowing users to connect with friends and share orders can enhance the social aspect of the app.
- Smart Recommendations: Implementing intelligent recommendationalgorithms can suggest personalized snack options to users based on their past orders and preferences.

By incorporating these future enhancements, the Snack Squad app can further solidify its position as a leading customizable snack ordering and delivery platform, catering to a wider audience and delivering an even better user experience.

10. REFERENCES

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