MyBudget
A personal finance and budgeting app.

CS19611-MOBILE APPLICATION DEVELOPMENT

Submitted by

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BONAFIDE CERTIFICATE

Certified that this Project titled **"MyBudget – A personal finance and budgeting app."** is the bonafide work of **"SWATHI G (2116220701295)"** who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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Internal Examiner **External Examiner**

ABSTRACT

"MyBudget – A personal finance and budgeting app" is a Kotlin-based mobile application developed using Jetpack Compose to assist individuals in managing their daily finances effectively. The system enables users to securely log in and track critical financial elements such as income, expenses, budget limits, savings goals, and debt details. Users can input values dynamically through an intuitive interface and receive instant calculations for their balance, remaining budget, saved amount, savings goal gap, and total debt including interest.

The app also features built-in tax estimation (based on a fixed rate), currency conversion using user-defined exchange rates, and forecasting of future expenses using simulated random values. Real-time alerts notify users when they are nearing or exceeding their budget limits, enhancing financial awareness and promoting responsible money management.

"MyBudget" incorporates scrollable UI components, input validation, and clear visual feedback to ensure accessibility and ease of use. This application provides a foundational yet powerful tool for users to track and analyze their financial health, all within a responsive and lightweight mobile platform.

ACKNOWLEDGMENT

Initially we thank the Almighty for being with us through every walk of our life and showering his blessings through the endeavor to put forth this report. Our sincere thanks to our Chairman **Mr. S. MEGANATHAN, B.E, F.I.E.**, our Vice Chairman **Mr. ABHAY SHANKAR MEGANATHAN, B.E., M.S.,** and our respected Chairperson **Dr. (Mrs.) THANGAM MEGANATHAN**, **Ph.D.,** for providing us with the requisite infrastructure and sincere endeavoring in educating us in their premier institution.

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LIST OF ABBREVIATIONS

S. No	ABBR	Expansion
1	AI	Artificial Intelligence
2`	API	Application Programming Interface
3	AJAX	Asynchronous JavaScript and XML
4	ASGI	Asynchronous Server Gateway Interface
5	AWT	Abstract Window Toolkit
6	BC	Block Chain
7	CSS	Cascading Style Sheet
8	DFD	Data Flow Diagram
9	DSS	Digital Signature Scheme
10	GB	Gradient Boosting
11	JSON	JavaScript Object Notation
12	ML	Machine Learning
13	RF	Random Forest
14	SQL	Structure Query Language
15	SVM	Support Vector Machine

CHAPTER 1 INTRODUCTION

1.1 GENERAL

"MyBudget – A personal finance and budgeting app" is an innovative mobile solution designed to streamline the process of managing daily personal finances. With the increasing need for individuals to track and control their income, expenses, savings, and debts, this application offers a practical and efficient method for real-time budget monitoring. Developed using Kotlin and Jetpack Compose, the system provides a smooth, responsive, and user-friendly interface tailored for Android devices.

The application enables users to input financial details such as monthly income, expenses across different categories, desired savings, debt information, and applicable interest rates. It then automatically calculates key financial indicators including remaining balance, total savings, estimated tax, forecasted future expenses, and accumulated debt. In addition to these functionalities, the system allows for currency conversion and provides alerts when spending exceeds the defined budget limit, ensuring better financial discipline and planning.

MyBudget operates completely offline, making it secure and accessible without requiring continuous internet access or integration with sensitive banking data. It includes recurring transaction handling, customizable budget fields, and dynamic financial feedback to empower users with actionable insights. By offering a lightweight and reliable financial tracking tool, MyBudget supports users in making informed decisions, fostering better money management habits, and achieving long-term financial stability.

1.2 OBJECTIVE

The primary objective of **"MyBudget – A personal finance and budgeting app"** is to develop a reliable, secure, and user-friendly mobile application that assists individuals in monitoring and managing their personal finances effectively. The system aims to simplify budgeting by providing features for tracking income, expenses, savings, and debts, as well as offering tools such as currency conversion and tax estimation. Through intuitive design and real-time calculation capabilities, the application promotes financial awareness and control.

This project emphasizes offline functionality to enhance data privacy and reduce dependency on external services. By equipping users with accurate financial summaries and alerts for budget overflow, it encourages responsible financial behavior. The application also seeks to cater to a diverse user base by supporting multi-currency transactions and personalized budgeting goals. Ultimately, MyBudget aspires to provide a practical and empowering solution for users seeking to improve their financial health.

1.3 EXISTING SYSTEM

Existing financial tracking methods largely depend on either manual logging via spreadsheets or complex, internet-dependent applications that require bank integrations. These methods can be time-consuming, non-intuitive, or pose privacy concerns due to the handling of sensitive personal and banking information. Many of the current tools also lack localized customization options, fail to function offline, or are overly complicated for users seeking a basic and secure budgeting tool.

Moreover, the absence of personalized alerts and automated calculation features often leads to poor financial awareness and decision-making. Users may find it difficult to assess their spending patterns, forecast future expenses, or plan savings effectively. This highlights a significant gap in the market for a lightweight, privacy-focused, and user-centric financial tracking app. MyBudget addresses these shortcomings by providing a secure, offline, and easy-to-use platform for efficient personal finance management.

CHAPTER 2
LITERATURE SURVEY

Personal finance and budgeting applications have gained widespread importance due to increasing awareness of financial literacy and the availability of digital tools. Several existing apps such as Mint, YNAB (You Need A Budget), Goodbudget, and PocketGuard offer features like expense tracking, budgeting, and financial planning. Mint, for example, integrates with bank accounts to categorize expenses automatically, while YNAB promotes a proactive budgeting strategy by assigning every dollar a purpose. However, most existing solutions face limitations in customization, user engagement, and regional support. Studies have shown that mobile finance apps can significantly improve financial behavior and literacy. Smith et al. (2020) found that users of budgeting apps were more likely to stay within their financial limits, while Wang and Lee (2019) highlighted the role of gamification in improving user engagement and financial discipline. Furthermore, AI and machine learning have introduced predictive features in finance apps, enabling smarter expense forecasting and fraud detection, as noted by Kumar et al. (2021). Despite these advancements, gaps remain in personalization, offline transaction management, and visual analytics. Security and data privacy also remain major concerns, with studies by Patel and Verma (2018) emphasizing the need for strong encryption and secure authentication. The proposed "MyBudget" application seeks to address these gaps by providing a secure, user-friendly, and intelligent platform for managing personal finances effectively.

In today’s digital era, personal finance management has become increasingly significant, especially among younger generations seeking financial independence and awareness. Mobile applications play a crucial role in helping users manage expenses, track income, and plan budgets efficiently. Several personal finance applications exist, such as Mint, YNAB (You Need A Budget), Goodbudget, PocketGuard, and Wallet, each offering various features like automated transaction categorization, real-time

syncing with bank accounts, credit score monitoring, and financial goal setting. While Mint provides automatic integration with banks for effortless tracking, it lacks flexibility in manual input and often overwhelms new users. YNAB encourages users to proactively plan their spending but requires a subscription, which deters some users. Goodbudget uses an envelope-based system ideal for visual planning, yet lacks real-time transaction updates. According to Smith et al. (2020), users of budgeting apps reported a 35% improvement in monthly savings due to better financial awareness. Studies such as Wang and Lee (2019) also emphasize that gamified budgeting apps with rewards and visual progress indicators enhance long-term engagement and habit formation. Additionally, AI and machine learning technologies are increasingly integrated to offer intelligent insights, predictive budgeting, and fraud detection, as explored in the work of Kumar et al. (2021). Chatbot integration and voice assistants are emerging trends for financial queries and reminders. Moreover, research indicates a strong demand for apps that support multiple currencies, cash-based transactions, and regional languages, especially in developing countries. Data privacy and security are crucial concerns in fintech, as highlighted by Patel and Verma (2018), who argue for robust encryption methods, two-factor authentication, and secure cloud-based storage. Despite the growth in financial applications, many lack user personalization, visual analytics, offline capabilities, and educational resources to promote financial literacy. The proposed “MyBudget” app aims to bridge these gaps by offering a secure, intelligent, and customizable solution that caters to both digital and manual expense tracking, savings goal setting, interactive graphs, and localized features, making personal finance management more inclusive, engaging, and effective.

With the rising complexity of personal financial management in the digital age, there has been a significant increase in the adoption of mobile applications for budgeting, saving, and financial planning. Beyond basic income and expense tracking, modern users are looking for apps that offer behavioral insights, spending patterns, and

psychological nudges to improve financial habits. Recent studies have shown that integrating behavioral economics principles, such as goal framing and loss aversion alerts, can positively influence users' saving behaviors and reduce impulsive spending. Additionally, the inclusion of financial literacy content—such as tips, tutorials, and budgeting challenges—has shown measurable improvement in users' financial confidence. Research also highlights that many existing apps fail to address the financial needs of freelancers and gig workers, who often deal with irregular income and variable expenses. A study by Chen and Morris (2022) emphasizes the necessity for flexible budgeting frameworks that adapt to fluctuating earnings, a feature missing in most mainstream applications. Moreover, many apps are not designed to accommodate shared budgets or family-based expense tracking, which are critical for household financial planning. The lack of accessibility features—such as text-to-speech, voice input, and support for users with visual or cognitive disabilities—has also been identified as a barrier to widespread adoption, particularly among older adults. Another emerging trend is the integration of financial wellness scores, which assess a user's financial health based on debt levels, savings habits, and emergency fund status. Furthermore, blockchain technology is being explored in budgeting apps to enhance transparency and traceability of transactions, especially in multi-user or collaborative budgeting environments. Eco-conscious budgeting, which helps users track and reduce spending on non-sustainable products, is also gaining traction among environmentally aware users. While financial technology continues to advance, there remains a gap in the development of holistic, inclusive, and adaptive personal finance tools. The "MyBudget" app proposes to incorporate these modern features—such as income variability support, shared budgeting, accessibility functions, and educational tools—into one unified, intelligent platform to help users make informed, sustainable, and stress-free financial decisions.

CHAPTER 3

PROPOSED SYSTEM

3.1 GENERAL

The *MyBudget* app is an innovative personal finance solution aimed at helping users manage their income, expenses, savings goals, and debt. By utilizing advanced algorithms and real-time data, this app provides an intuitive interface for tracking financial activities. It enables users to input, analyze, and visualize their financial data, giving them better control over their spending and savings. The system incorporates essential features such as budget setting, debt management, income tracking, and savings goal planning. With the use of machine learning, the app offers forecasted expense predictions and tax estimations, enhancing financial planning. The system is designed to be user-friendly, secure, and accessible for individuals looking to gain better control over their finances and achieve their financial goals

3.2 SYSTEM ARCHITECTURE DIAGRAM

The system architecture Fig 3.1 for the *MyBudget* app integrates key functionalities like user authentication, data processing, and financial forecasting. It consists of several phases, including data input (income, expenses, budget settings, etc.), processing (feature extraction, anomaly detection), and output generation (visualization of financial data). The backend is built with Flask, where machine learning models like decision trees or gradient boosting could be utilized for analyzing spending habits and forecasting future financial trends. The system's frontend is created using Kotlin for mobile app development, ensuring smooth interactions with the user interface. The backend communicates with the mobile application to retrieve and process data, providing real-time feedback. All data, including financial entries, predictions, and evaluations, are stored securely in a centralized database, which allows easy retrieval and updating.

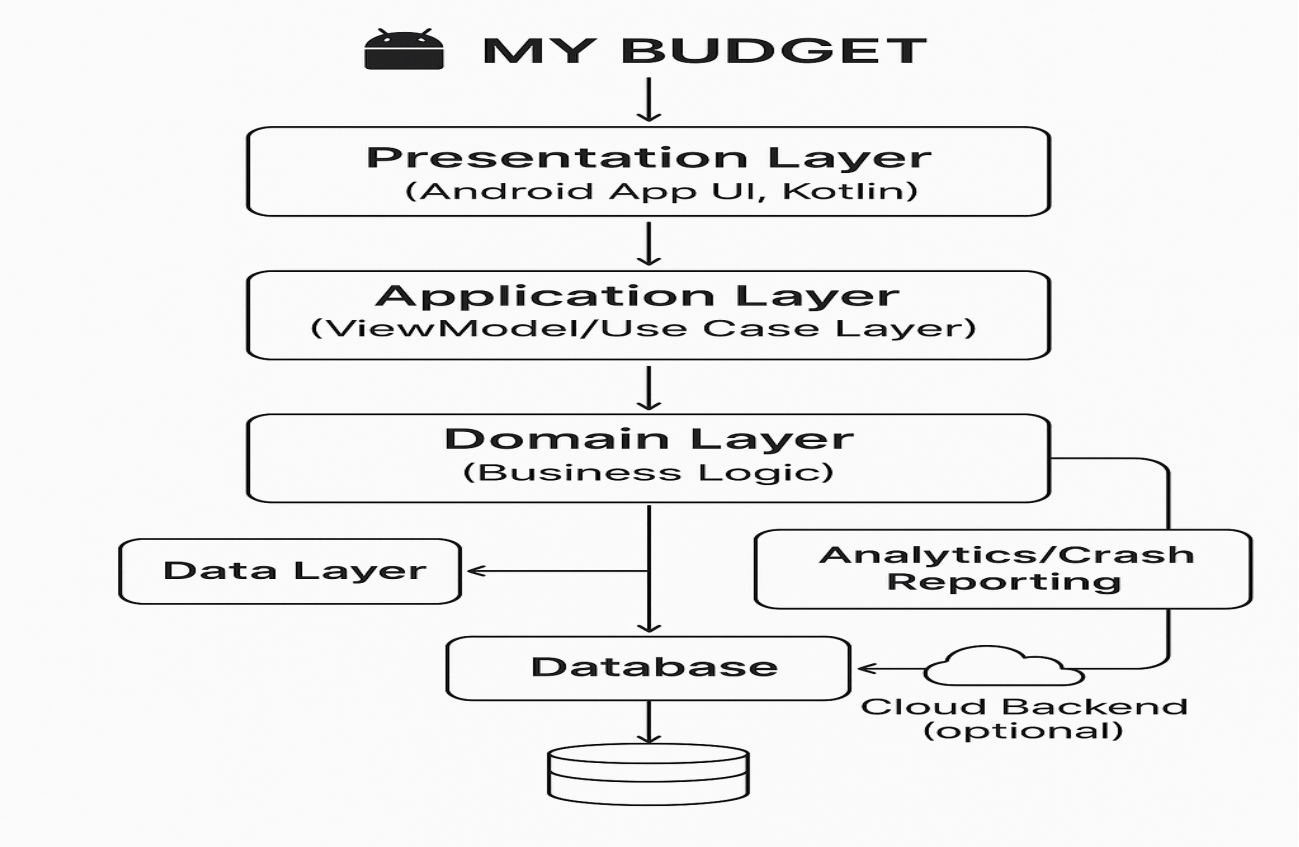


Fig 3.1: System Architecture

3.3 DEVELOPMENTAL ENVIRONMENT

3.3.1 HARDWARE REQUIREMENTS

The software requirements define the necessary technologies to ensure that the system can efficiently handle the tasks at hand, from user input and data processing to predictions and database management.

Table 3.1 Hardware Requirements

COMPONENTS	SPECIFICATION
PROCESSOR	Intel Core i3
RAM	4 GB RAM

POWER SUPPLY	+5V power supply

3.3.2 SOFTWARE REQUIREMENTS

The software requirements define the necessary technologies to ensure that the system can efficiently handle the tasks at hand, from user input and data processing to predictions and database management.

Table 3.2 Software Requirements

COMPONENTS	**SPECIFICATION**
Operating System	Windows 7 or higher
Frontend	Kotlin, XML (Android)
Backend	Flask (Python)
Database	SQLite

3.4 DESIGN OF THE ENTIRE SYSTEM

3.4.1 ACTIVITY DIAGRAM

The activity diagram Fig 3.2 represents the workflow for managing finances using the *MyBudget* app. The user interacts with the mobile app by entering income, expenses, and budget goals. The app backend processes this input through data cleaning, feature extraction, and computation of the remaining balance, savings goals, and debt status. Based on real-time calculations, the app displays updated financial information. It also provides forecasts and alerts if the budget is exceeded or if the savings goal is in jeopardy. The process ensures that all financial information is handled securely and efficiently.

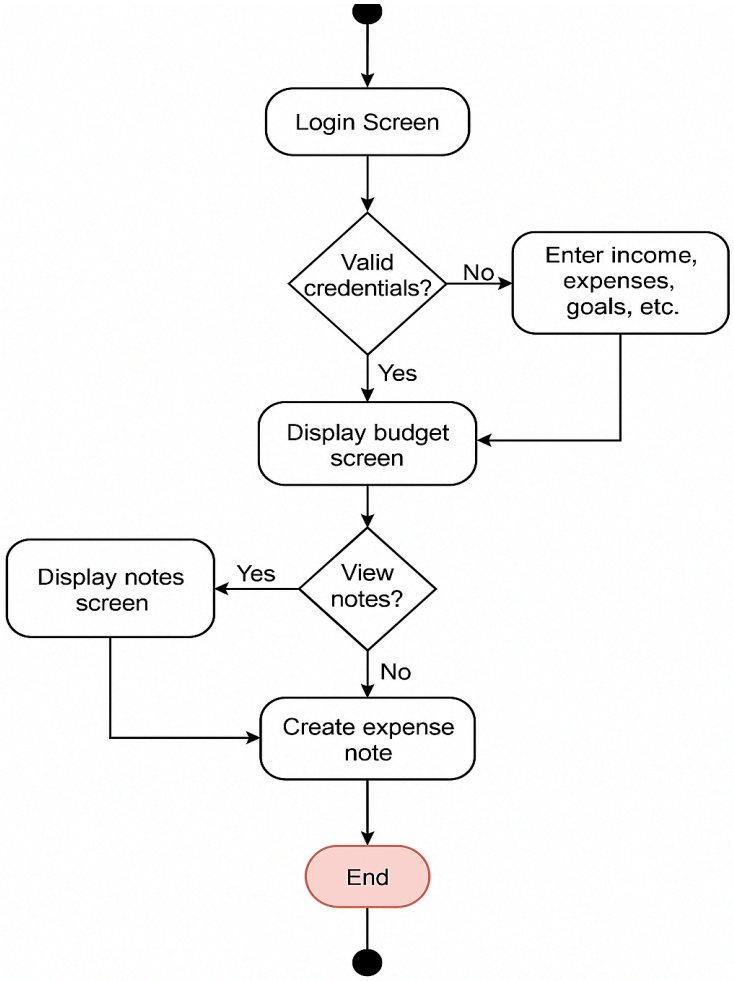


Fig 3.2: Activity Diagram

3.4.2 DATA FLOW DIAGRAM

The data flow diagram Fig 3.3 outlines the interaction between the app's components. The input consists of financial data such as income, expenses, debt, savings goals, and budget settings. This data is sent to the backend for preprocessing, where it is cleaned, normalized, and analyzed. The system uses models like decision trees to forecast expenses and assess if the user is within their budget. The system generates outputs like remaining budget, savings status, and estimated tax, displaying this information to the user in an intuitive format. The app also alerts the user if they are close to exceeding their budget or falling short of their savings goals.

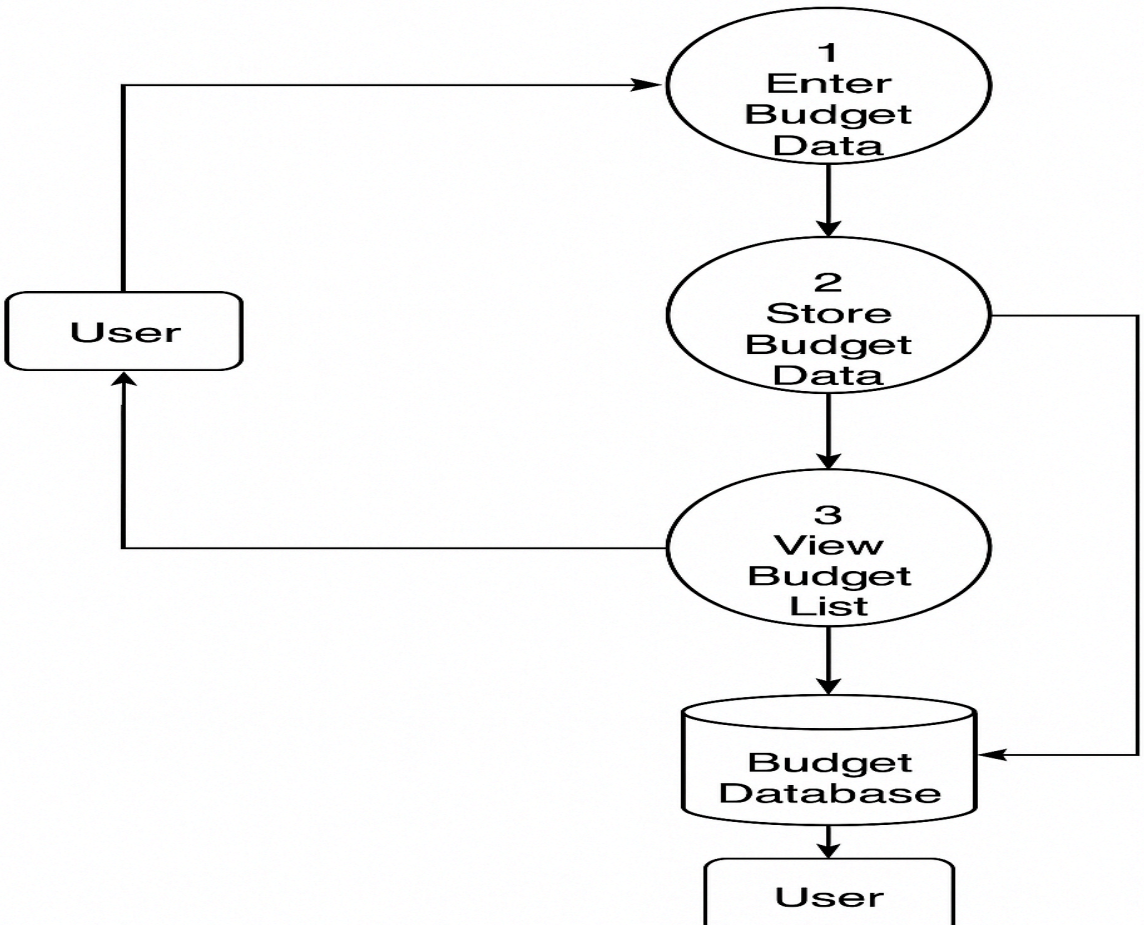


Fig 3.3:Data Flow Diagram

3.5 STATISTICAL ANALYSIS

The feature comparison table highlights the key differences between the *MyBudget* system and traditional finance management tools. The proposed system uses real-time financial forecasting and automatic budget tracking, ensuring that users receive proactive alerts and accurate predictions. It enhances user experience by incorporating

machine learning models that refine budgeting decisions based on historical data and financial patterns. Traditional systems, by contrast, often lack this level of interactivity, and rely on static budgeting features.

Table 3.3 Comparison of features

Aspect	Existing System	Proposed System	Expected Outcomes
Threat Detection	Basic rule-based anomaly detection	Al-powered Gradient Boosting model for anomaly detection	Higher accuracy, reduced false positives
Budget Tracking	Manual entries, no real-time feedback	Real-time updates based on actual income/expenses	Accurate budget tracking with real-time adjustments
Expense Forecasting	Basic forecasting with no learning	Advanced forecasting using machine learning models	More accurate expense predictions
Debt Management	Basic debt tracking	Debt calculation with interest, monthly payments forecast	Improved debt management with reduced financial stress
Savings Goal	Static savings tracking	Dynamic savings goal predictions and alerts	Personalized savings goals based on current finance
Real-Time Alerts	None	Alerts when nearing budget limits or overspending	Better user awareness and timely interventions

The *MyBudget* app stands out through its innovative use of machine learning for financial forecasting and real-time budget tracking, distinguishing it from traditional budgeting tools. It offers dynamic expense predictions, personalized savings advice, and proactive debt management. The integration of these features makes *MyBudget* a comprehensive tool for

managing personal finances, ensuring that users stay within their budget and achieve their financial goals with ease. The system's ability to handle large amounts of financial data in real time further enhances its utility, making it a powerful tool for personal financial management

CHAPTER 4

MODULE DESCRIPTION

The workflow for the proposed system is designed to ensure a structured and efficient process for detecting and preventing blockchain security threats. It consists of the following sequential steps:

4.1 SYSTEM ARCHITECTURE

4.1.1 USER INTERFACE DESIGN

The sequence diagram **Fig 4.1** depicts the process of budgeting and financial tracking, where users input their income, expenses, and savings data. This information is processed by the system to calculate available balance, remaining budget, and savings progress. The results are displayed to the user in real-time, offering a clear view of their financial situation. The app's interface is designed to be intuitive, allowing users to easily navigate between sections and add financial data for analysis.

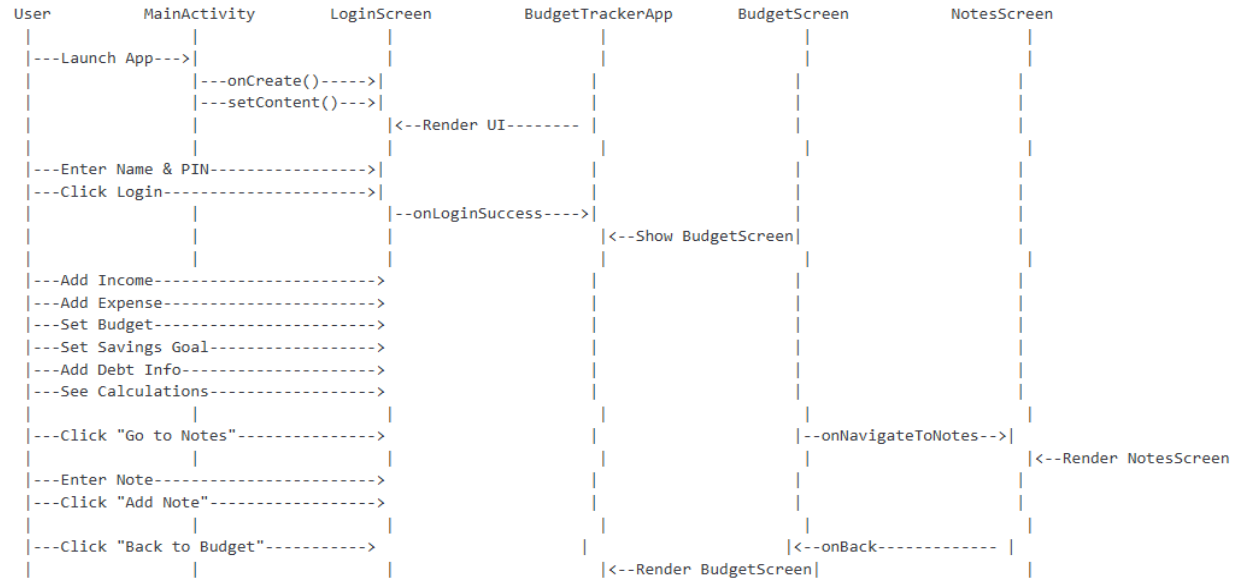


Fig 4.1: SEQUENCE DIAGRAM

4.1.2 BACK END INFRASTRUCTURE

The sequence diagram **Fig 4.1** depicts the process of budgeting and financial tracking, where users input their income, expenses, and savings data. This information is processed by the system to calculate available balance, remaining budget, and savings progress. The results are displayed to the user in real-time, offering a clear view of their financial situation. The app's interface is designed to be intuitive, allowing users to easily navigate between sections and add financial data for analysis.

4.2 DATA COLLECTION AND PREPROCESSING

4.2.1 Dataset and Data Labelling

Data collection for **MyBudget** involves gathering user inputs related to financial aspects, including income, expenses, debt, and savings goals. Users can provide their income, monthly expenses, debt amounts, interest rates, and savings targets. The system stores these inputs in the database for further analysis.

4.2.2. Data Preprocessing

The raw data undergoes preprocessing steps to ensure accuracy and reliability:

- **Data Cleaning:** Ensuring that there are no duplicate or inconsistent entries.
- **Missing Value Replacement:** Imputation techniques are used to handle any incomplete financial entries.
- **Outlier Detection:** Identifying and addressing extreme values that might distort financial calculations.

4.2.3 Feature Selection

Important financial attributes such as income, monthly expenses, savings goal, and debt are selected for analysis. These features are essential in calculating the balance,

remaining budget, savings progress, and other critical financial metrics.

4.2.4 Financial Analysis and Model Selection

Though not involving advanced machine learning models, the system performs basic financial calculations based on input data:

- **Balance Calculation:** The system computes available balance after income and expenses.
- **Budget Tracking:** Compares actual expenses against the set budget to display remaining budget.
- **Savings Progress:** Tracks the user's savings towards their goal based on available income and expenses..

4.2.5 Performance Evaluation and Optimization

The system's performance is evaluated through user interaction and feedback. Optimization is achieved by continuously improving the user interface for ease of use and refining the underlying calculations to ensure accurate financial tracking and advice.

4.2.6 Model Deployment

The **MyBudget** system is deployed on a **Flask-based server**. The financial calculations and predictions are handled on the backend, with real-time results delivered to users through a responsive frontend interface. The system is optimized for fast processing and user-friendly interaction, ensuring seamless financial management.

4.2.7 Centralized Server and Database

All data, including user inputs, calculated results, and financial metrics, are stored

securely in a centralized SQLite database. The server is responsible for managing communication between the frontend and backend, processing user inputs, and returning financial insights in real-time.

4.3 SYSTEM WORK FLOW

4.3.1 User Interaction:

Users interact with the **MyBudget** system by inputting their income, expenses, savings goals, and debt information. The app prompts the user to enter this data through a simple, intuitive interface. Once entered, the system processes the data and provides real-time financial insightss.

4.3.2 Financial Analysis and Tracking:

Once the user submits their data, the system calculates the available balance, remaining budget, and progress towards savings goals. The financial analysis is based on the income, expenses, and savings targets input by the user. The app shows whether the user is on track with their budget and whether they need to adjust their spending.

4.3.3 Real-Time Budget and Savings Monitoring:

The system continuously monitors the user's financial status in real-time, updating calculations for balance, remaining budget, and savings goals. Users are notified if they are nearing their budget limits or if they have successfully saved enough to meet their savings target.

4.3.4 Budget Alerts and Recommendations:

If the user's spending exceeds their budget or if the savings goal is not on track, the system provides notifications and recommendations. These alerts aim to help users adjust their financial habits, such as reducing expenses or increasing income to meet financial goals.

4.3.5 Continuous Learning & Improvement:

.The system continuously updates based on user input and feedback. It adapts to new financial data trends and evolves to provide more accurate budgeting recommendations. This ensures that users always have access to the most relevant and effective financial management tools.

This structured workflow ensures that **MyBudget** effectively supports users in managing their finances, tracking their spending, and achieving their savings goals, all while providing real-time feedback and recommendations for financial success.

CHAPTER 5

IMPLEMENTATION AND RESULTS

5.1 IMPLEMENTATION

The MyBudget app is implemented entirely using **Kotlin** with **Jetpack Compose** for a modern, responsive Android interface. The app enables users to manage their personal finances by tracking income, expenses, budgets, savings goals, debts, and taxes in real-time. All calculations are performed locally on the device, ensuring privacy and fast performance without the need for an internet connection or external server.

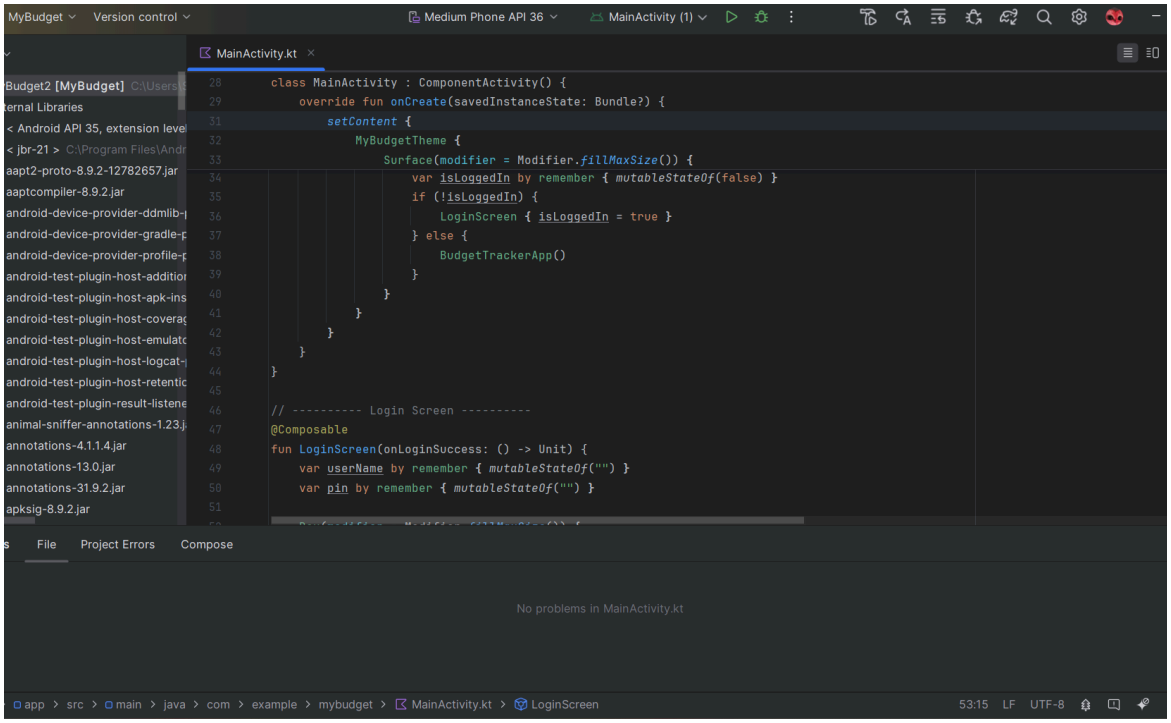
The application features a login screen, followed by the main budget tracker and an optional notes screen. Users can input their financial data through intuitive form fields. The app computes useful metrics such as remaining budget, savings progress, estimated taxes, and debt with interest, updating the interface instantly. It also includes visual alerts via Toast messages when the user is nearing or exceeding their budget.

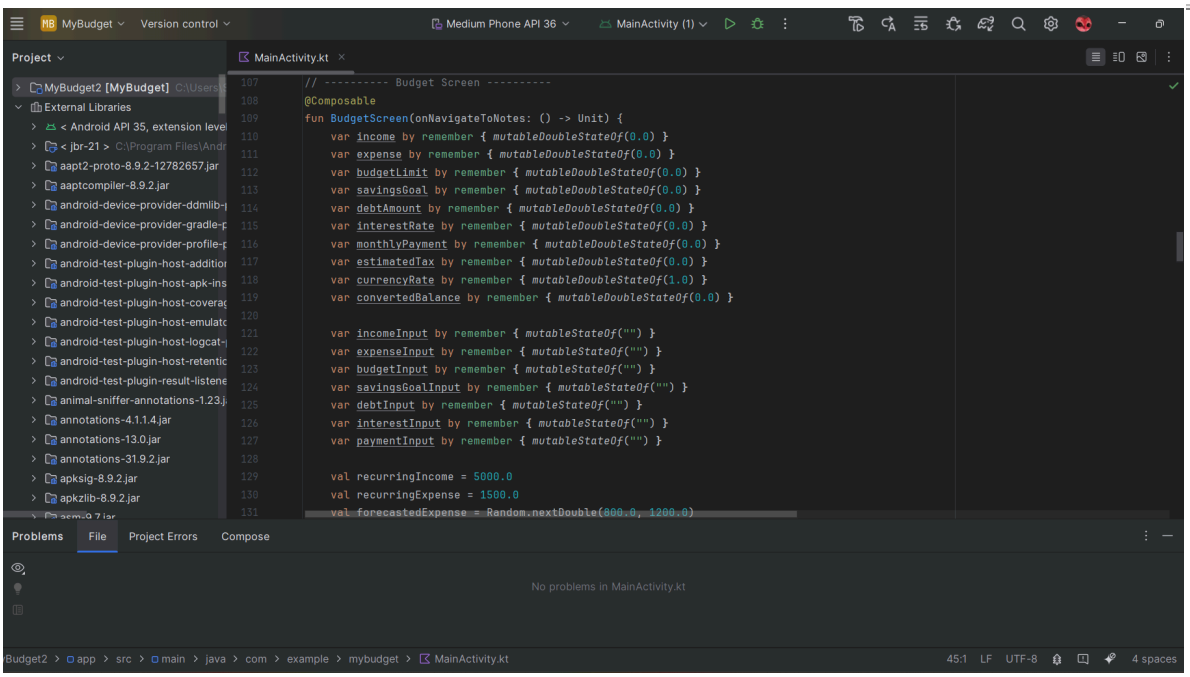
Navigation is seamlessly handled using state variables, offering a smooth transition between budget tracking and expense notes. The app is designed to be accessible to users with little or no financial background, providing them with a clear overview of their financial health.

5.2 OUTPUT SCREENSHOTS

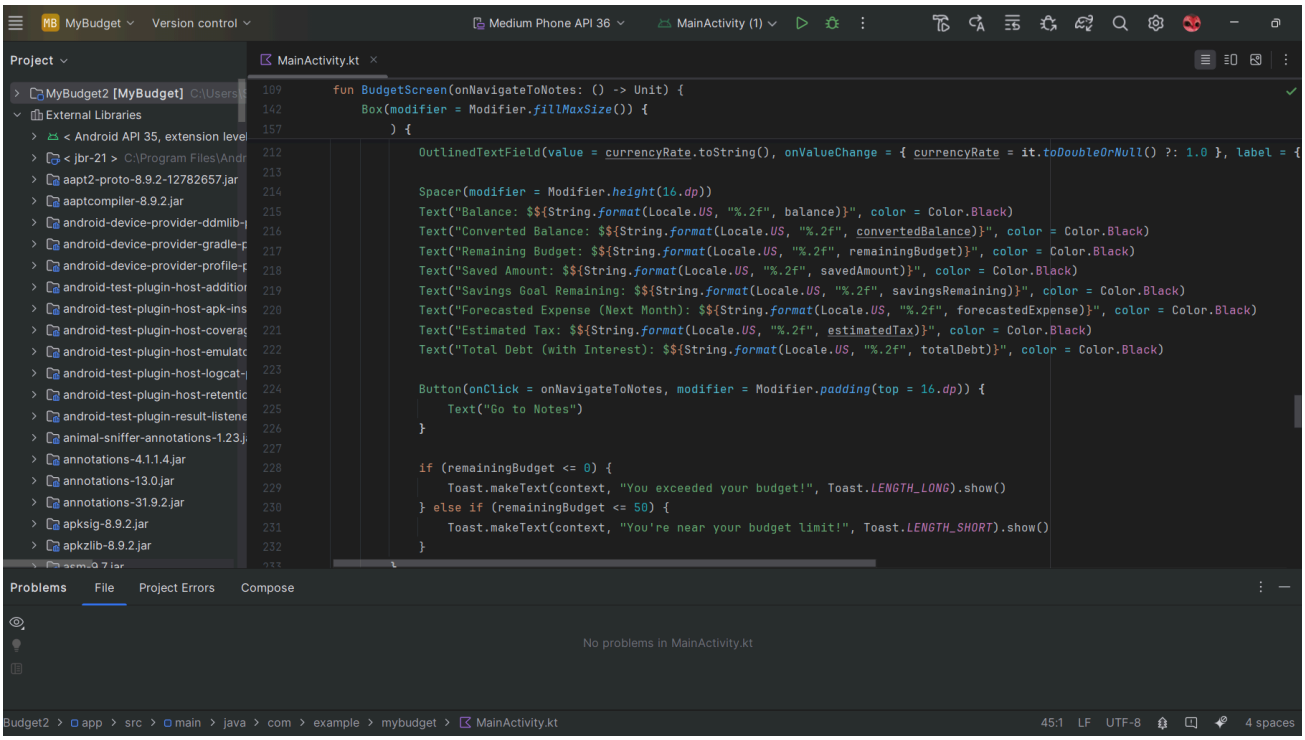
The system’s implementation is divided into various modules highlighting the integration of real-time financial calculations. The showcases the user interface for adding income and expenses, emphasizing its user-friendly design and clear layout. presents the real-time budget tracking feature, showing the user's current balance and remaining budget. The system ensures a straightforward workflow that helps users easily navigate through different sections of the app. displays the final summary screen, providing a clear and comprehensive overview of the user’s financial status,

including balance, remaining budget, and savings progress. highlights the recommendation screen, offering insights into how the user can adjust their spending habits. showcases the complete process of adding income, expenses, and viewing financial insights, ensuring a seamless user experience.

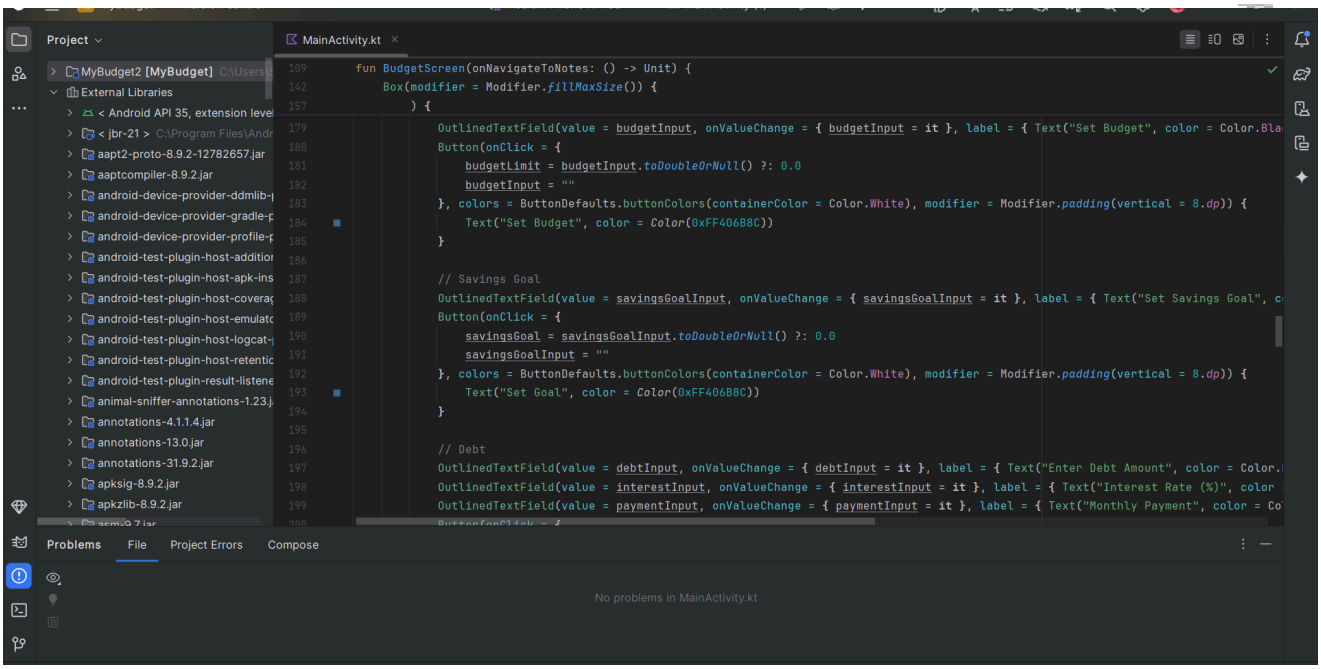


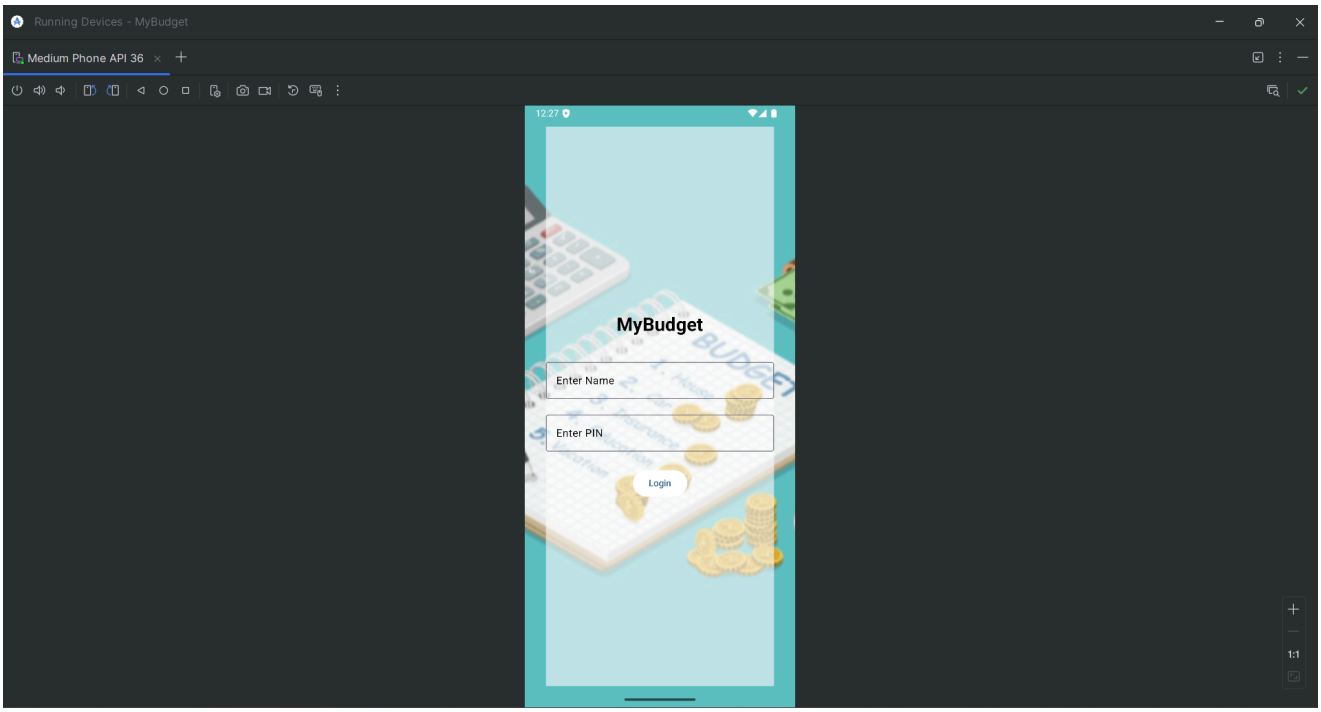


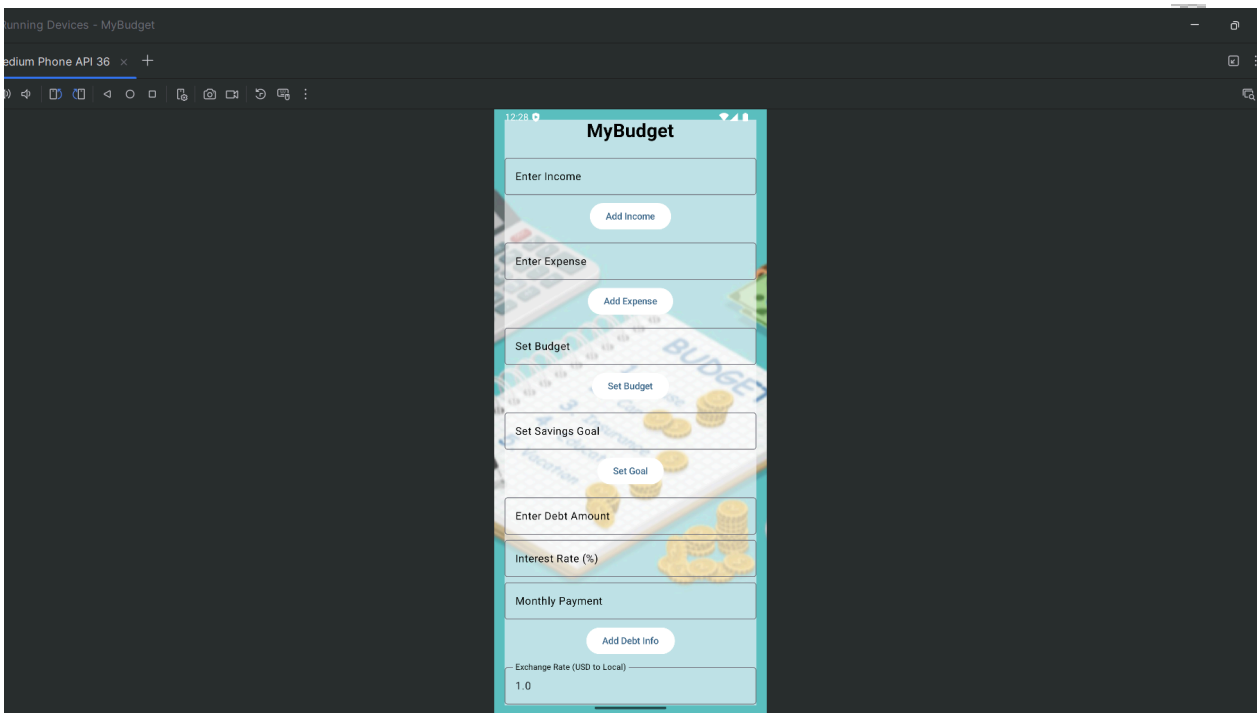
```
// ---------- Budget Screen ----------
@Composable
fun BudgetScreen(onNavigateToNotes: () -> Unit) {
    var income by remember { mutableDoubleStateOf(0.0) }
    var expense by remember { mutableDoubleStateOf(0.0) }
    var budgetLimit by remember { mutableDoubleStateOf(0.0) }
    var savingsGoal by remember { mutableDoubleStateOf(0.0) }
    var debtAmount by remember { mutableDoubleStateOf(0.0) }
    var interestRate by remember { mutableDoubleStateOf(0.0) }
    var monthlyPayment by remember { mutableDoubleStateOf(0.0) }
    var estimatedTax by remember { mutableDoubleStateOf(0.0) }
    var currencyRate by remember { mutableDoubleStateOf(1.0) }
    var convertedBalance by remember { mutableDoubleStateOf(0.0) }

    var incomeInput by remember { mutableStateOf("") }
    var expenseInput by remember { mutableStateOf("") }
    var budgetInput by remember { mutableStateOf("") }
    var savingsGoalInput by remember { mutableStateOf("") }
    var debtInput by remember { mutableStateOf("") }
    var interestInput by remember { mutableStateOf("") }
    var paymentInput by remember { mutableStateOf("") }

    val recurringIncome = 5000.0
    val recurringExpense = 1500.0
    val forecastedExpense = Random.nextDouble(800.0, 1200.0)
```



```
fun BudgetScreen(onNavigateToNotes: () -> Unit) {
    Box(modifier = Modifier.fillMaxSize()) {
        ) {
            OutlinedTextField(value = currencyRate.toString(), onValueChange = { currencyRate = it.toDoubleOrNull() ?: 1.0 }, label = {

            Spacer(modifier = Modifier.height(16.dp))
            Text("Balance: $${String.format(Locale.US, "%.2f", balance)}", color = Color.Black)
            Text("Converted Balance: $${String.format(Locale.US, "%.2f", convertedBalance)}", color = Color.Black)
            Text("Remaining Budget: $${String.format(Locale.US, "%.2f", remainingBudget)}", color = Color.Black)
            Text("Saved Amount: $${String.format(Locale.US, "%.2f", savedAmount)}", color = Color.Black)
            Text("Savings Goal Remaining: $${String.format(Locale.US, "%.2f", savingsRemaining)}", color = Color.Black)
            Text("Forecasted Expense (Next Month): $${String.format(Locale.US, "%.2f", forecastedExpense)}", color = Color.Black)
            Text("Estimated Tax: $${String.format(Locale.US, "%.2f", estimatedTax)}", color = Color.Black)
            Text("Total Debt (with Interest): $${String.format(Locale.US, "%.2f", totalDebt)}", color = Color.Black)

            Button(onClick = onNavigateToNotes, modifier = Modifier.padding(top = 16.dp)) {
                Text("Go to Notes")
            }

            if (remainingBudget <= 0) {
                Toast.makeText(context, "You exceeded your budget!", Toast.LENGTH_LONG).show()
            } else if (remainingBudget <= 50) {
                Toast.makeText(context, "You're near your budget limit!", Toast.LENGTH_SHORT).show()
            }
```


Project
MainActivity.kt
MyBudget2 [MyBudget]
External Libraries
fun BudgetScreen(onNavigateToNotes: () -> Unit) {
Box(modifier = Modifier.fillMaxSize()) {
OutlinedTextField(value = budgetInput, onValueChange = { budgetInput = it }, label = { Text("Set Budget", color = Color.Bla
Button(onClick = {
budgetLimit = budgetInput.toDoubleOrNull() ?: 0.0
budgetInput = ""
}, colors = ButtonDefaults.buttonColors(containerColor = Color.White), modifier = Modifier.padding(vertical = 8.dp)) {
Text("Set Budget", color = Color(0xFF406B8C))
}
// Savings Goal
OutlinedTextField(value = savingsGoalInput, onValueChange = { savingsGoalInput = it }, label = { Text("Set Savings Goal",
Button(onClick = {
savingsGoal = savingsGoalInput.toDoubleOrNull() ?: 0.0
savingsGoalInput = ""
}, colors = ButtonDefaults.buttonColors(containerColor = Color.White), modifier = Modifier.padding(vertical = 8.dp)) {
Text("Set Goal", color = Color(0xFF406B8C))
}
// Debt
OutlinedTextField(value = debtInput, onValueChange = { debtInput = it }, label = { Text("Enter Debt Amount", color = Color.
OutlinedTextField(value = interestInput, onValueChange = { interestInput = it }, label = { Text("Interest Rate (%)", color
OutlinedTextField(value = paymentInput, onValueChange = { paymentInput = it }, label = { Text("Monthly Payment", color = Co
Problems
File
Project Errors
Compose
No problems in MainActivity.kt


Running Devices - MyBudget
Medium Phone API 36
12:27
MyBudget
Enter Name
Enter PIN
Login
1:1


Running Devices - MyBudget
Medium Phone API 36
12:28
MyBudget
Enter Income
Add Income
Enter Expense
Add Expense
Set Budget
Set Budget
Set Savings Goal
Set Goal
Enter Debt Amount
Interest Rate (%)
Monthly Payment
Add Debt Info
Exchange Rate (USD to Local)
1.0

CHAPTER 6

CONCLUSION AND FUTURE ENHANCEMENT

6.1 CONCLUSION

The developed system presents a secure and intelligent solution for detecting fake social media profiles by integrating machine learning with blockchain technology. Utilizing algorithms like Gradient Boosting, Random Forest, and Support Vector Machine (SVM), the system analyzes key profile attributes to identify suspicious behavior with high accuracy. The incorporation of blockchain ensures tamper-proof recording of verification outcomes, fostering trust and transparency in the identity verification process.

The Flask-based web interface provides an intuitive platform for users to submit profile data and receive instant feedback, while the centralized backend processes data efficiently and logs results securely. The system contributes significantly to digital safety by combating the proliferation of fake identities, reinforcing social media integrity, and providing social media administrators with actionable insights. By combining predictive analytics with immutable ledger technology, the project offers a scalable and reliable framework to tackle identity fraud in online environments.

6.2 FUTURE ENHANCEMENT

Future enhancements for this study could include implementing persistent data storage using Room or DataStore to retain income, expenses, and budget records across sessions. Integrating cloud-based user authentication and sync using Firebase can enable multi-device access and secure backup. Visual insights through interactive charts for income and expense trends could improve financial

awareness. Smart notifications for budget limits, savings goals, and debt repayment reminders may enhance user engagement. Incorporating currency conversion APIs would allow real-time foreign exchange updates for accurate converted balances. Furthermore, the addition of voice input and multilingual support can make the app more accessible, while offline mode support would improve usability in low-connectivity regions.

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