Final Project Proposal: Recipe Sharing Platform

Introduction
The Recipe Sharing Platform is an innovative online community that enables users to discover, share, and explore a wide variety of recipes. Unlike traditional recipe management applications, this platform focuses on collaboration, sharing, and a social aspect to enhance the culinary experience. Users can share their favorite recipes, explore new cooking ideas, and connect with a community of food enthusiasts

Key Features:

User Profiles and Authentication:
- Allow users to create profiles, customize their preferences, and manage their recipe collections.
- Implement secure authentication to protect user accounts and data.

Recipe Discovery and Categorization:
- Provide a user-friendly interface for browsing and searching recipes.
- Categorize recipes based on cuisines, dietary preferences, and difficulty levels.

User-Generated Content:
- Enable users to contribute their recipes, including ingredients, preparation steps, cooking times, and images.
- Implement a user-friendly recipe editor for easy content creation.

Recipe Rating and Reviews:
- Allow users to rate recipes and leave reviews to share their experiences.
- Highlight popular and well-reviewed recipes on the platform.

Personalized Recipe Recommendations:
- Develop a recommendation system based on user's preferences, cooking history, and saved recipes.
- Provide personalized suggestions for recipes to try.

Shopping List Integration:
- Enable users to generate shopping lists based on selected recipes.
- Streamline the ingredient-gathering process for users planning to cook a particular recipe.

Community Challenges and Events:
- Introduce community challenges, events, or cooking contests to engage users.
- Foster a sense of community participation and friendly competition.

Design Patterns:

Observer Pattern (Real-time Interaction):
- Apply the Observer Pattern for real-time features like comments and interactive cooking sessions.
- Allow users to receive updates and notifications when there are new comments or live cooking sessions.

Factory Method Pattern (Recipe Creation):

- Use the Factory Method Pattern for creating different types of recipes.
- Allow for the creation of diverse recipes with various attributes and complexities.

Strategy Pattern (Recommendation System):

- Apply the Strategy Pattern to implement different recommendation algorithms.
- Allow users to choose their preferred recommendation strategy, such as based on personal history, community favorites, or trending recipes.

Decorator Pattern (Personalization):

- Utilize the Decorator Pattern to add personalized features to user profiles.
- Enhance user profiles with personalized badges, achievements, or other decorations based on their activity and engagement.

Singleton Pattern (User Authentication):

- Use the Singleton Pattern to ensure a single instance of the user authentication system.
- Ensure secure and centralized management of user authentication throughout the platform.

Observer Pattern (Rating and Reviews):

- Apply the Observer Pattern for the rating and review system.
- Notify users and update recipe rankings in real time based on user reviews and ratings.

These design patterns can enhance the maintainability, scalability, and flexibility of the Recipe Sharing Platform, ensuring a robust and feature-rich application. The specific implementation details will depend on the programming language and framework you choose for your project.

Who is gonig to do what:

Sagarika:

- User Profiles and Authentication
- Recipe Discovery and Categorization

Nikil:

- User-Generated Content
- Recipe Rating and Reviews

Dileep

- Personalized Recipe Recommendations
- Shopping List Integration

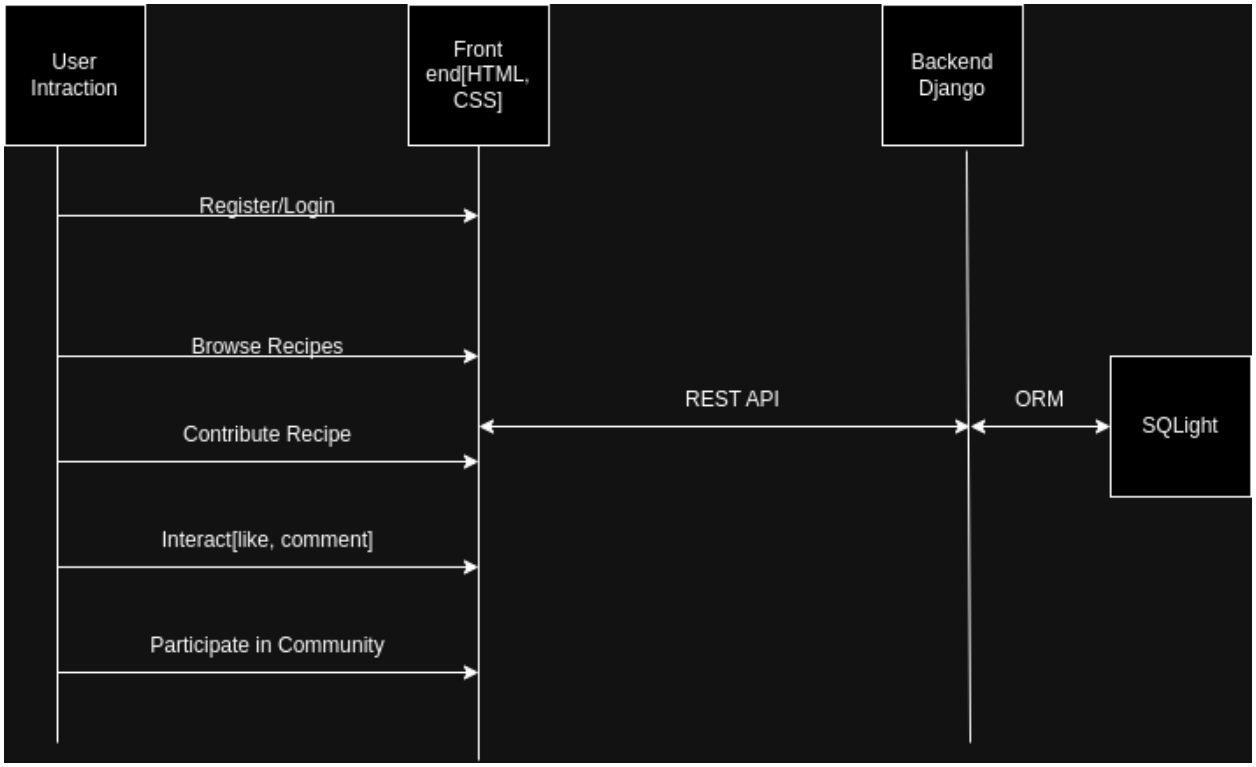
Manoj

- Community Challenges and Events:
- Quality Assurence

Technology Stack:

- Python
- Django
- SQLite
- HTML
- CSS
- JavaScript

Architure:


User Intraction
Front end[HTML, CSS]
Backend Django
Register/Login
Browse Recipes
REST API
ORM
SQLight
Contribute Recipe
Interact[like, comment]
Participate in Community