

SUBSCRIPTION MANAGEMENT AND TRACKING APP

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Goal and Motivation

- Simplify Subscription Management
- Enhance Financial Control
- Promote Happiness and Well-being

Key Features

- Comprehensive Subscription Dashboard:
 - *Centralized overview of all subscriptions.*
 - *Visualization of active subscriptions, billing dates, and costs.*
 - *Eliminates manual sorting, providing clarity and control.*

Key Features

- Smart Subscription Renewal Reminders:
 - *Personalized reminders through preferred channels.*
 - *Ensures users never miss renewal deadlines.*
 - *Optimizes subscriptions based on evolving needs.*

Key Features

- Cost Tracking and Budgeting Tools:
 - *Categorization and monitoring of expenses.*
 - *Insights into spending patterns and budget thresholds.*
 - *Promotes financial awareness and control for a happier, organized life.*

Algorithms and Tools

Comprehensive Subscription Dashboard:

Technology: React for the front end.

Tools/Libraries: Currently Hardcoded, will be decided and implemented this semester.

Algorithm: Use algorithms for sorting and filtering subscription data efficiently.

Smart Subscription Renewal Reminders:

Technology: React Native for cross-platform mobile development.

Tools/Libraries: Firebase Cloud Messaging (FCM) for push notifications, Nodemailer for email reminders.

Algorithm: Implement a scheduling algorithm for timely reminders.

Cost Tracking and Budgeting Tools:

Technology: React for the front end, Node.js for the back end.

Tools/Libraries: Will be decided and implemented this semester.

Algorithm: Implement algorithms for categorizing and tracking spending patterns.

Algorithms and Tools

Database Schema and Optimization:

Technology: MongoDB for the local database.

Tools/Libraries: Mongoose (for MongoDB for database modeling and querying).

Algorithm: Optimize database queries for fast performance.

User Authentication and Security:

Technology: Implement Firebase for secure user authentication.

Cross-Platform Compatibility:

Technology: React Native for cross-platform mobile development.

Tools/Libraries: Use responsive design principles for a consistent user interface.

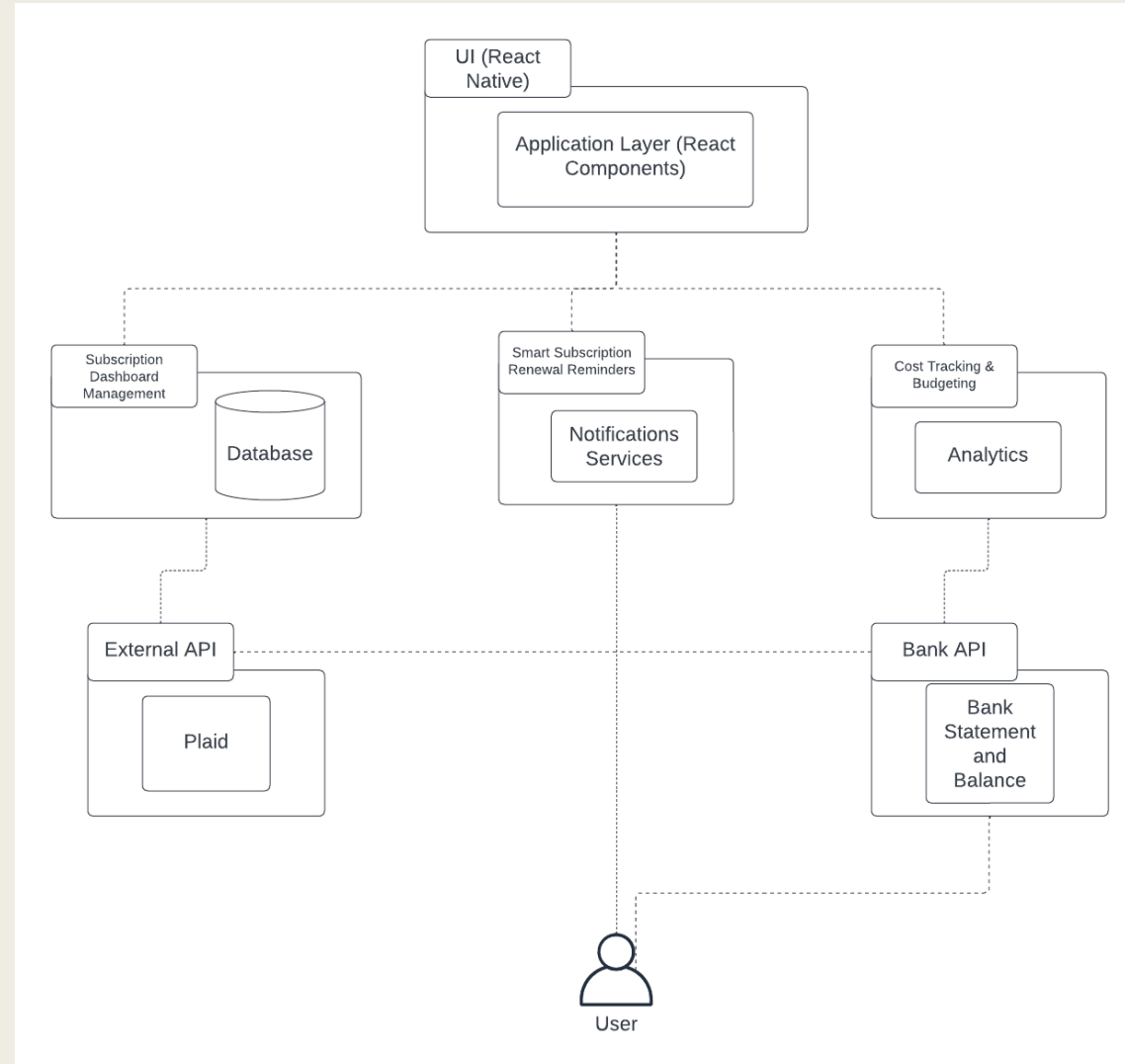
Novel Feature: "Smart Subscription Renewal Reminders"

- Personalized Reminders
- Proactive Approach
- User-Centric Customization

Technical Challenges

- Automatically Adding Subscriptions Feature:
 - Adding subscriptions automatically by getting the user bank statements and finding all subscriptions to be added.
 - Our Approach is to use Plaid to link banks to the app.
- Efficient Database Design:
 - Converting the local Database to a Cloud one.
 - Optimizing database queries for fast performance is crucial to ensure a seamless user experience.

Design



Evaluation

Speed:

- Measure the time taken to load the subscription dashboard and retrieve subscription data.
- Evaluate the response time for push notifications and emails for subscription renewals.

Accuracy:

- Assess the accuracy of subscription information displayed on the dashboard.
- Check the accuracy of renewal reminders and notifications.

Reliability:

- Conduct tests to determine how often the system successfully sends accurate reminders out of a set number of trials (e.g., 10 times).
- Monitor system uptime and assess reliability over time.

Progress Summary

Module/Feature	Completion	To do
GUI	% 100	none
Database	% 80	Convert the database from local to a cloud database, and modify it if need to when advanced features are implemented
User Authentication	% 100	%50
Clickable Prototype	% 100	none
Automation (if possible)	% 0	Task 3 in Milestone 4
Cost tracking and budgeting features	% 0	Task 1 in Milestone 4
Search and Filter feature	% 75	Task 1 in Milestone 5

Milestone 4 (Feb 19)

- Develop the cost tracking and budgeting tools with graphs and analytics.
- Enhance the subscription management by allowing users to categorize subscriptions.
- Adding "Adding subscriptions through bank account" feature if possible

Milestone 5 (Mar 18)

- Implement more advanced search and filter options for subscriptions.
- Complete the remaining features and functionality if there are any, including any outstanding subscription management and cost tracking features.
- Conduct thorough testing, including security and compatibility testing.

Milestone 6 (Apr 15)

- Address any issues and fix bugs identified during testing.
- Prepare for app store submissions (App Store and Google Play).
- Launch the app on the app stores and promote it.