

**CS683 Project Assignment**  
**Indian Project – Restaurant App**  
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## Overview

“Indian Project” restaurant app is an Android app designed to enhance the dining experience at “Indian Project”, a renowned restaurant located in Times Square, New York, known for its exceptional Indian cuisine. The primary purpose of the app is to revolutionize the restaurant’s interaction with its customers.

This app will have features like pre-ordering or selecting the pickup option to streamline the ordering process which will reduce wait times enhance overall customer satisfaction, track orders in real time, integrate payment options, and more. The primary users of the app will be valued customers of the Indian Project restaurant including but not limited to local residents and people who work in the area.

## Related Work

The idea behind this app was highly motivated by the McDonald’s and Starbucks mobile apps. The similarities and differences between my proposed app and the apps mentioned are:

### Similarities:

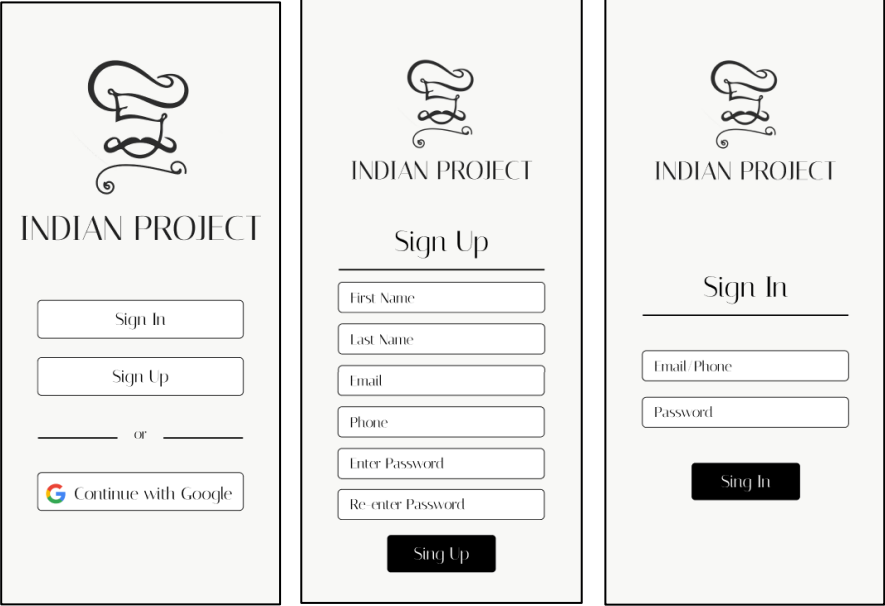
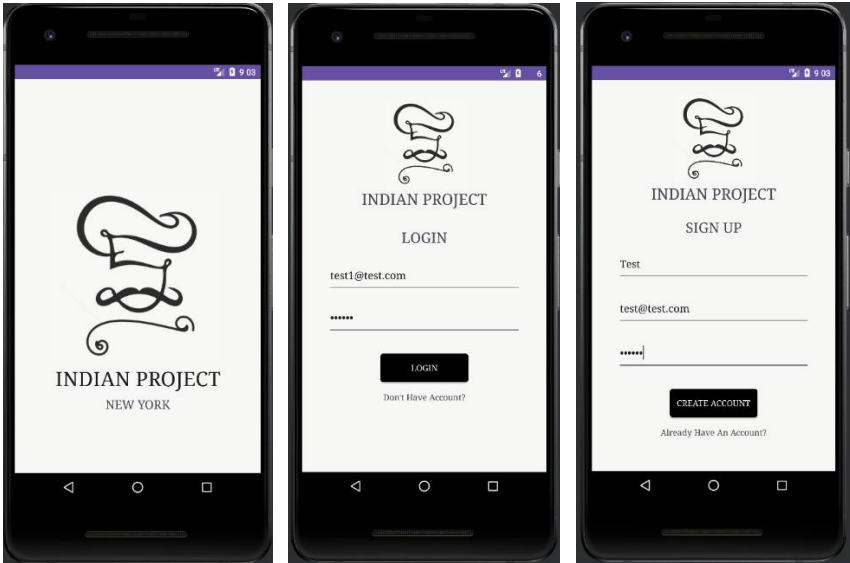
- McDonald’s, Starbucks, and the Indian Project mobile apps focus on a single restaurant chain, providing a dedicated platform for customers to order food.
- All apps offer menu browsing, order placement, tracking, and payment.

### Differences:


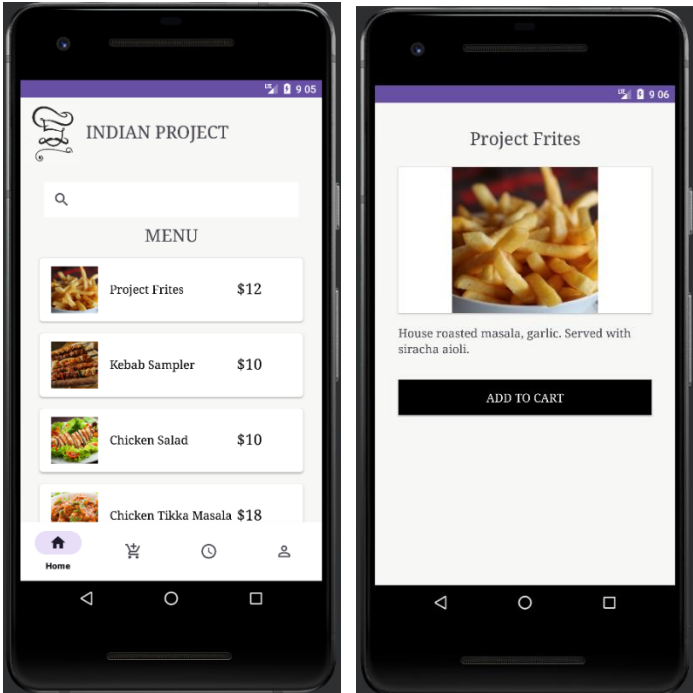
- The Indian Project restaurant app caters to the Indian Project restaurant, serving Indian cuisine, while the McDonald’s and Starbucks apps are dedicated to their menus respectively.
- This app's design, branding, and user experience are tailored to highlight the unique offerings and identity of the Indian Project restaurant.

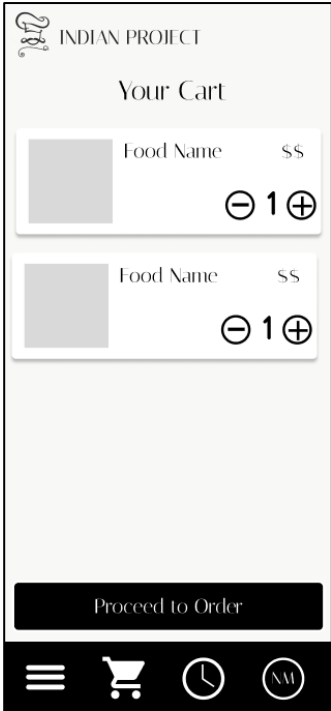
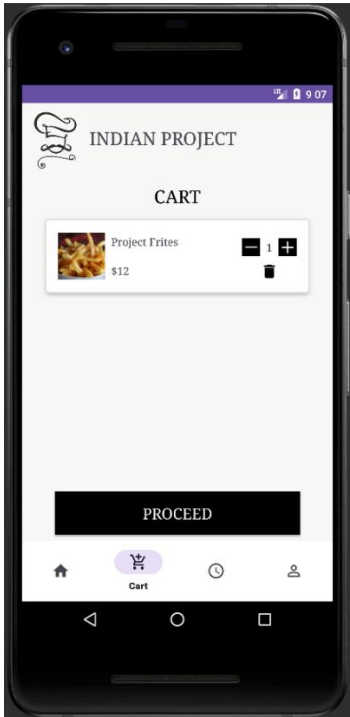
## Requirement Analysis and Testing

Title	User Registration and Authentication (Essential)
Description	As a user, I want to be able to register an account and/or login into the app smoothly.


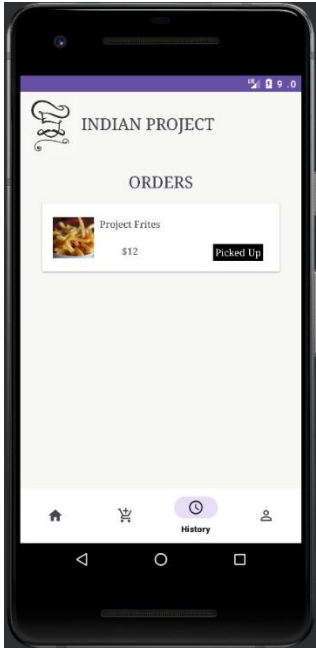
Mockups	
Acceptance tests	<p>When the user opens the app a splash screen is displayed followed by the login screen. If the user does not have an account they can create one by clicking on don't have an account which will redirect them to the sign up screen. For a better user experience even if the user does not have an account and directly tries to login using email and password it will automatically create a new account.</p>
Test Results	
Status	Implemented using Firebase as database.

Title	Menu Display with Prices (Essential)
Description	As a user, I want to browse the restaurant's menu with food names and prices.

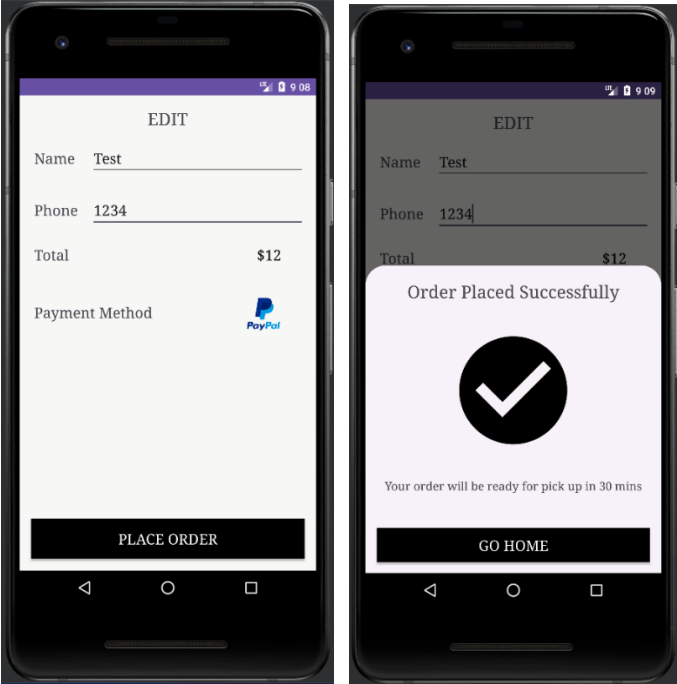
Mockups	
Acceptance tests	<p>Once logged in the home screen displays a list of menu items with its names and prices as well as search bar to search for a particular food item. When clicked on a menu item the details screen activity opens from where items can be added to cart. The menu items are being fetched from the Firebase database.</p>
Test Results	
Status	<p>Implemented using Firebase cloud storage as database to store menu items.</p>

Title	Cart Management and Order Placement (Essential)
Description	The user is able to add items to the cart, view the cart, make modifications, and place orders.
Mockups	
Acceptance tests	Given that I have added items to my cart when I go into the cart I should see a list of items in my cart, and I can modify quantities or remove items before placing my order. If there are existing items in my cart they should appear in the cart when the user logs in.
Test Results	

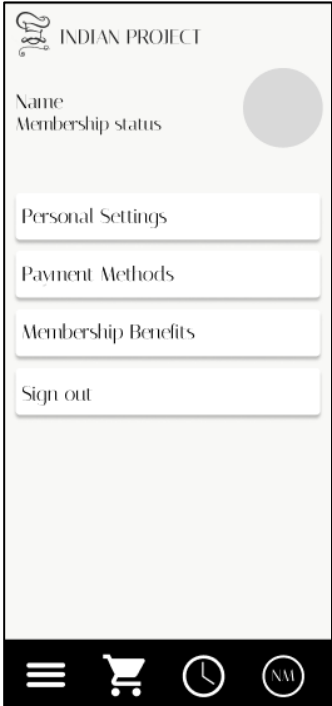

Status	Implemented using Firebase as the database to store cart items in each user's cart.
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Title	Real Time Order Tracking (Desirable)
Description	As a user, I want to track the status of my order in real time as well as see past orders.
Mockups	
Acceptance tests	Given that I have placed the order when I go to the order status section of the app, I should see updates on the status of my order like preparing, ready, etc.
Test Results	

Status	The app shows the order but does not yet have the real time order tracking feature.
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Title	Payment Integration (Essential)
Description	As a user, I want a secure and convenient payment option to complete my order.
Mockups	
Acceptance tests	Given that I am ready to place the order when I proceed to check out, I should be able to place the order smoothly.
Test Results	
Status	Implemented using app UI.

Title	Elite Member Service (Optional)
Description	As an Elite Member, I want access to a special menu and exclusive deals.

Mockups	
Acceptance tests	<p>Given that I am an Elite Member and logged in, I should be able to access the Elite member section and I should see a unique menu with exclusive deals and discounts.</p>
Test Results	
Status	<p>The current version of the application does not have this feature but this can be integrated in the future.</p>



## Design and Implementation

- Authentication: User sign up and login functionality used Firebase.
- UI design and implementation:  
Activities: Main, Login, Sign Up, Payout, Details  
Fragments: Home, Cart, History, Profile  
Splash Screen: Screen displayed on opening the application  
Bottom Sheet: Order Placed
- Data Handling:  
Firebase to store user details and user cart details.

## Project Structure

### Timeline

Iteration	Application Requirements (Essential/Desirable/Optional)	Android Components and Features to be used	Planned tasks
1	Menu Display and App Navigation (Essential)	Activities, Fragments, XML	<ul style="list-style-type: none"><li>• Completed building bottom navigation.</li><li>• Develop the menu display user interface with food name and prices.</li></ul>
2	User Registration, Cart Management and Order Placement (Essential)	Activities, Fragments, XML	<ul style="list-style-type: none"><li>• Designed and created the user interface for registration and login.</li><li>• Implement user registration and login functionality with Firebase.</li><li>• Completed the cart management and order placement feature.</li><li>• Added the ability to modify quantities and remove items from the cart.</li></ul>
3	Real-Time Order Tracking and Elite Member Service (Desirable and Optional)	Fragments, XML	<ul style="list-style-type: none"><li>• Implemented order history and profile fragments.</li><li>• Real-time order tracking and elite member service are not available.</li></ul>

### Future Work (Optional)

- Create an Admin application for the restaurant staff to make updates to the menu easily.
- Implement the Elite Member Service Feature.
- Add real-time order tracking and additional payment methods.

## References