



GourmetBook

CSE Senior Design

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Background

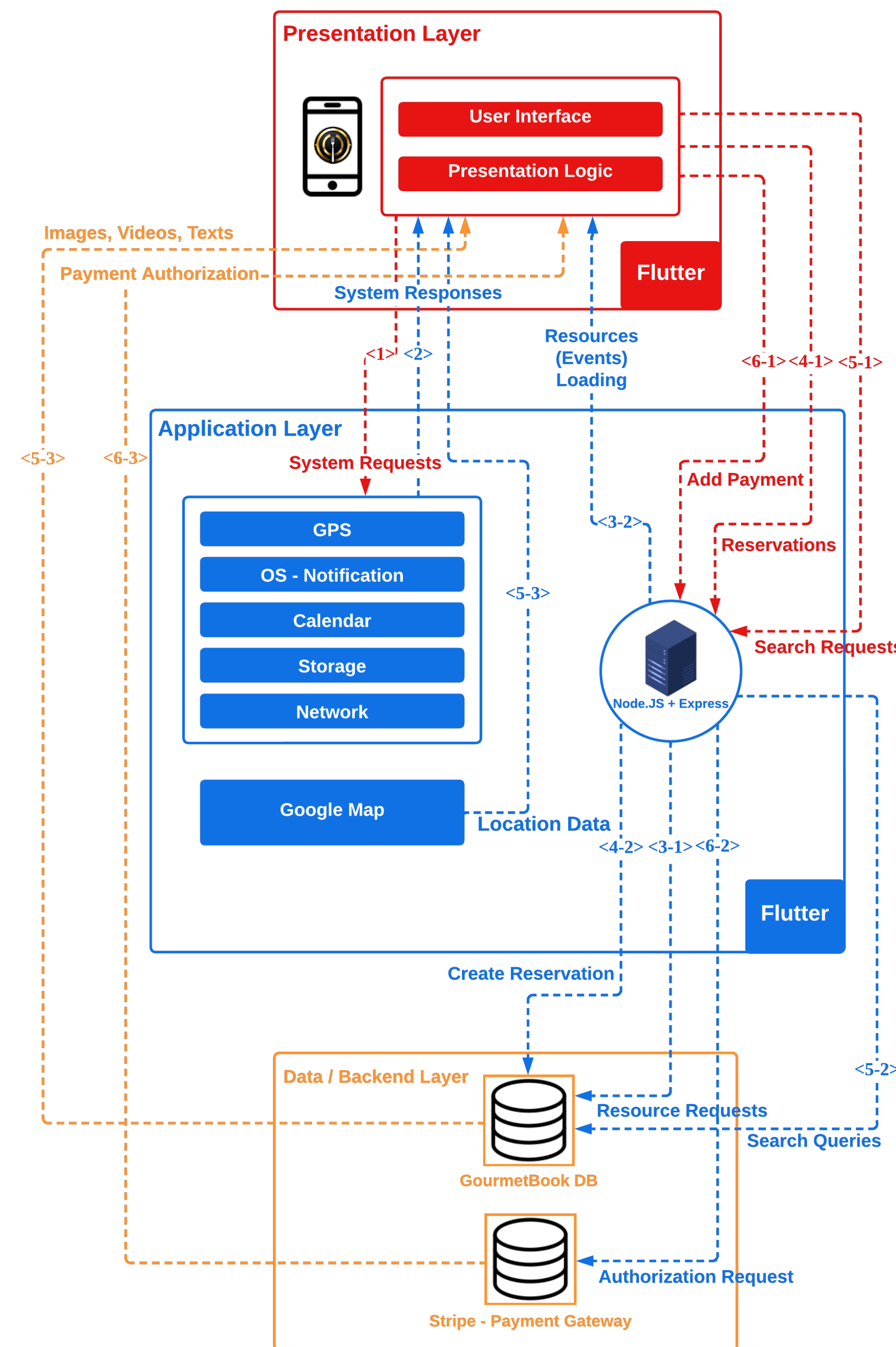
The growing demand and curiosity in experiencing well-treated and high-end quality cuisines are something that has recently caught people's attention through various sources of media. And there is no single application that aggregates all those fancy restaurants in one place. Moreover, Fine-dining restaurants tend to stay close to the traditional ways of reservations such as phone and website. In addition, there are people with credit cards who get priority to reserve, Since not everyone has access to this privilege, we are here building this application for the rest of the people who could enjoy fine dining without having specific credit cards.

Our product is a mobile based application built to enhance the dining experience for customers and to be an efficient way for restaurant to provide service. With a user-friendly interface and innovative features included the application is truly an upgrade to the hospitality industry. This app aims to streamline the reservation process, offer convenient online pre-ordering, provide event information nearby, and ensure efficient restaurant management.

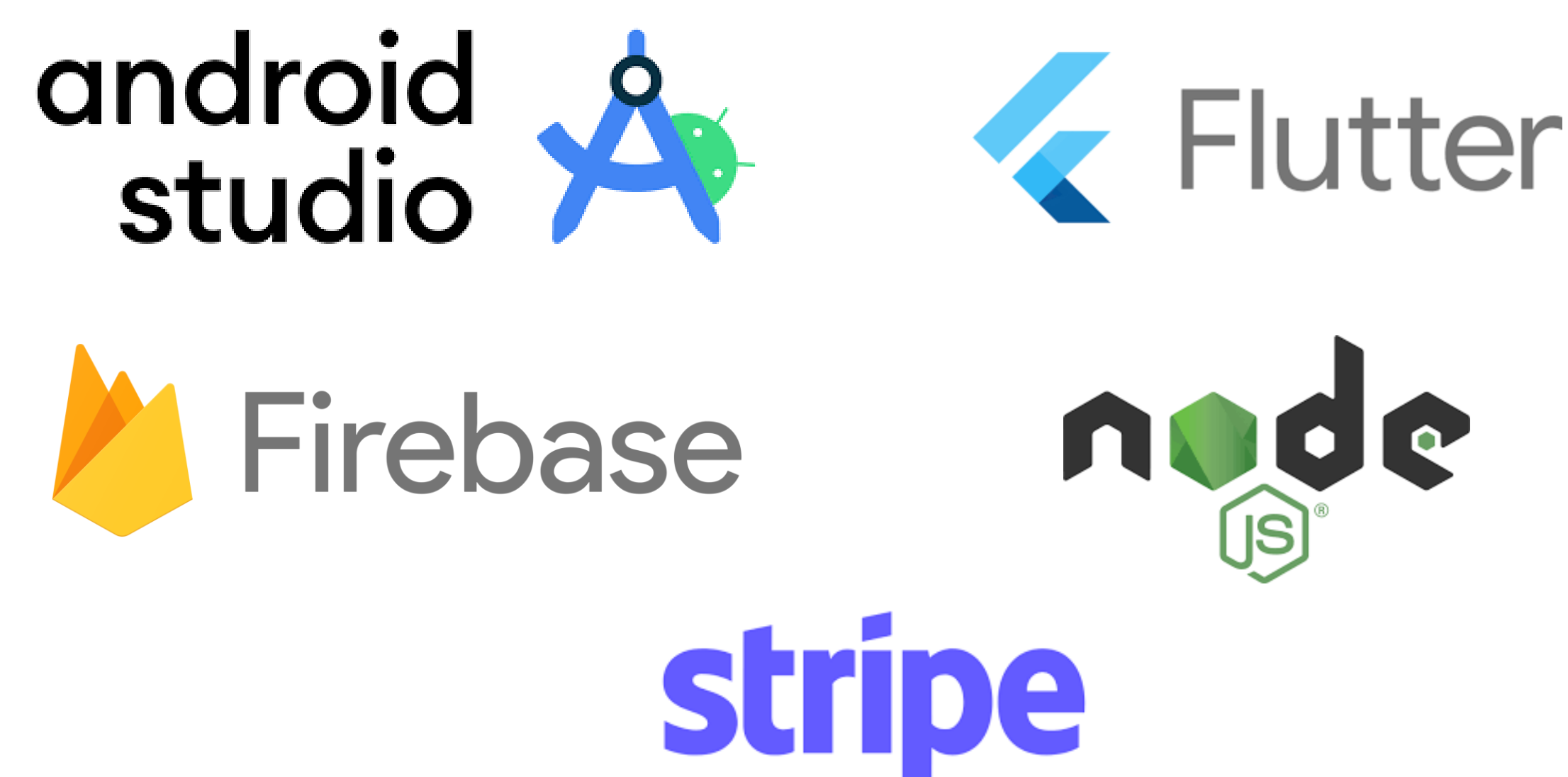
System Requirements

1. User can create account using email address and password. Choose account type.
2. Home screen: Display map by detecting user location. Allow user to search and filter through available restaurants/events.
3. Allow user to select restaurants/events for future, store in a list that can be viewed at any time.
4. Allow user to book selected reservation and make payment by credit card.
5. Display and allow user to access profile information, including username/profile picture, privacy, help & support, and logout option.
6. Display confirmed and pending reservations, including date and timeslot. Admin has ability to confirm reservations.
7. Admin can add new Event/Restaurant by giving restaurant name, city, country, available timeslot, and price.
8. Admins can view their posts of restaurants/events.

System Overview



Tools/Technologies Used



Design Details

The application has three complementary layers, and each layer is divided into different subsystems and functions. The layers are presentation, application, and data/backend.

- **Presentation Layer:** Includes Login/Signup screen where users can create or log in to their accounts using email and password. Also includes Home Screen with Explore tab that displays map based on location, Reservation tab with booked or pending reservations, and Profile tab with account information. User can see Wishlist of liked restaurants/events. Admins can see their previous posts in My Posts tab.
- **Application Layer:** Handles events from the Presentation Layer and processes them internally to update application behavior. The phone's system services' data is necessary for application run according to a specific user's needs. GPS updates user location for map, Calendar is needed to mark important reservation dates, Storage is needed to hold application data/images, and Network provides internet access. Once the user requests the location information of a restaurant they are interested in, Google Maps API will transmit the GPS coordinates of the restaurant to the presentation layer.
- **Data/Backend Layer:** "GourmetBook Database" will be integrated through Google Firebase's real-time database service, which is a cloud database, and "Stripe Payment Gateway Database" has already been integrated by Stripe for whoever wants to access their database in an authorized manner. Responsible for storing users' account and reservation information.

Conclusion

Most of the functionality has been implemented. We were able to create a user-friendly table reservation app for both users and admins. It allows users to create an account, view map and available restaurants/events, add to Wishlist, and book reservations. Admin can add event/restaurant and confirm bookings.

- Some future tasks include making user registration and account information more secure, integrating a secure payment system for users, and adding more features to UI/UX of app. Instead of using test data for restaurants/events, we need to use an API that provides real-time restaurant info such as contact information, opening hours, cuisine type, and more.

References

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- [2] Federal Trade Commission. Federal trade commission guides. <https://www.ftc.gov/businessguidance/advertising-marketing/advertising-marketing-basics>.
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