



Marathwada Mitramandal's
COLLEGE OF ENGINEERING, PUNE
An Autonomous Institute



Project Based Learning

Title of Project: Financial Management Tool

Developing a web-based tool for personal finance management, integrating budgeting, expense tracking and financial goal setting with a clear and intuitive interface

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Date:

Faculty In-Charge

CHAPTER 1

Introduction

1.1 Brief overview of the project:

This project is a UI-based prototype of a Financial Management Tool designed to help users, especially students and young adults, track and manage their expenses effectively. **Key features** include **Parental Control**, allowing guardians to monitor spending behavior and **PhonePe integration simulation** for **displaying** real-time **transaction summaries**. The interface also offers **visual representations** of spending data through interactive charts, all designed with a **user-centric approach**.

1.2 Objective:

- To design an intuitive and engaging user interface for a financial management tool.
- To enable users to monitor their finances effectively.
- To provide clear visualization of expenses for better financial awareness.
- To help users develop and maintain budgeting habits through smart UI design.
- To create a realistic, front-end-only prototype focusing on user interaction and experience.
- To address the needs of both individual users and their guardians through accessible and inclusive design features.

1.3 Importance of UX in making financial tracking simple and accessible:

User Experience (UX) plays a pivotal role in the success of financial applications. In the context of financial management, an effective UX ensures that users can navigate complex data effortlessly, encouraging consistent usage and engagement. A user-friendly interface minimizes friction, fosters trust, and makes financial tracking more accessible to users across varying levels of financial literacy. By prioritizing UX, this project seeks to transform financial management into a simpler and more meaningful process.

CHAPTER 2

UX Research Report

2.1 Research Methods:

To gather comprehensive insights into user behavior and expectations regarding personal finance tools, a combination of qualitative and quantitative research methods was employed:

- **Surveys:** Distributed to a diverse user base to capture general financial behaviors, challenges, and desired features.
- **User Interviews:** Conducted to obtain in-depth feedback and understand pain points experienced by real users.
- **Competitive Analysis:** Benchmarked against existing financial tools to identify key features, usability gaps, and market opportunities.

2.2 Survey Results & Interviews:

Analyzing the Survey Data

The survey collected responses from a diverse group of users, including university students and faculty members. The objective was to identify common financial challenges, user expectations, and preferred features that could guide the design of a practical and efficient financial management tool.

Common Needs Identified

I. Expense Tracking and Categorization

A significant portion of respondents emphasized the need for tools that allow automatic categorization of transactions originating from bank accounts, credit cards, or even scanned receipts. This feature would reduce manual effort and increase accuracy in financial tracking.

II. Budgeting Tools

Many participants—especially students and faculty—expressed the need for an intuitive interface that simplifies budget creation and management. They preferred the ability to

allocate funds across customizable categories such as tuition, utilities, groceries, entertainment, and savings.

III. Financial Goal Setting

Users showed strong interest in features that allow them to set specific financial goals (e.g., saving for a trip, paying off student loans, or purchasing a house) and monitor their progress visually over time.

IV. Security and Privacy

Given the sensitivity of financial data, respondents consistently prioritized robust data protection. There was a clear expectation that the tool should enforce strong privacy policies and encryption protocols to ensure secure handling of personal financial information.

Pain Points

I. Complexity of Existing Tools

Several users reported that many existing financial applications are too complex or cluttered. This complexity leads to frustration and eventual disuse, especially for users without a finance background.

II. Time Constraints

Both students and faculty often operate under strict time schedules. Consequently, they favored tools that can minimize manual entry by offering automation—such as syncing with bank accounts, automated alerts, and pre-built templates.

III. Difficulty in Data Interpretation

A recurring issue involved users' inability to understand raw financial data. Participants suggested that visual aids such as interactive charts, summary dashboards, and progress bars would help make insights more digestible and actionable.

Preferred Features:

- Budget categorization by spending type.
- Real-time expense tracking and alerts.
- Goal-based savings visualization and reporting.
- Export options for financial data (CSV, PDF formats).

Functional Requirements Identified:

- Budget Creation and Management
- Automated Expense Tracking
- Financial Goal Setting and Monitoring
- Financial Reports and Insights
- Integration with External Financial Accounts
- Data Export Functionality
- Guardian Monitoring

Non-Functional Functional Requirements Identified:

- High Usability and Accessibility
- Responsive Performance
- Application Stability and Reliability
- Strong Data Security and Compliance
- Scalable Infrastructure
- Automated Data Backup Mechanism

Interview Insights

“I always start with a budget, but I lose track by the end of the month.”

– Riya, University Student, Age 21

“I want to save more, but I can’t visualize how my daily spending affects my long-term goals.”

– Nita, Marketing Executive, Age 28

“Many financial apps feel bloated. I want something clean and focused on what I actually need.”

– Sameer, Freelance Designer, Age 35

2.3 User Personas:

Persona 1: – Riya College Student

- **Age:** 21
- **Occupation:** Undergraduate Student
- **Goals:** Save for educational resources and travel
- **Frustrations:** Difficulty controlling spending, Difficulty sending integrated expenditure to parents
- **Behaviors:** Frequently uses mobile apps, visually oriented
- **Motivations:** Wants to build healthy financial habits early on

Persona 2: Arjun – Working Professional



- **Age:** 28
- **Occupation:** Software Engineer
- **Goals:** Save for a car, reduce student loan debt
- **Frustrations:** Finds traditional budgeting tedious and time-consuming
- **Behaviors:** Prefers automation and streamlined interfaces
- **Motivations:** Long-term financial freedom and efficient planning

Persona 3: Meera – Small Business Owner

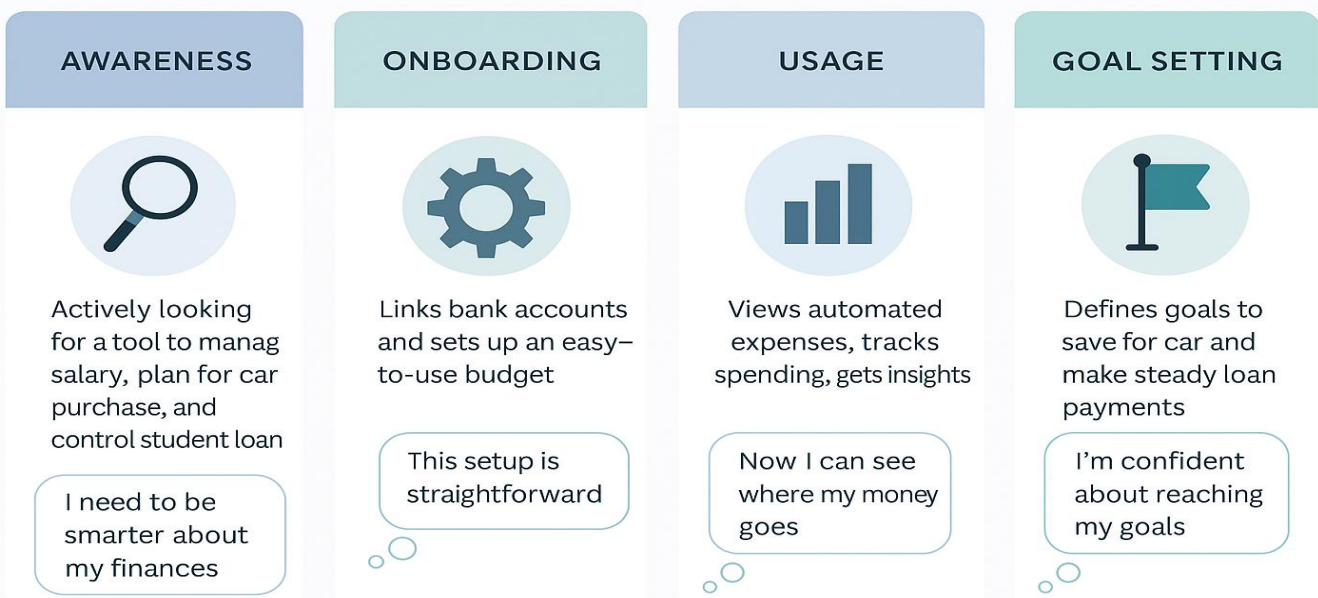
- **Age:** 40
- **Occupation:** Owner of a Boutique Store
- **Goals:** Track both business and personal expenses effectively
- **Frustrations:** Overwhelmed by complex financial tools and spreadsheets
- **Behaviors:** Uses both desktop and mobile tools regularly
- **Motivations:** Wants a centralized, organized approach to financial tracking

2.4 Journey Maps:

Riya's Journey: College Student

Stage	User Actions	Usage	Goal Setting
Stage	Hears about app from a friend 	Tracks expenses by category	Set up a savings goal 
Thoughts	"Maybe this will help me stay on budget." "	"This is easier than I expected."	"I'm motivated to reach this target."
Pain Points	Unsure about data privacy	Concerns about data syncing	Slow goal progress feels demotivating
Opportunities	Embassived encryption ssecurity	Ondrbog-tips and resurance	Motivational nudges & progress boosts

Arjun's Financial Journey



CHAPTER 3

UX Audit Document

3.1 Heuristic Evaluation of Existing Finance Apps (If applicable)

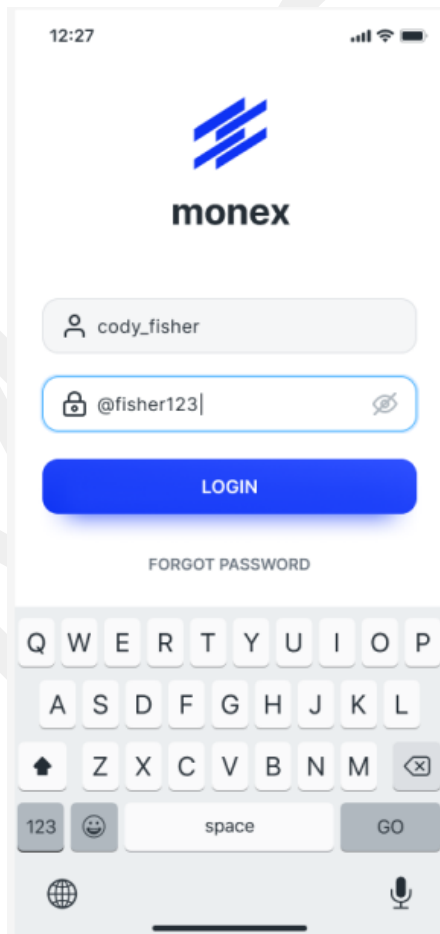
Heuristic 1: Visibility of System Status

Description:

The system should always keep users informed about what is going on, through appropriate feedback within a reasonable time.

Findings:

- **Issue:** On the login and password reset screens, there's no feedback indicator after clicking the button (e.g., “Reset Password” or “Sign in”), leading to uncertainty.
- **Screenshot:**



- **Recommendation:** Include a loading spinner or progress indicator after the user taps "Login".

Heuristic 2: Match Between System and the Real World - Satisfied

Evidence:

The app uses familiar financial terminology such as *Salary*, *Family Expense*, and *Side Business*, which match the user's real-life understanding. Visuals like calendars and categorized transactions mirror real-world scenarios of budgeting and tracking income/expenses.

Heuristic 3: User Control and Freedom - Satisfied

Evidence:

Users can easily navigate between screens using the bottom navigation bar and go back using visible buttons like "*Back to Login*". The app allows cancelling or switching actions such as "Add Income" vs "Add Expense," supporting flexibility and recovery from unintended steps.

Heuristic 4: Consistency and Standards - Satisfied

Evidence:

The app maintains consistent layouts, colors, and iconography across screens. Primary actions like "Add Goal," "Set Reminder," and "Login" are always represented using the same style of blue buttons, adhering to platform standards and maintaining uniformity.

Heuristic 5: Error Prevention -Satisfied

Evidence:

The password setup screen includes clear instructions before submission, such as "Must not contain your name or email," which helps users avoid common mistakes. Validation messages and field highlights guide users to correct input formats before proceeding.

Heuristic 6: Recognition Rather Than Recall

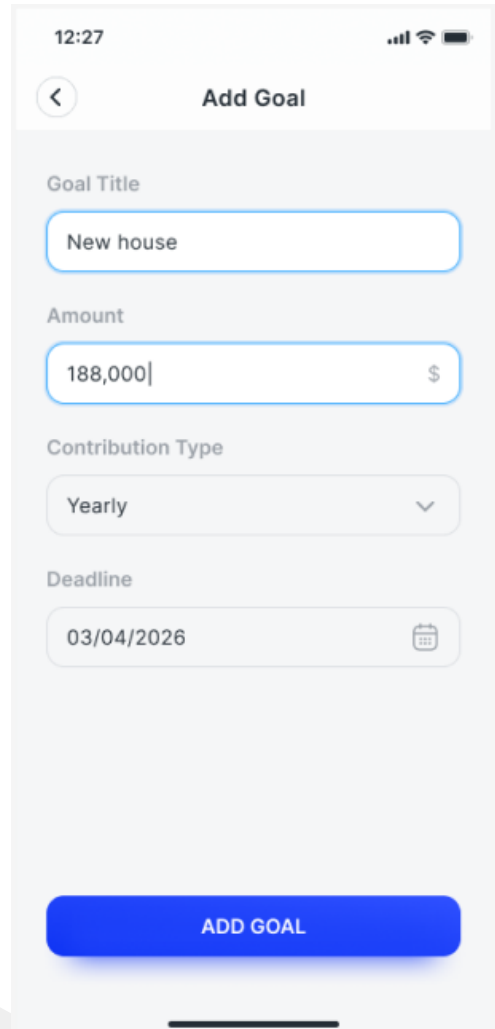
Description:

Reduce memory load by making actions/options visible.

Findings:

- **Issue:** The "Goals" section does not pre-fill common goals or suggest categories.

- **Screenshot :**



The screenshot shows a mobile application interface for adding a goal. At the top, the status bar displays the time 12:27 and signal/battery icons. Below the status bar is a navigation bar with a back arrow and the title 'Add Goal'. The form consists of four sections: 'Goal Title' with a text input field containing 'New house'; 'Amount' with a text input field containing '188,000' and a dollar sign icon; 'Contribution Type' with a dropdown menu showing 'Yearly'; and 'Deadline' with a date input field showing '03/04/2026' and a calendar icon. At the bottom of the form is a large blue button labeled 'ADD GOAL'.

- **Recommendation:** Add common goal templates like “Vacation” or “Emergency Fund”.

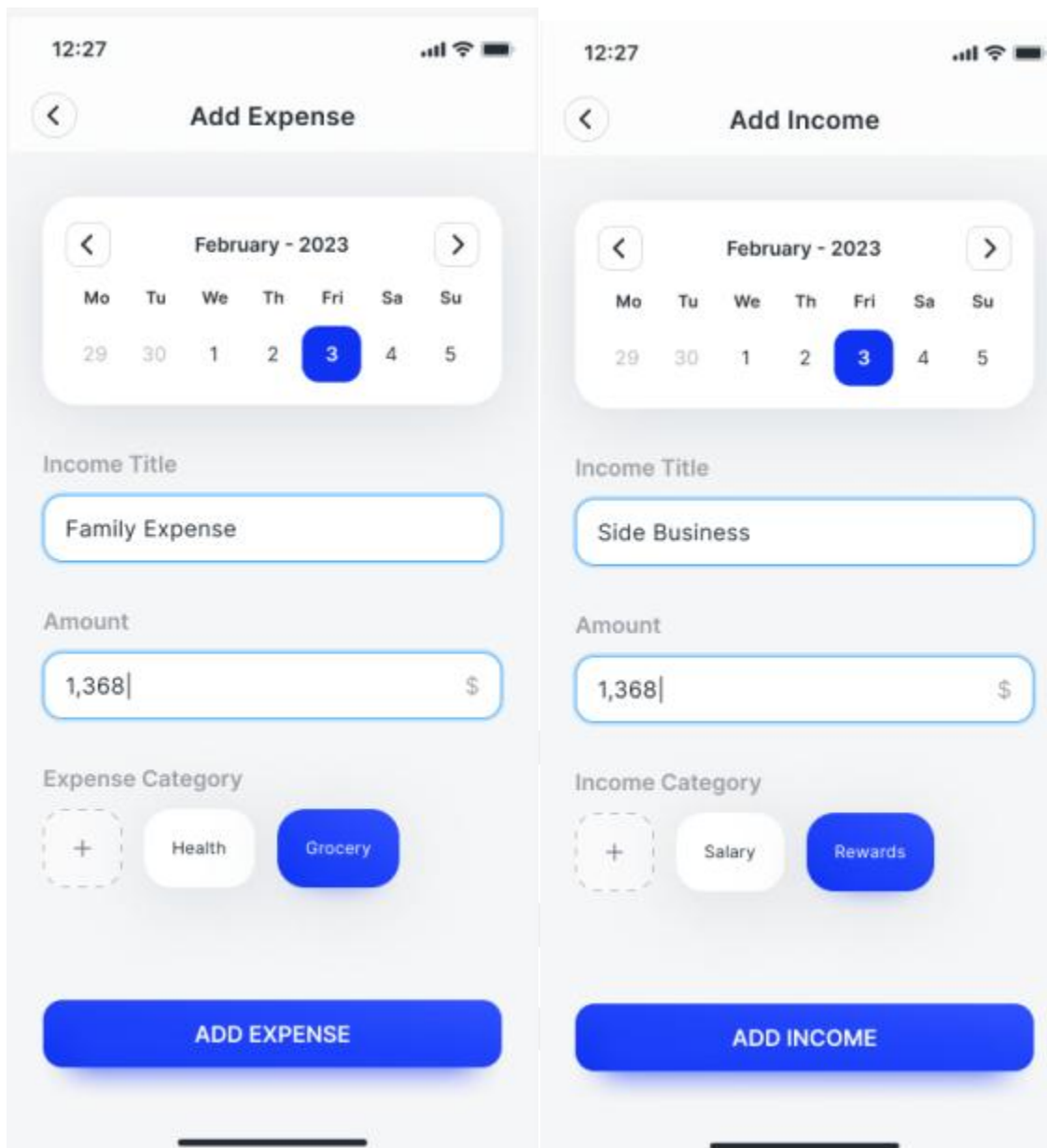
Heuristic 7: Flexibility and Efficiency of Use

Description:

Support both novice and expert users via shortcuts or accelerators.

Findings:

- **Issue:** Adding income or expense always requires manual typing, no quick-add options.
- **Screenshot 7:**



- **Recommendation:** Enable voice input, recently used categories, or QR scanning.

Heuristic 8: Aesthetic and Minimalist Design -Satisfied

Evidence:

The UI design is clean and uses sufficient whitespace, simple icons, and a consistent blue-and-white theme. The dashboard avoids information overload by grouping content under tabs like “Spends” and “Categories,” allowing users to focus on relevant data.

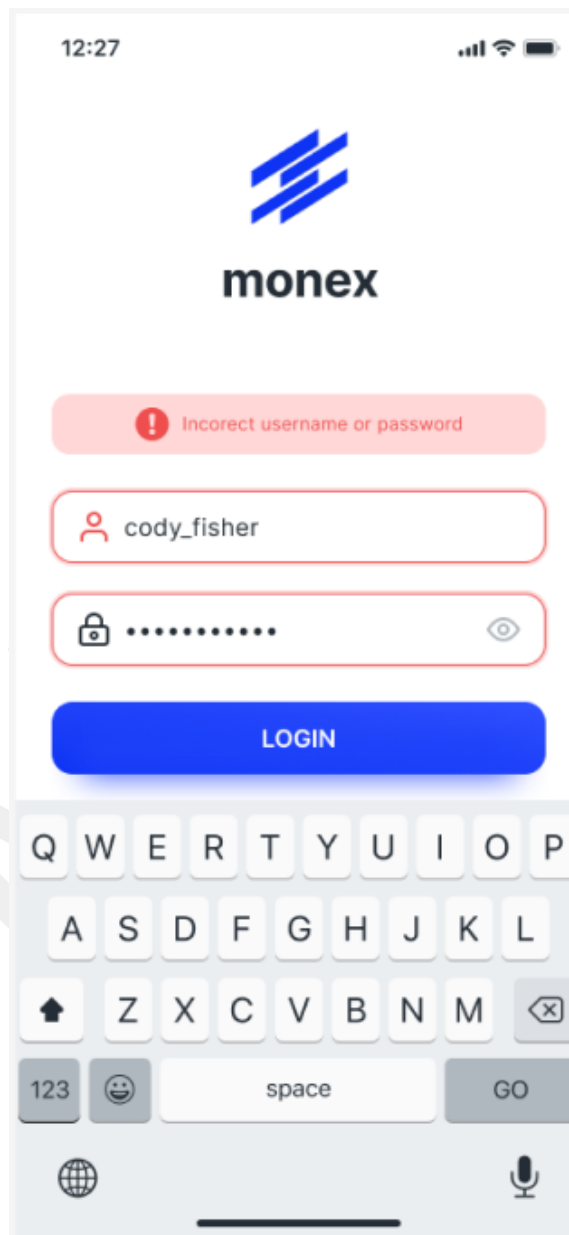
Heuristic 9: Help Users Recognize, Diagnose, and Recover from Errors

Description:

Use plain language in error messages.

Findings:

- **Issue:** Login errors like "Incorrect username or password" are vague.
- **Screenshot:**



- **Recommendation:** Clarify whether it's the username or password that's wrong

Heuristic 10: Help and Documentation - Satisfied

Evidence:

Although the app lacks a traditional help section or user manual, its intuitive design, consistent icon usage, and clear labeling guide users effectively. The password creation screen includes helpful inline tips, and most features are self-explanatory due to minimalism and standard practices. This built-in guidance serves the purpose of lightweight documentation, aiding user understanding without external references.

3.2 Key UX Issues Identified:

- **Difficult Navigation:** While tab navigation exists, the lack of descriptive text labels beside icons can confuse first-time users. It's not immediately obvious what each icon represents, especially in areas like "Reminders" or "Savings."
- **Lack of Visual Clarity:** The UI uses a lot of white space and soft colors, which looks clean but can reduce clarity. Key figures (like total expenses or category breakdowns) can blend in with the background due to low contrast.
- **Complex Onboarding:** The password reset process includes multiple validation messages that appear suddenly, which may cause cognitive overload. Additionally, users are not clearly guided through the process with step indicators or visual feedback.
- **Overwhelming Data Presentation:** Screens like "Total Expenses" and "Categories" are data-dense. There are no summarizing graphics like bar charts or pie charts (except one instance), making it harder to interpret financial insights at a glance.
- **Limited Feedback on Actions:** After certain actions like "Add Expense" or "Set Reminder," there's minimal confirmation (e.g., a small visual change or toast message) that the action was successful. This can leave users uncertain.
- **Inconsistent Input Styles:** Some input fields (e.g., income vs. password setup) show different validation styles or behaviors. This inconsistency can disrupt the user's expectation of how forms will work throughout the app.
- **Limited Accessibility Considerations:** The app does not appear to support accessibility features like font resizing, screen reader labels, or high contrast modes, which limits its usability for diverse user groups.

- **No Undo/Cancel Options:** Financial entries like expenses or goals are immediately submitted without an easy undo or cancel option. Mistakes may require the user to manually delete and re-enter the data.

- **Minimal Micro interactions:** The interface lacks engaging feedback animations or transitions (e.g., button press effects or goal completion progress), which can make the experience feel static or unresponsive.

Chapter 4

Task Flows & Sitemap

4.1 Task Flows:

TASK FLOWS



TASK FLOWS

Parental Control

Verification

QR scan / Login

Choice selection

Monitor

Linking Account

Navigate to profile

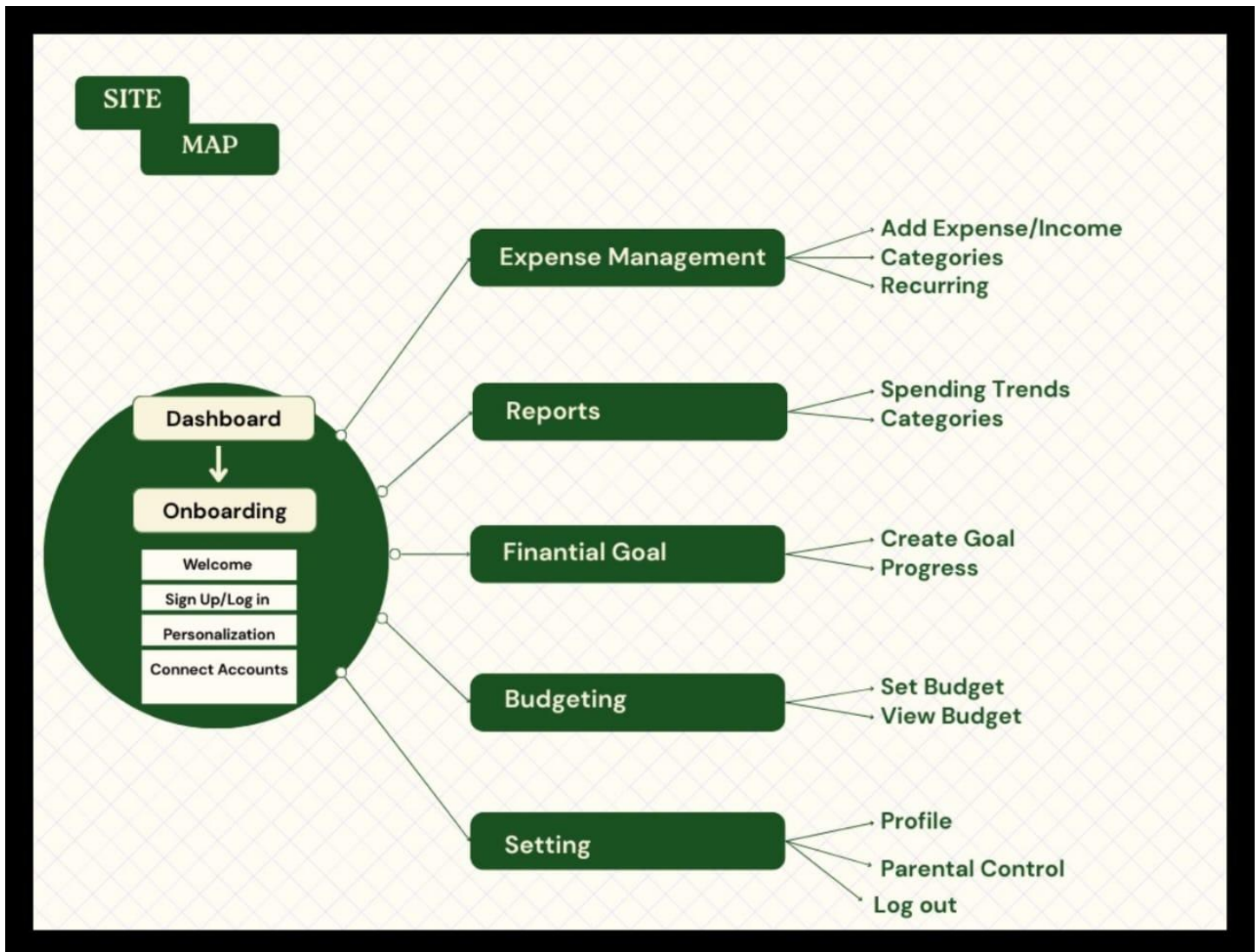
Tap Account

Add new wallet

Enter details

Save

4.2 Sitemap



Chapter 5

Wireframes & Interactive Prototype (Figma)

5.1 Low-Fidelity Wireframes:

The image displays three sequential mobile app wireframes for an onboarding process. Each wireframe is titled at the top: 'Onboarding / Sign Up', 'Onboarding / Sign Up - ...', and 'Onboarding / Setup Pin ...'.

Wireframe 1: Sign Up
This screen features a back arrow and the title 'Sign Up'. It includes three input fields for 'Name', 'Email', and 'Password' (with an eye icon for toggling visibility). Below these is a 'Sign Up' button, followed by the text 'Or with' and a 'Sign Up with Google' button. At the bottom, it says 'Already have an account? [Login](#)'.

Wireframe 2: Verification
This screen has a back arrow and the title 'Verification'. It prompts the user to 'Enter your Verification Code' with four dots indicating the code length. Below this is a 'Verify' button and a numeric keypad with digits 1-9, 0, and a backspace icon.

Wireframe 3: Setup Pin
This screen displays the message 'Ok. Re type your PIN again.' above four dots representing the PIN. Below is a numeric keypad with digits 1-9, 0, and a right arrow.

Onboarding / Add new ...

← Add new wallet

Balance

₹

Chase

Bank

Bank

Continue

Onboarding / Forgot Pa...

← Forgot Password

Enter your email

Email

Continue

Onboarding / Reset Pas...

← Reset Password

New Password

Retype new password

Continue

Home

October

Account Balance

₹9000

Spend Frequency

Week Month Year

Recent Transaction

Shopping - ₹

Home Transaction Budget Profile

Income / Detail Transaction

← Detail Transaction

₹

Salary for July

Type Category Wallet

Income Salary Chase

Description

Attachment

Edit

Transaction

Month

See your financial report

Today

Shopping - ₹

Subscription - ₹

Food - ₹




Yesterday





Salary + ₹





Transportation - ₹

Home Transaction Budget Profile


← Financial Report


▼ Month   


   


   

Expense Income

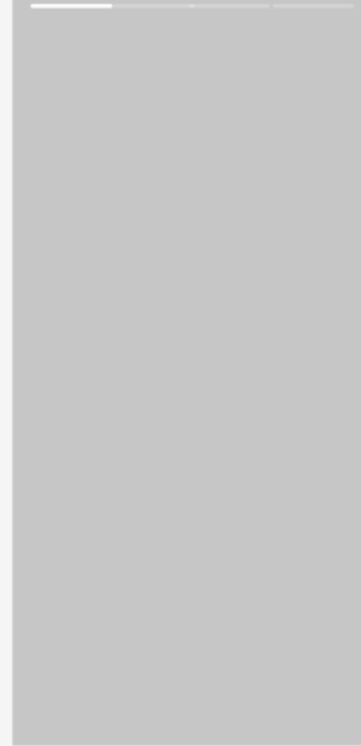
▼ Transaction 


 Shopping - ₹

 Subscription - ₹

 Food - ₹

This Month



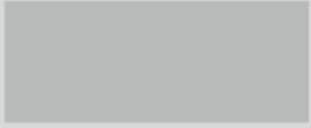
← Detail Transaction 

₹5000

Salary for July
Saturday 4 June 2021 16:20

Type	Category	Wallet
Income	Salary	Chase

Description



Attachment

Remove this transaction?

No Yes

← Transfer

How much?

₹

Category ▼

Description

Wallet ▼

Add attachment

Repeat ☐

Continue

← Income

How much?

₹

Category ▼

Description

Wallet ▼

Add attachment

Repeat ☐

Continue

← Expense

How much?

₹

Category ▼

Description

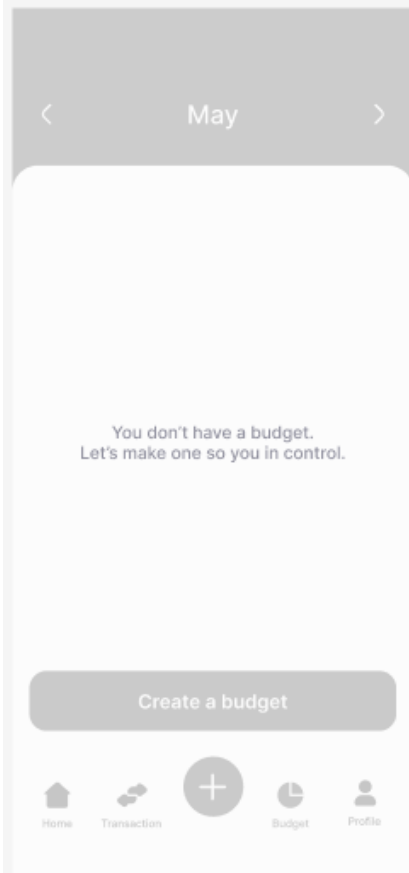
Wallet ▼

Add attachment

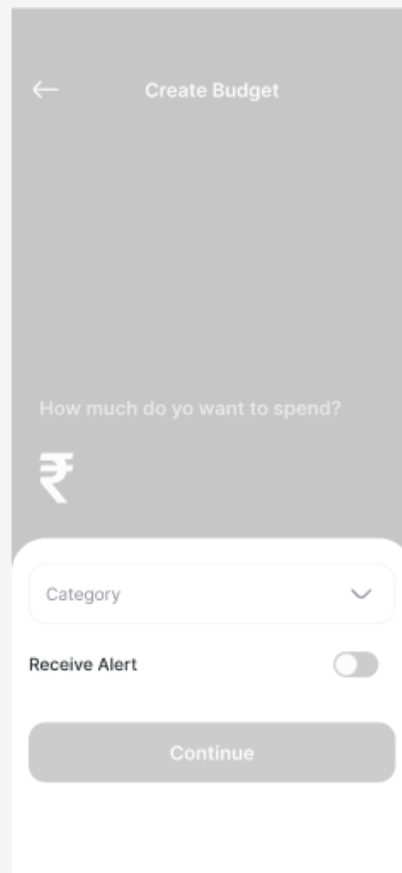
Repeat ☐

Continue

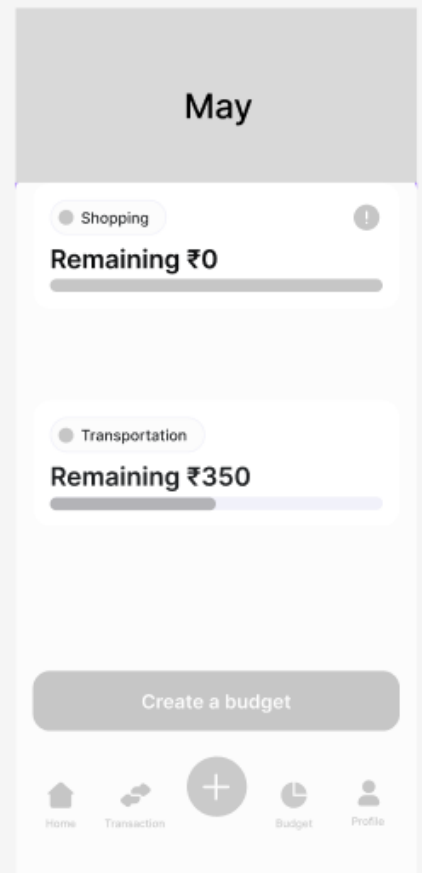
Budget / Empty_State



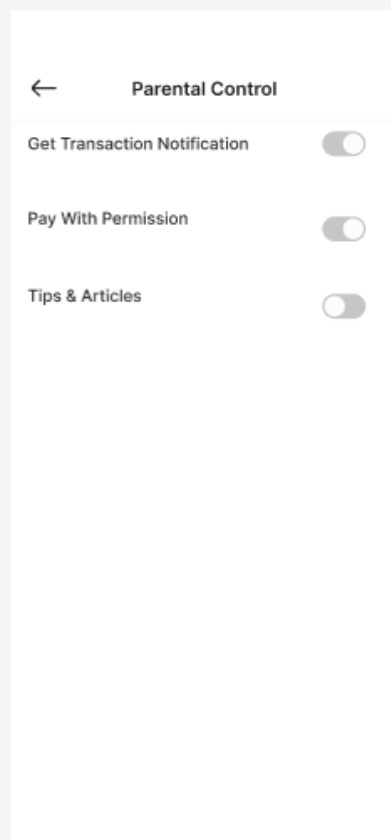
Budget / Create_Budget



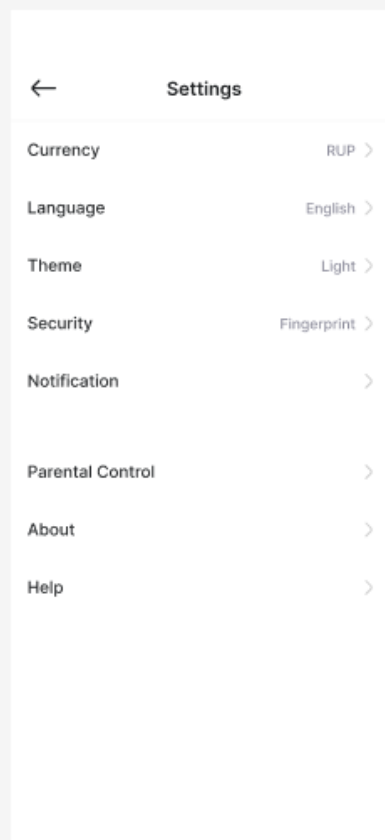
Budget / Budget



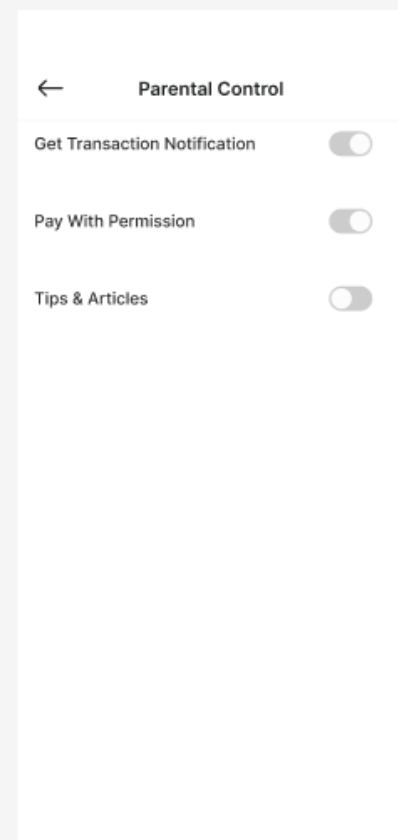
Settings / Parental Control



Settings / Settings



Settings / Parental Control



Settings / Notification

Notification

Expense Alert ☐

Budget ☐

Tips & Articles ☐

Settings / Parental Control / For...

Login to the App by QR code

Done

Settings / Export Data

Export Data

What data do your want to export?

When date range?

What format do you want to export?

Export

Profile

Username

Persons Name

Account

Settings

Export Data

Logout

Home

Transaction

+

Budget

Profile

Logout

User ID

Persons Name

My Wallet

Settings

Export Data

Logout

Logout?

No
Yes

Account / Account

Account

Account Balance

₹

Wallet ₹

Phone Pay ₹

G Pay ₹

Paypal ₹

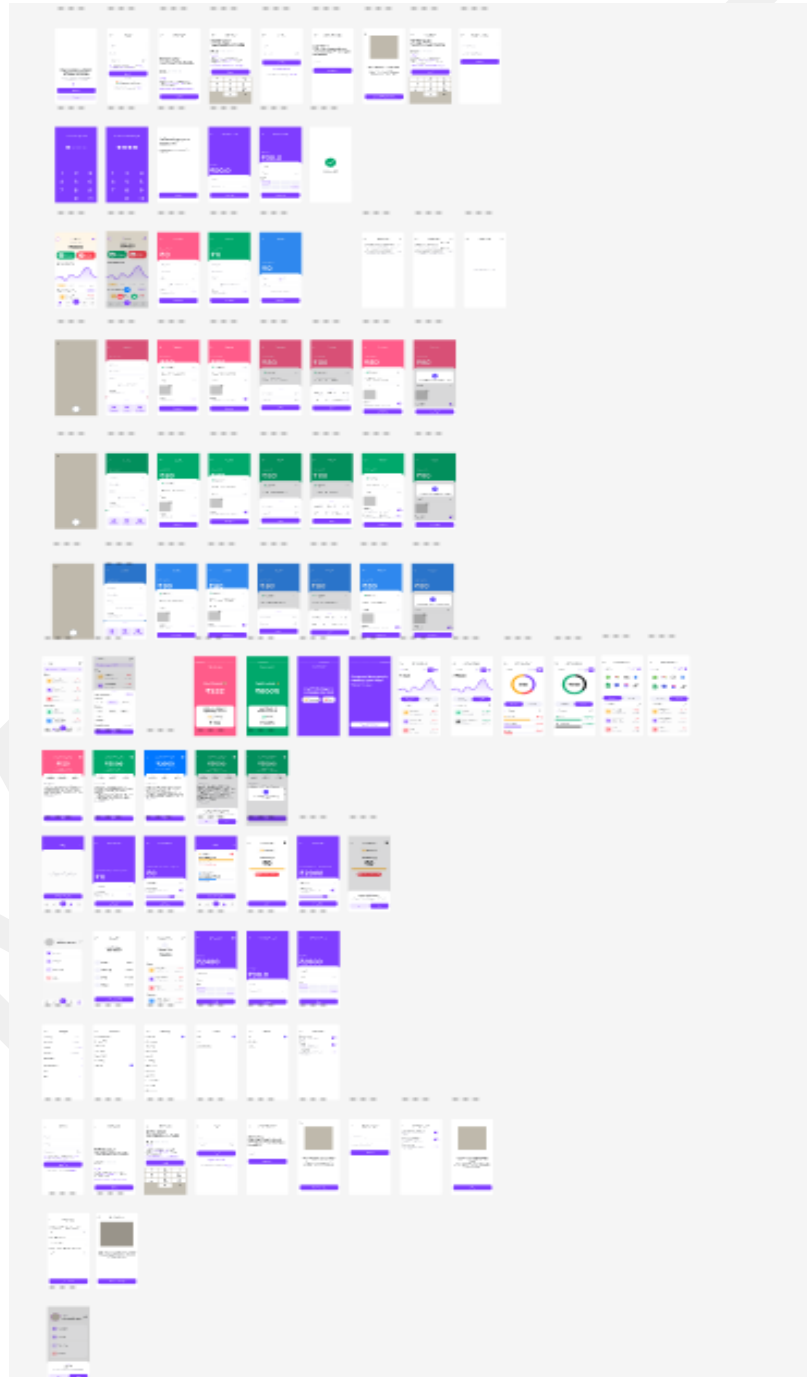
+ Add new wallet

5.2 High-Fidelity Prototype

Link to the interactive prototype:

<https://www.figma.com/design/hFMuV0D9V1ydxMpcOXr1qI/CURRENT?node-id=0-1&t=YNtM6gP4exNDCsx5-1>

Figma designs showcasing the final UI:



Chapter 6

Style Guide (UI Components, Typography, Color Scheme)

- **Typography:**

h1 2.986rem	Financial management
h2 2.488rem	Financial management
h3 2.074rem	Financial management
h4 1.728rem	Financial management
h5 1.44rem	Financial management
h6 1.2rem	Financial management

- **Colour Palette:**

BLUE

Blue

● 18.74 AAA AAA

112

Light

#eaf3fd

rgb(234, 243, 253)

● 17.69 AAA AAA

119

Light :hover

#e0e3fc

rgb(224, 237, 252)

● 14.82 AAA AAA

144

Light :active

#bdfafa

rgb(191, 218, 250)

● 5.88 AAA AA

357 AA

Normal

#2f88ee

rgb(47, 136, 238)

● 4.85 AAA AA

433 AA

Normal :hover

#2a7ad6

rgb(42, 122, 214)

● 4.01 AA

523 AAA AA

Normal :active

#266dbe

rgb(38, 109, 190)

● 3.82 AA

580 AAA AA

Dark

#2366b3

rgb(35, 102, 179)

● 2.65

782 AAA AA

Dark :hover

#1c528f

rgb(28, 82, 143)

● 1.91

1039 AAA AAA

Dark :active

#153d6b

rgb(21, 61, 107)

● 1.57

1338 AAA AAA

Darker

#103053

rgb(16, 48, 83)

NEUTRAL

Neutral

● 20.83 AAA AAA

101

Light

#fffffc

rgb(255, 254, 252)

● 20.82 AAA AAA

101

Light :hover

#fffffb

rgb(255, 254, 251)

● 20.52 AAA AAA

102

Light :active

#fffcf7

rgb(255, 252, 247)

● 19.57 AAA AAA

107

Normal

#fffb95

rgb(255, 246, 229)

● 15.80 AAA AAA

135

Normal :hover

#e6ddce

rgb(230, 221, 206)

● 12.24 AAA AAA

172

Normal :active

#cccc5b7

rgb(204, 197, 183)

● 10.75 AAA AAA

186

Dark

#bf69ac

rgb(191, 185, 172)

● 8.95 AAA AA

302

Dark :hover

#999489

rgb(153, 148, 137)

● 4.20 AA

500 AAA AA

Dark :active

#736f67

rgb(115, 111, 103)

● 2.57

731 AAA AAA

Darker

#585650

rgb(89, 86, 80)

GREEN

Green

● 18.81 AAA AAA

112

Light

#e6f6f0

rgb(230, 246, 240)

● 17.83 AAA AAA

118

Light :hover

#d9f2e9

rgb(217, 242, 233)

● 14.88 AAA AAA

141

Light :active

#b0e4d1

rgb(176, 228, 209)

● 8.81 AAA AA

308

Normal

#00a86b

rgb(0, 168, 107)

● 5.80 AAA AA

375 AA

Normal :hover

#009760

rgb(0, 151, 96)

● 4.54 AAA AA

462 AAA AA

Normal :active

#008656

rgb(0, 134, 86)

● 4.10 AA

512 AAA AA

Dark

#007e50

rgb(0, 126, 80)

● 2.94

715 AAA AAA

Dark :hover

#006540

rgb(0, 101, 64)

● 2.08

1011 AAA AAA

Dark :active

#004c30

rgb(0, 76, 48)

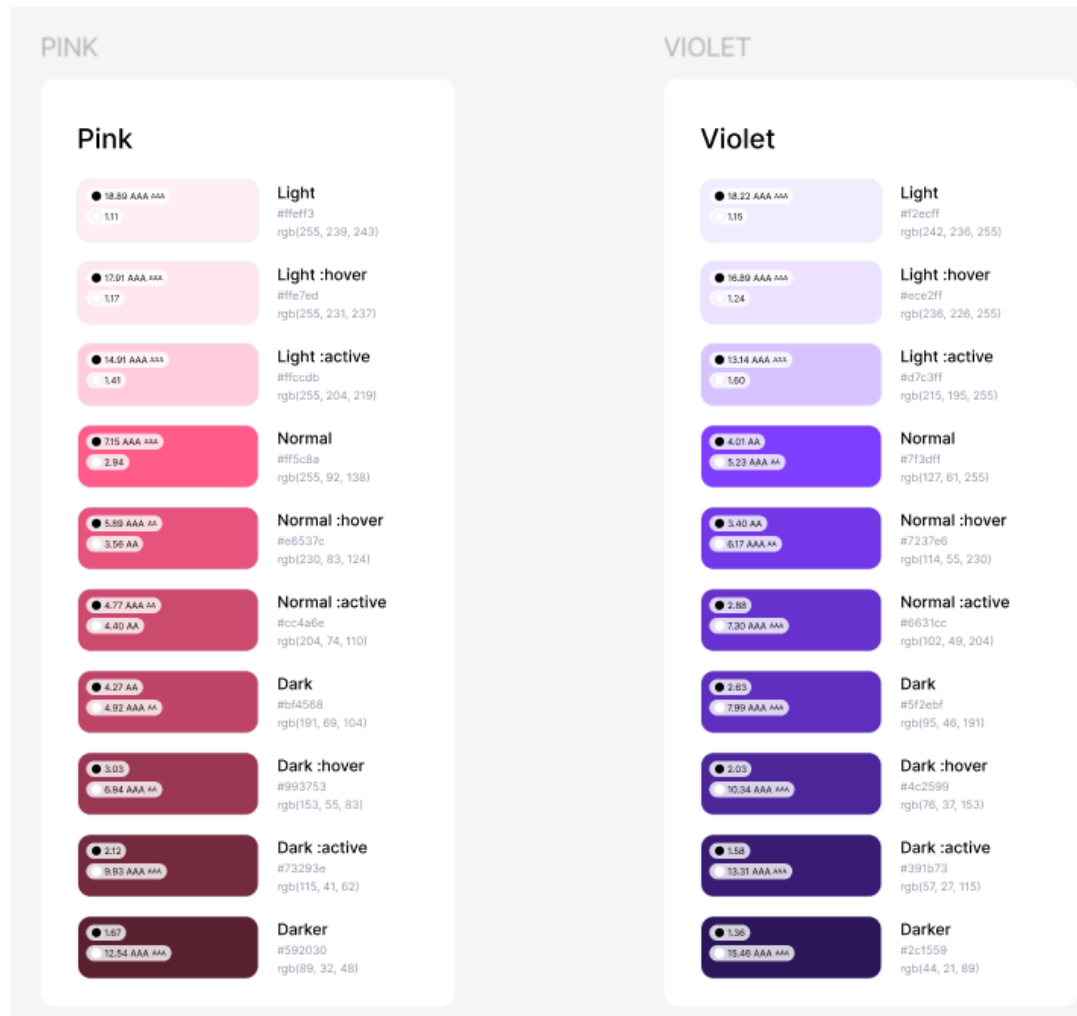
● 1.65

1271 AAA AAA

Darker

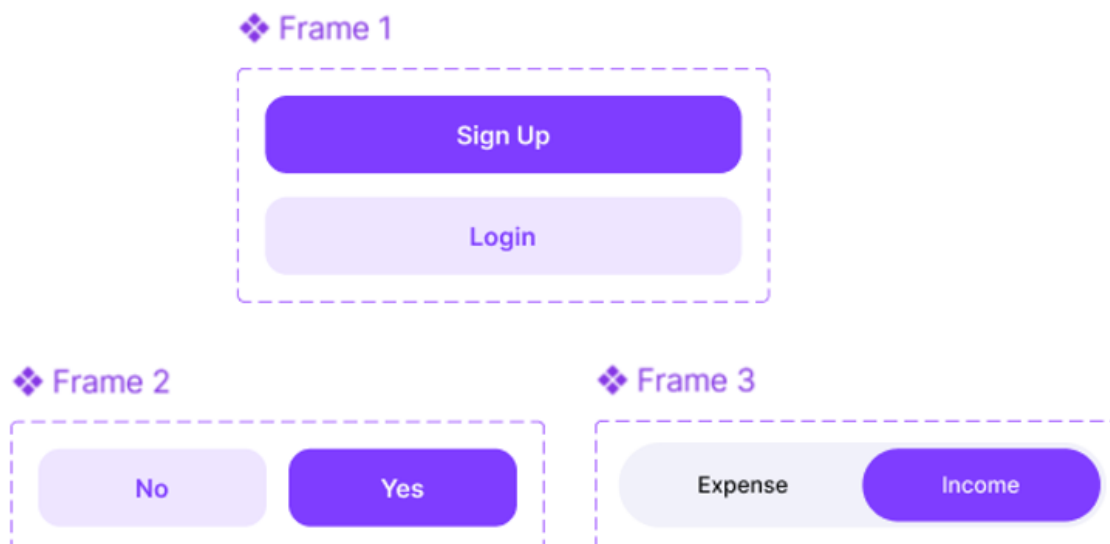
#003b25

rgb(0, 59, 37)



- **UI Components** (Buttons, cards, tables, icons).

Buttons:



Charts:

Chart 1

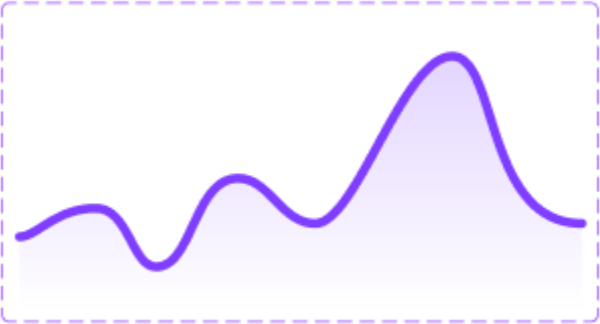
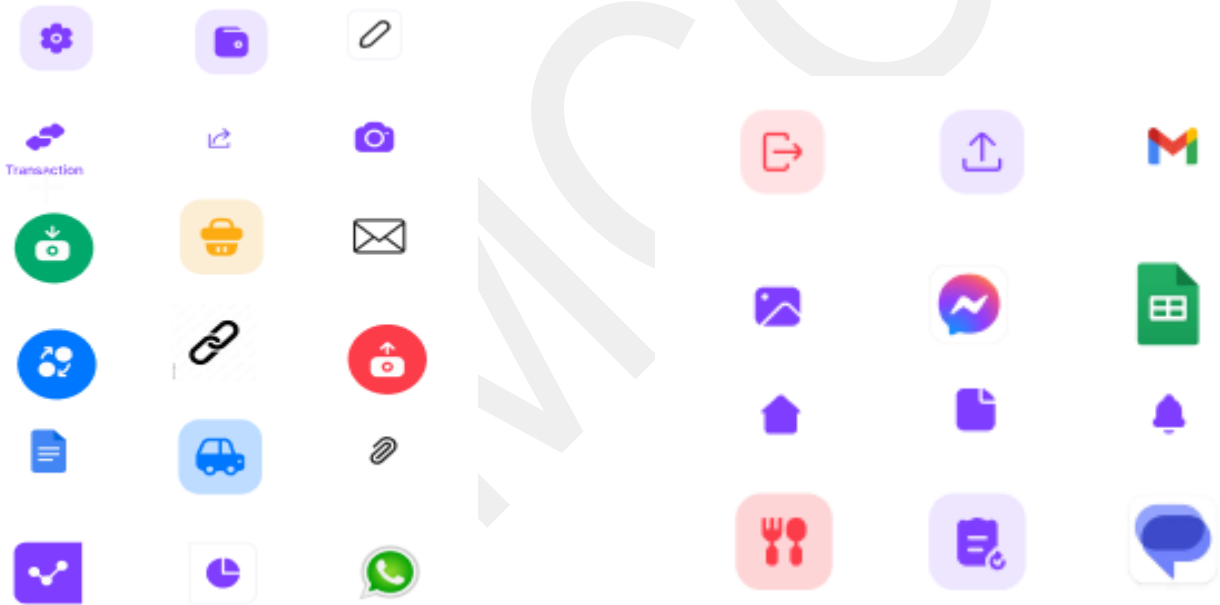


Chart 2



Icons:



Chapter 7

Findings, Designs & Improvements

7.1 Key Research Insights:

The UX research for the Financial Management Tool highlighted several critical user expectations, challenges, and behavior patterns that shaped the direction of the app's key features — particularly **Parental Control functionality** and **payment app integration with visual analytics**.

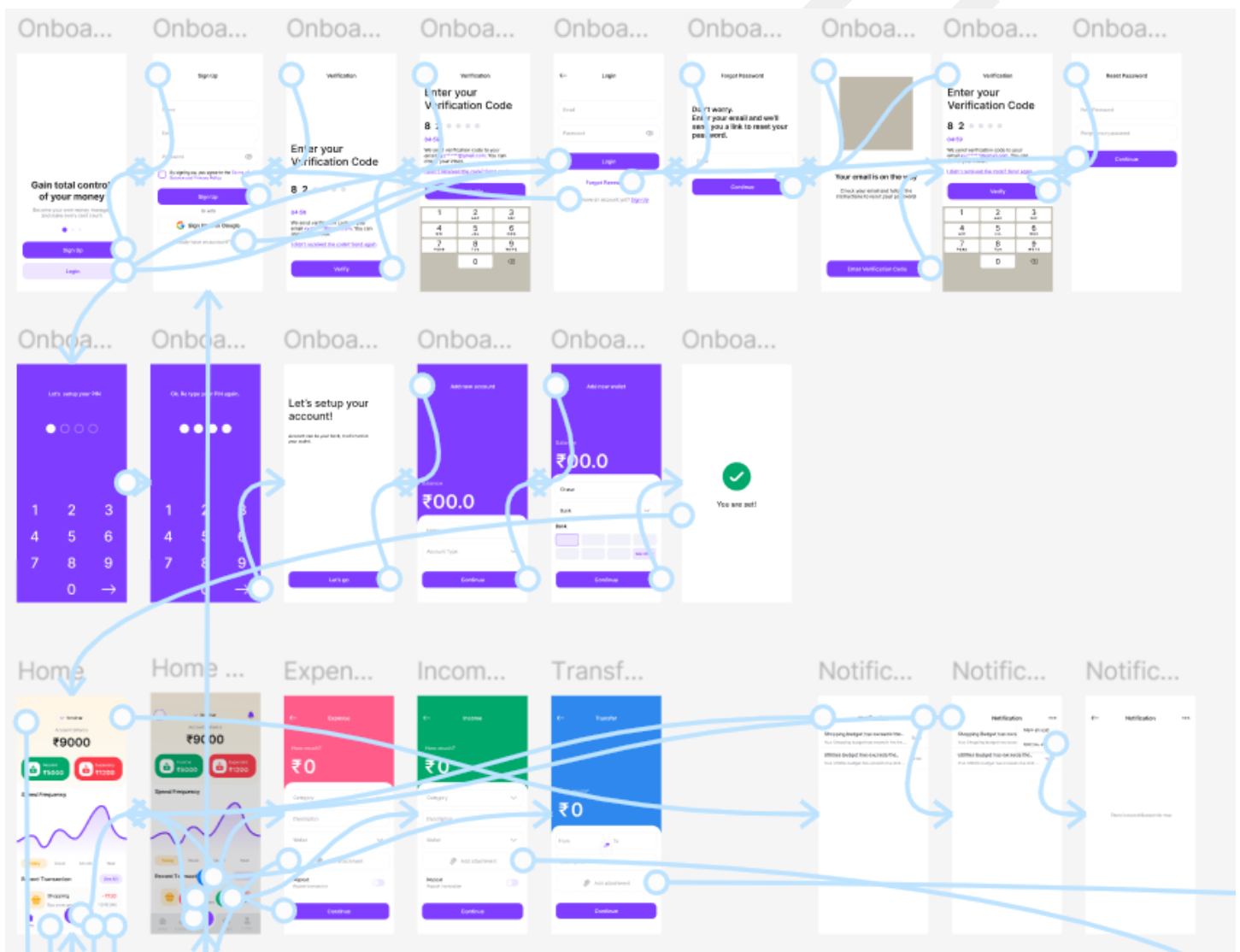
Key UX Findings:

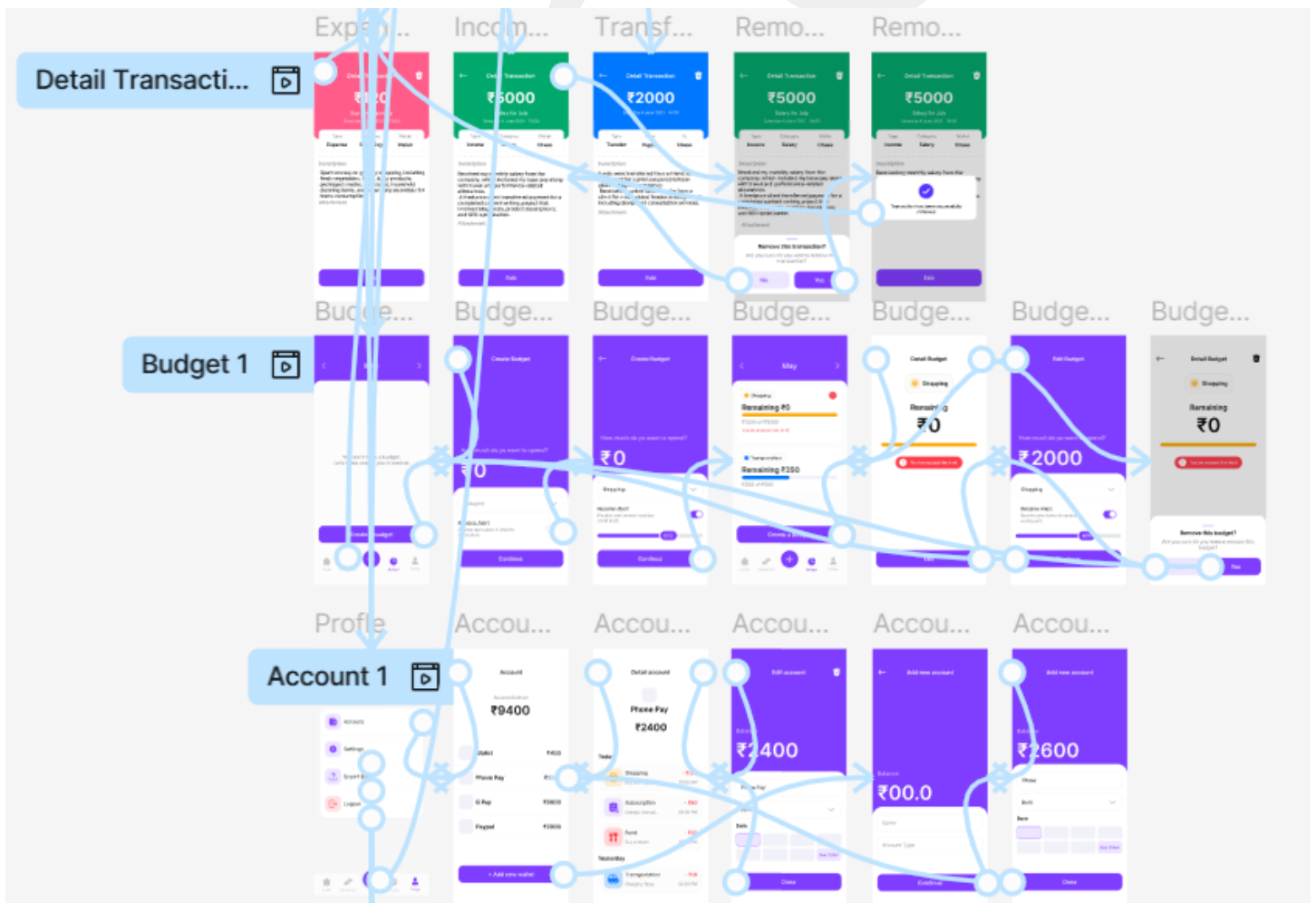
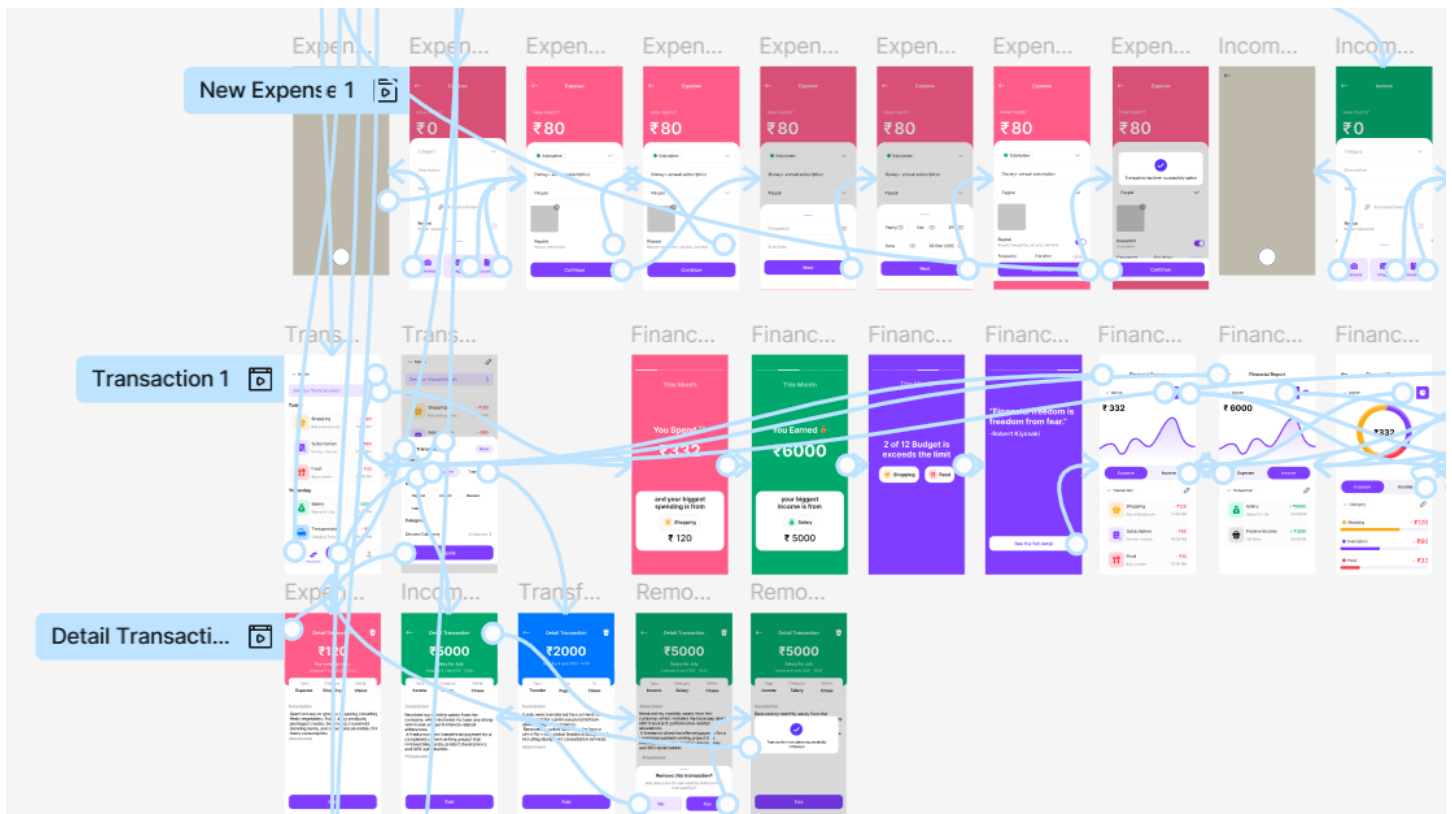
- **Parental Monitoring is in Demand for Young Users:**
During user interviews, a recurring concern among parents of teenage and young adult users was the lack of oversight on digital spending. This insight led to the inclusion of a **Parental Control feature**, allowing **parents to monitor** and **guide** their child's financial activities.
Parents can view categorized expenses, set spending limits, and receive alerts for transactions exceeding predefined budgets — promoting financial responsibility in young users.
- **Seamless Integration with Payment Platforms is Expected:**
Many users preferred not to manually enter their expenses. Based on this feedback, the app includes a powerful feature to **integrate directly with bank accounts or digital wallets like PhonePe**.
This integration pulls real-time transaction data, reducing manual input and ensuring accuracy in budget tracking.
- **Visual Data Representation Enhances Understanding:**
Users showed a strong preference for visually intuitive dashboards. To address this, the app transforms transaction data into **interactive charts and graphs**, offering clear insights into spending patterns over time.
Users can easily understand where their money goes, empowering better decision-making.
- **Control + Customization = Satisfaction:**
Customizable alerts, budget and control over which accounts to integrate (e.g., specific banks or only PhonePe) were highly valued by users, particularly those managing shared accounts or student budgets.
- **Security & Privacy Matter Deeply:**
Especially with parental monitoring and third-party integrations, users were highly concerned about data security. This reinforced the need for robust **authentication**

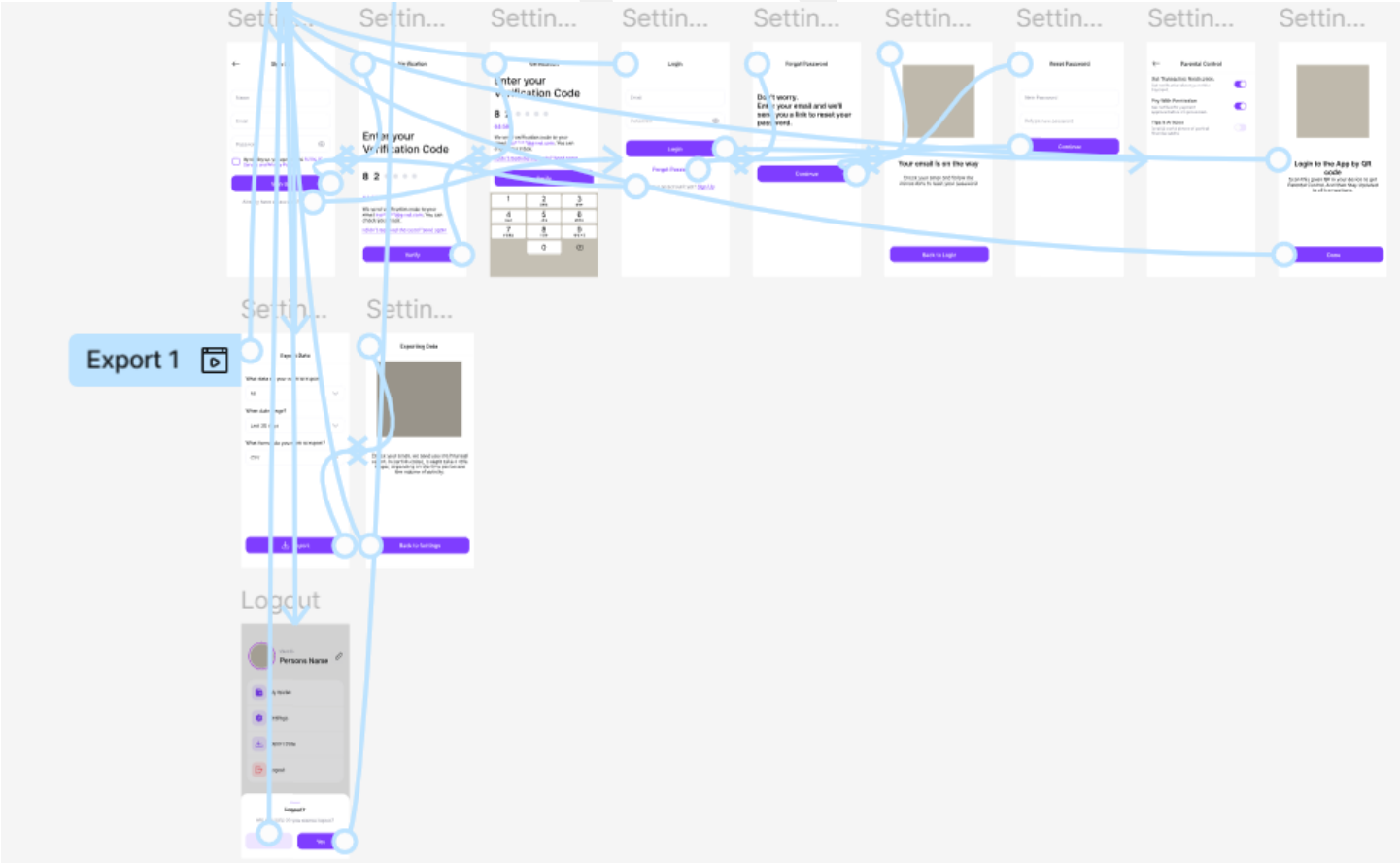
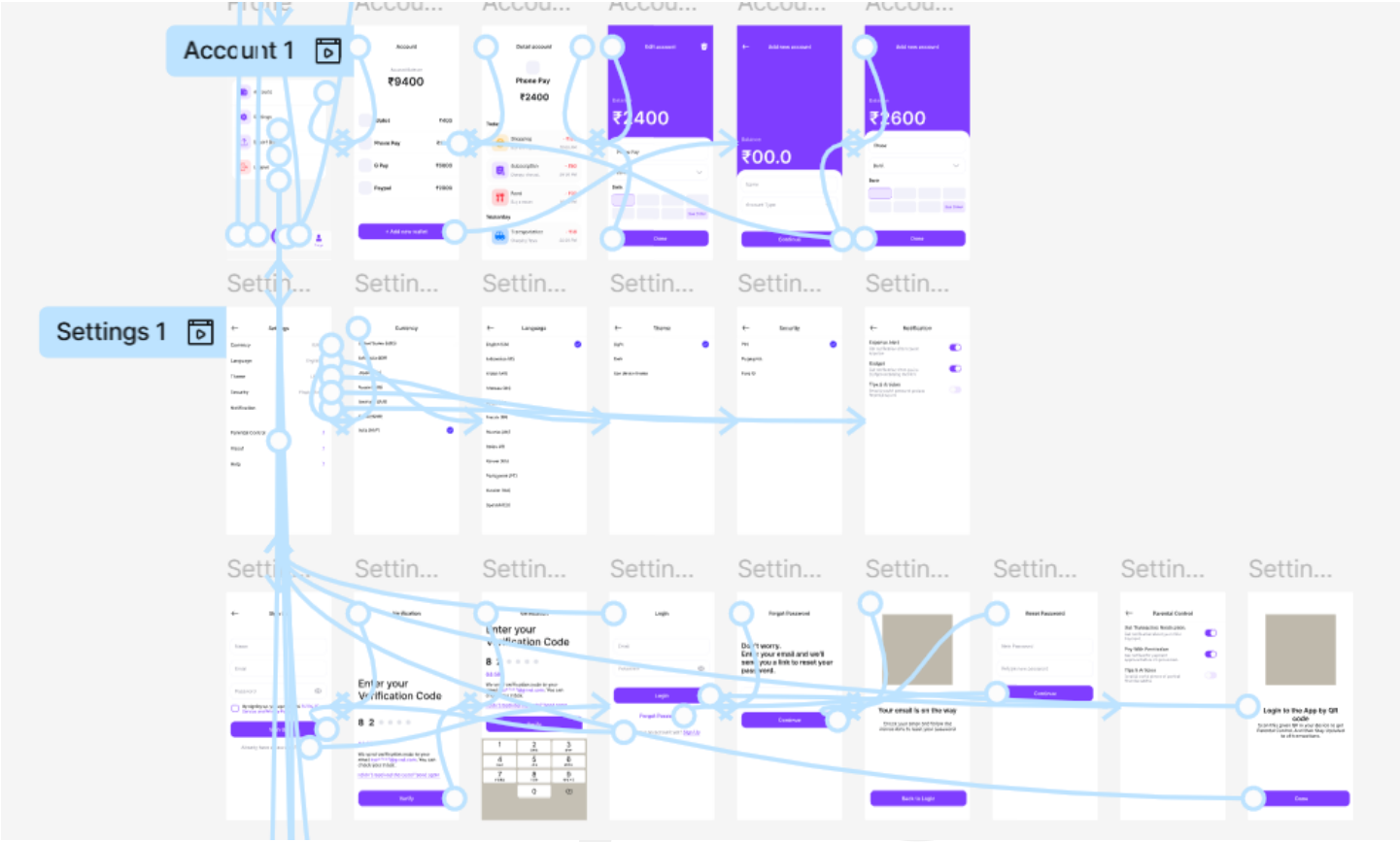
mechanisms, encrypted data transfers, and transparent user consent dialogs before syncing accounts.

These insights not only validated the core features of the app, but also helped guide the UI structure and flow to ensure a smooth, intuitive, and user-centered experience. The focus remained on designing clear, purposeful interfaces that reflect user needs and simulate real-world scenarios effectively.

7.2 Final Design Showcase:







7.3 Future Improvements:

While the **current UI provides a strong foundation**, several future improvements were identified through user feedback:

- **Dark Mode and Accessibility Settings**

To improve comfort and inclusivity, especially during night-time usage or for users with visual impairments, adding a Dark Mode toggle, font resizing options, and screen reader-friendly labels would make the app more accessible and user-friendly.

- **UI Feedback and Confirmation Alerts**

Adding subtle **confirmation alerts, tooltips, and animations** (e.g., “Transaction Added” pop-ups or visual feedback when reaching spending limits) can enhance the sense of interactivity and guide the user’s actions intuitively.

- **Visual Spending Heatmaps**

Introduce a **calendar-based heatmap UI** where users can see their daily spending intensity over a month. Dates with higher spending can appear in darker shades, giving users a **quick-glance visual** of their financial behavior across time. This helps users identify patterns — like weekend overspending — without diving into charts