Project Proposal: MyFinance360

1. Introduction & Motivation

MyFinance360 consolidates bank, credit, and investment data into one secure platform, offering personalized insights and cross-platform access.

2. Objectives

- Unify financial data via Open Banking APIs
- Automate expense categorization and forecasting
- Engage users with gamification and smart alerts
- Ensure data security with encryption

3. Scope & Features

Module	Key Features
User Management	Registration, login, profile edits
Dashboard	Net worth, budgets, visual reports
Expense Handling	Manual categorization
Social Budgeting	Shared envelopes, bill-splitting, group tracking
Alerts & Notifications	Rule-based real-time alerts (WebSockets, email)
Investment Tracker	Multi-currency support
Tax Estimator	Tax estimation based on financial history

4. Technologies & Tools

Layer	Technologies
Front-end	React, Chart.js, Service Workers; Flutter or React Native
Back-end	Node.js/Express, Python/FastAPI
Databases	PostgreSQL, MongoDB, Redis
DevOps	Docker, Kubernetes, CI/CD
Security	OAuth2/OIDC, TLS, AES-256

5. Database Management

o Design schema to store:

■ User accounts (ID, name, email, password hash, profile settings, date joined).
■ Financial accounts (user link, account type, balance, currency).
■ Transactions (linked to user and account, amount, date, description, category).
■ Budgets (user link, category, limit, period).
■ Investment records (user link, asset name, quantity, current value).
■ Alerts (user link, rule description, trigger condition, notification method).
■ Group budgets (group name, created by, member links).
■ Tax records (user link, taxable income, year, estimated tax).

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