

IDEATION FOR PERSONAL EXPENSE TRACKER:

Due to the lack of basic financial education, people have poor spending habits, and poor control over finances. Every year thousands of people get purchasing power without knowing the basics. WE ARE looking for a way to extend their market by helping young adults to build spending habits and monitor them as well to prepare them for a financially independent lifestyle.

Most of the young people are not aware of how to build a financially independent lifestyle for themselves. They are often misled by many factors to buy and spend on things that are not important for their lifestyle. Adding a layer on the app to build and improve their financial wealth will help them to use that feature and attain a **financially independent lifestyle**.

Assumptions about User

- Users want to improve their financial situation.
- They want to track their **spendings and expenses** (especially during this pandemic).
- Young people spend their income on **unwanted things**.
- People also want to earn additional income.
- I assume that people are not using many fintech apps for their benefit. So they would like to have many features under 1 application.
- I assume if people are **aware of their income and expenses** they might save a lot of money and they can use that wisely.
- Most young people don't have a budget plan.
- Most young people aren't aware of how much they are spending.
- People who come out of college **suffer more** as they are not prepared to plan their finances.
- Due to **poor financial planning**, people might get into debt.

Assumptions about Product

- PhonePe is one of the most-used apps for payment and they are expanding their market by **adding more features in their bucket** to increase the number of users.
- Digital payment apps are now increasing and improving their values **to reach more customers.**
- By helping people to improve their financial situation will make users use the app **more frequently.**
- It will increase the **screen time of users** and also might increase the number of users so that they have more chances to advertise and do business.

Individual Brainstorming

I started my brainstorming session by opening the PhonePe app first and check which features are currently supporting to increase people's financial wealth and what else can be added.

Brainstorming

Basic finance tips
can be given to
users

Hariharan

Users can invest
in funds, stocks,
etc to raise their
money game.

Hariharan

Users could learn
and use
advantages in
bankings.

Hariharan

Financial
guidance and
support

Hariharan

A tracker to track
Users' income
and spendings

Hariharan

Users can earn
small amount of
money through
the app like
watching Ads,
beta user, etc.

Hariharan

Initially, I came up with the above ideas that would solve the users' problems effectively. Then after considering the time and product constraints, I decided to scope down and go with the below ideas,

- **Tracker** — I assumed it would lay a foundation for the users by **tracking their income and expenses** to improve their financial goals.
- **Earning money via the app** — This can help the users to get a **small amount of money** to satisfy their needs.

Then I started to ideate how the ideas can be presented and what features can be included.

A tracker to track Users' income and spendings

Haritharan

Users can select their ideal budget plan for their use.

Example: 50/30/20 rule

Haritharan

Users can enter the income for a month/week/year/ preferred months

Haritharan

Automatically feeds the amount from the payments which user done via app.

Users can add manually the amount(spendings) as well.

Haritharan

Overall budget report for the users (monthly, yearly, etc)

Haritharan

Notification and alerts

- Overspending
- underspending
- to remind the user to enter the spendings
- Budget reports

Haritharan

Suggestions for users to use the savings

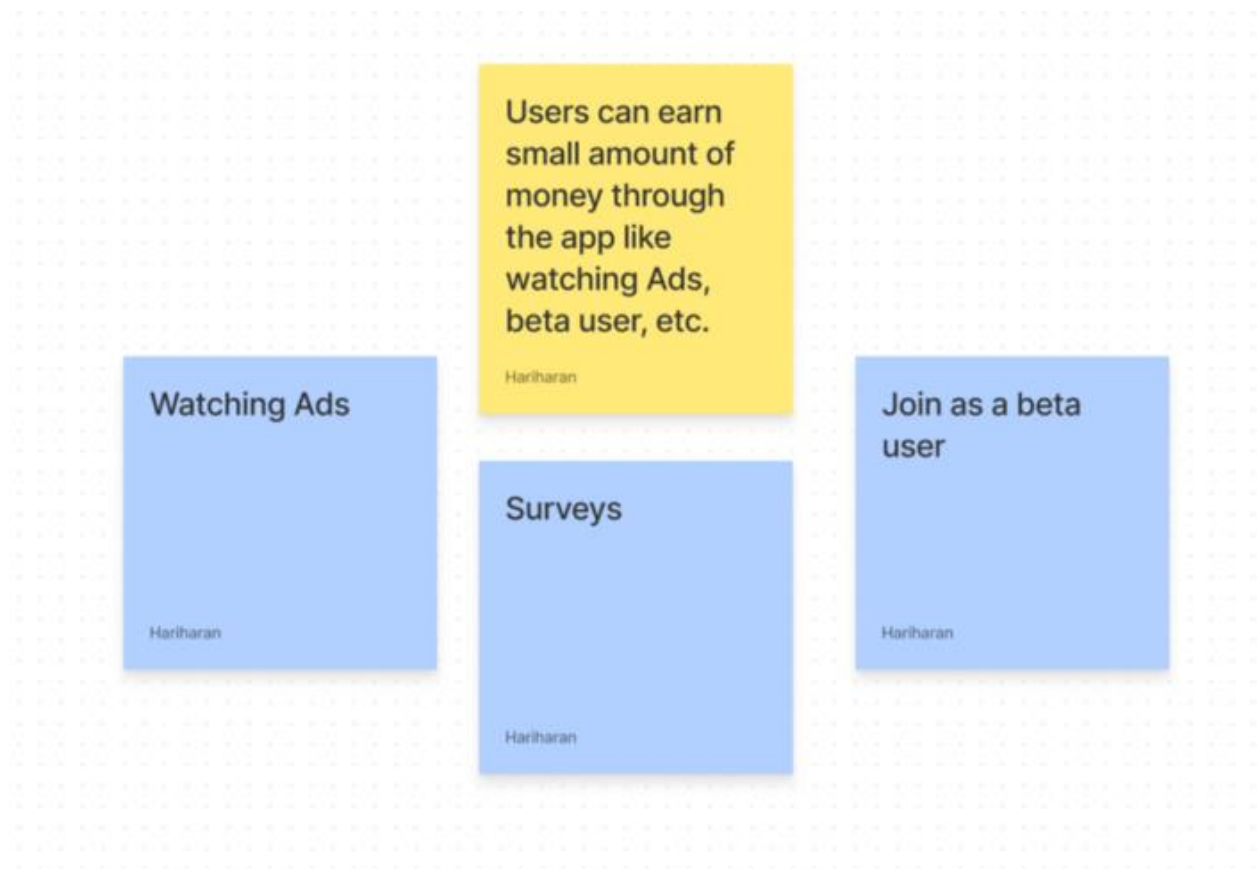
- Emergency fund
- Invest in funds

Haritharan

Users can carry forward the budget for the next month.

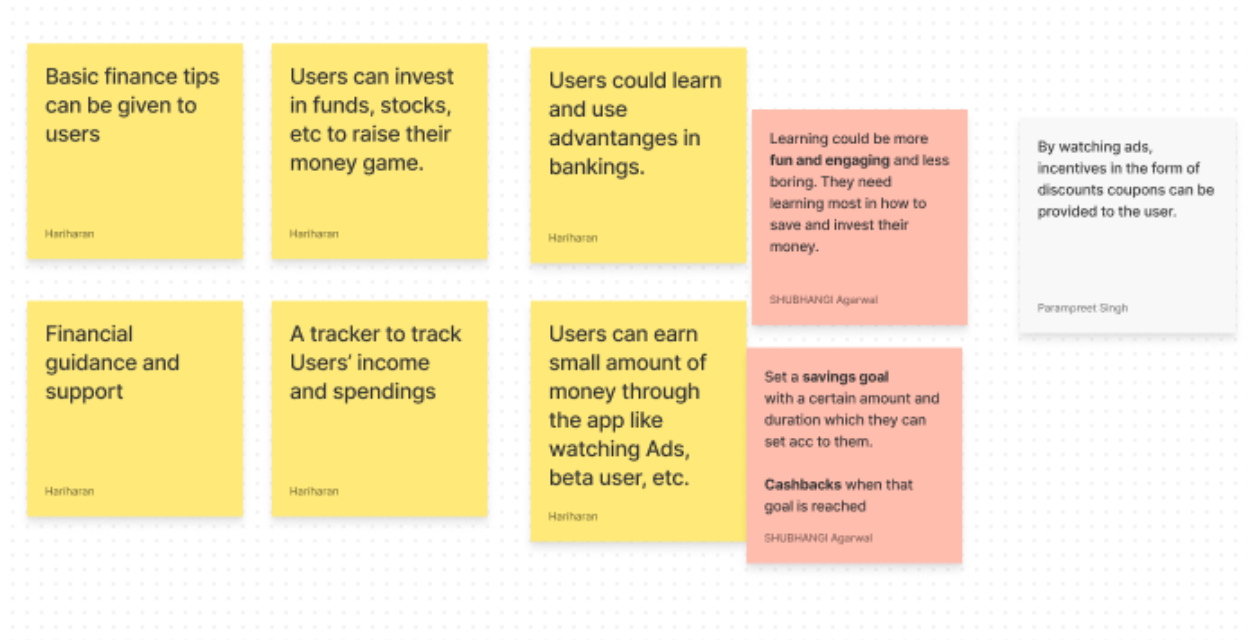
eg: If a user saves more money (suppose to 20% but saves 25%) they can have a option to carry that 5% for next month to spend

Haritharan

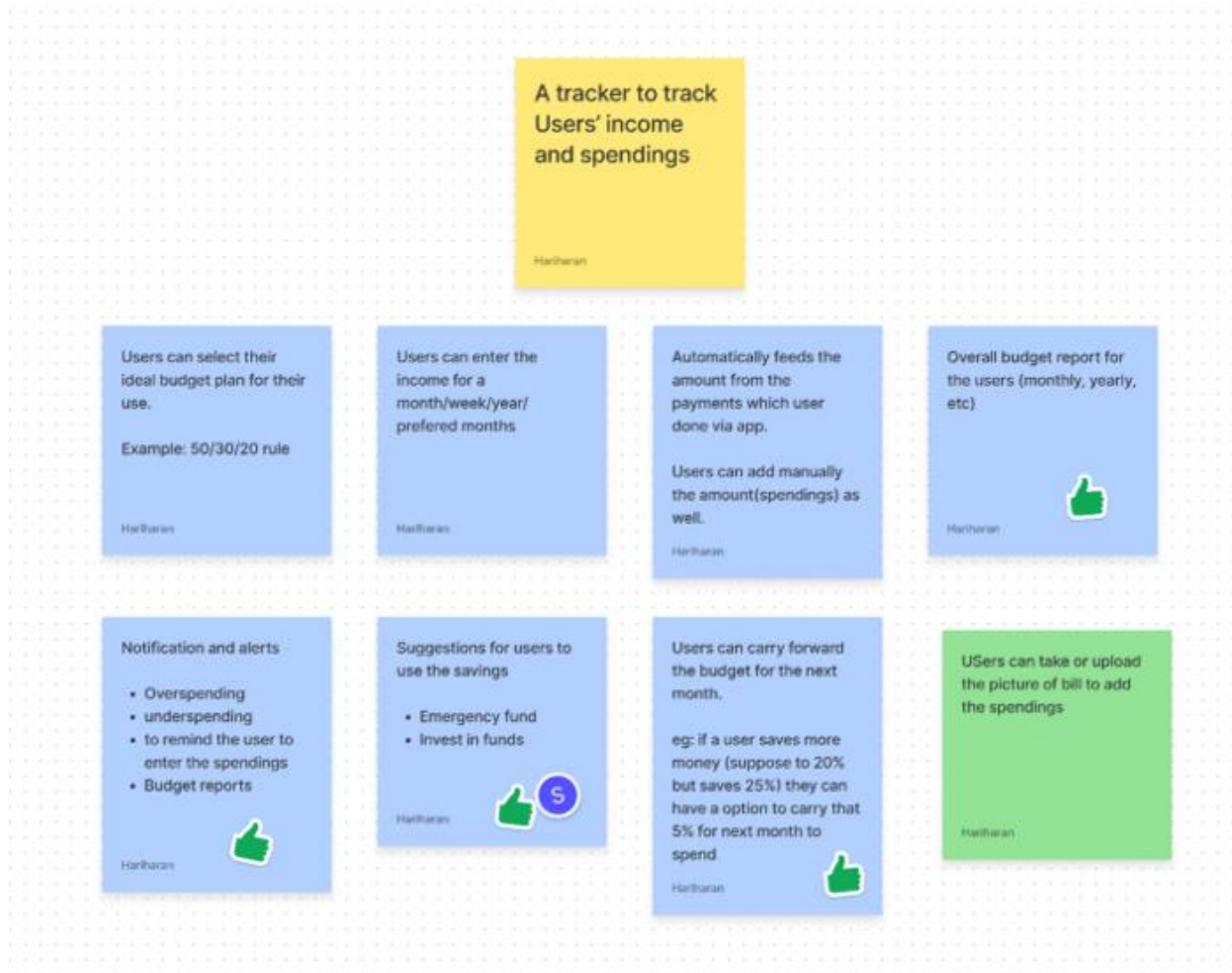


Group Brainstorming

I had a call with my peers for a group brainstorming session where I discussed the solutions made from the above individual brainstorming with them. After that, we started brainstorming together to get more ideas and suggestions on improving the solution I came up with.

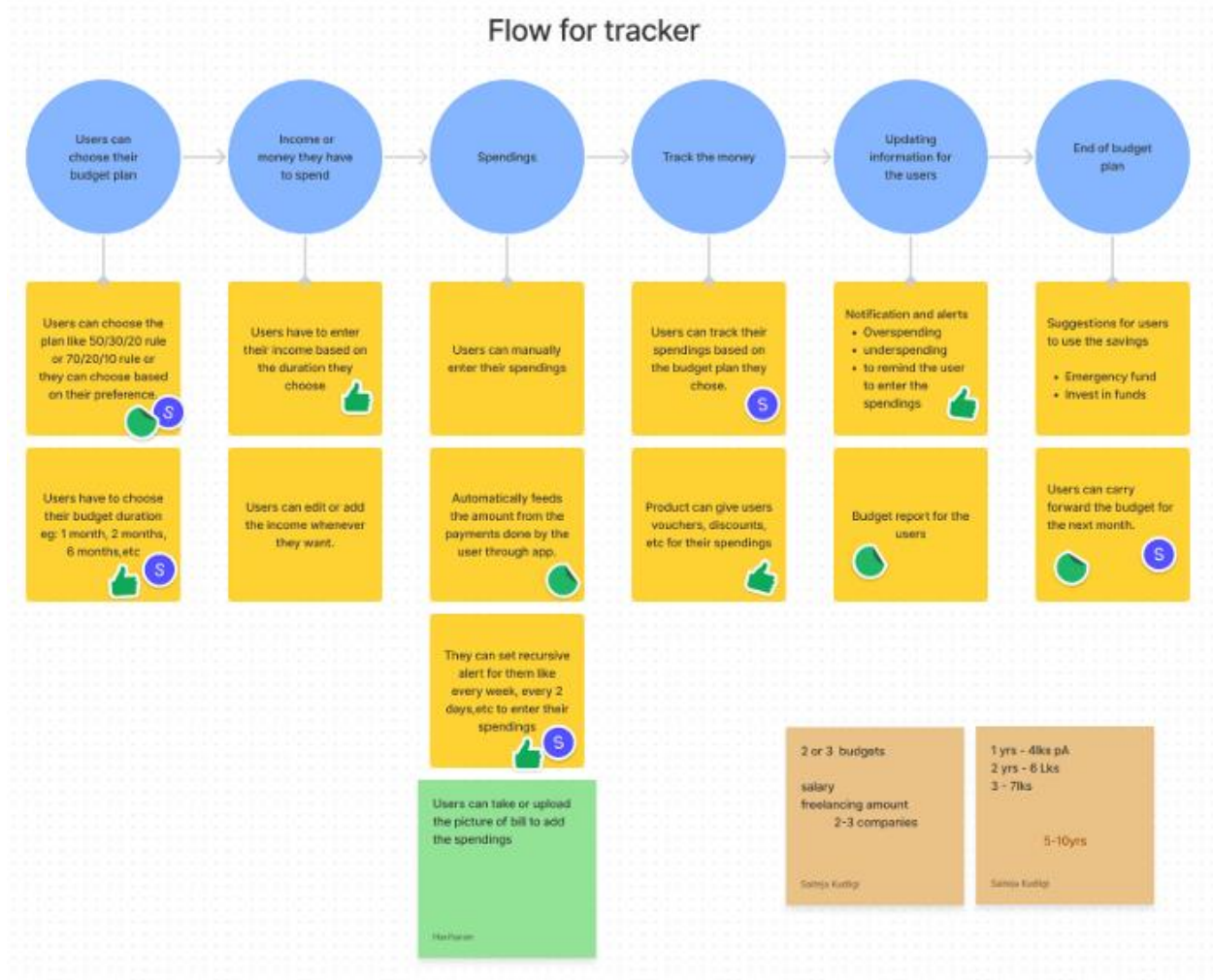


After discussion, we all voted down for the ideas and scoped down the solution to go ahead with the **tracker** as it will be more efficient for the users to build their financial wealth for them and given the time I have to complete the project.

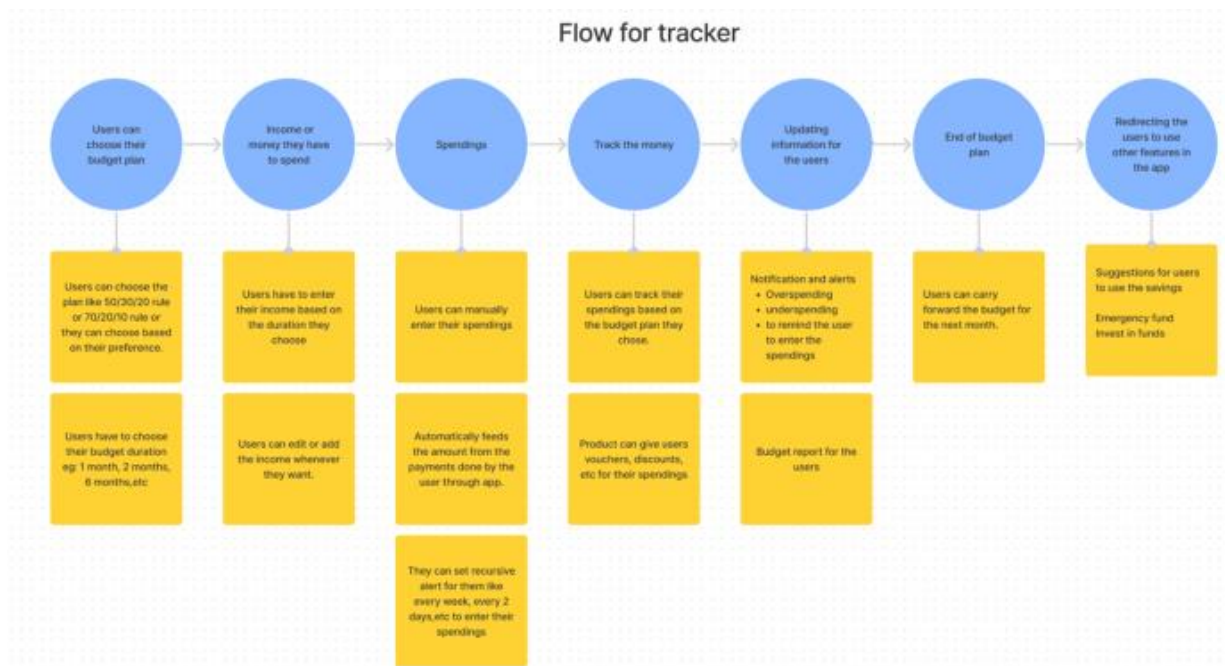


Flow Diagram

After prioritizing the tracker, we conceptualized the rough flow diagram for the tracker and voted on the best features that would help the users to reach their goal out of it.



Final iteration:



Hypothesis

After brainstorming over the assumptions for some time, I came up with a few hypothesis statements that listed possible solutions to the problems I could derive from my assumptions. However, I would need to validate these later in the secondary and primary research.

- There should be a feature to control the user's spending because users spend their income **on unwanted things**.
- My hypothesis is that there should be a way for people to follow a budget plan because my assumption is that most young people **don't have a budget plan** and they are not prepared to plan their finances.
- Users are not using many fintech apps for their benefit and I am yet to find more info for solving this.
- There should be a way for people to track their income and spendings because my assumption is that if people are aware of their income and expenses they might save a lot of money and they can **use that wisely**.

Overall my hypothesis is a tracker for the people to track their budget because most people are **not tracking their money** by solving this users can lay a foundation for them to build their financial wealth.

Secondary Research

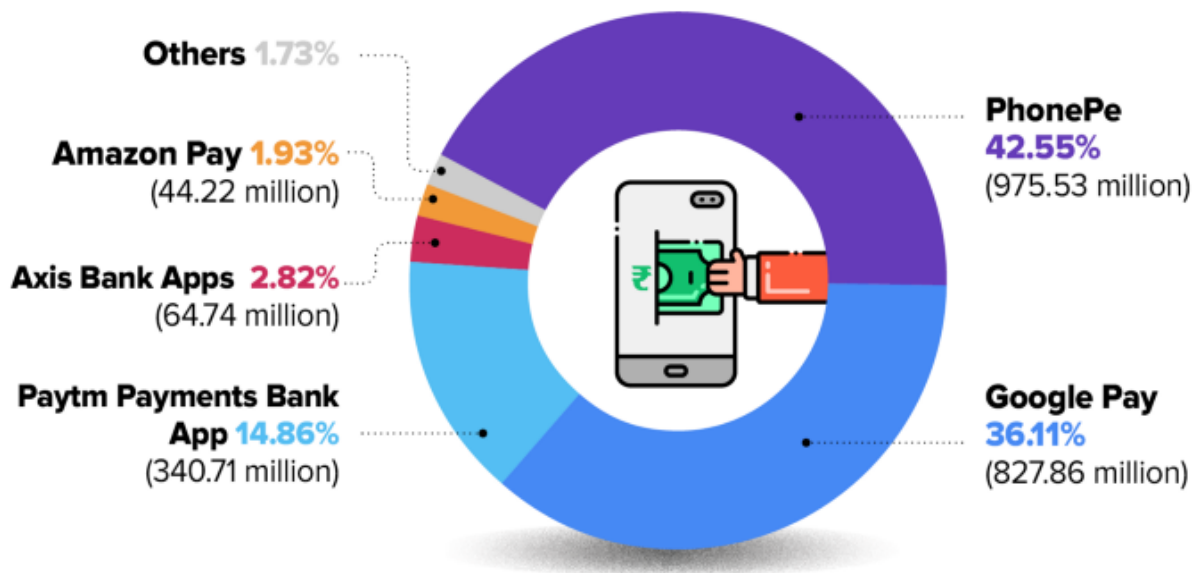
I went through various sources on the internet like industry reports, academic articles, analytics/business data to get statistical and behavioral insights. It helped me validate my hypothesis and determine if I was going in the right direction before reaching out to the users.

Top Insights:



Top 5 UPI apps in Feb 2021

(Note: Number of transactions in brackets)



Source: NPCI website

2020

- Wins the best mobile payment product/service category and the technology category at IAMAI India digital awards
- The PhonePe ATM goes live across 10 lakh stores in 300 cities
- Launches **Liquid funds** , **Super funds** and 7 more curated MF category products
- Launches **Travel Insurance** , **Coronavirus Insurance** , Motor Insurance & more Insurance offerings
- Becomes India's fastest growing insure-tech distributor with a sale of 5 lakh policies in 5 months
- Crosses the 250 million registered users mark; market-leading share of over 40% in UPI transactions

Source: PhonePe

- In February 2021, providers of unified payments interfaces (UPI) in India recorded a total of **2.3 billion digital payment transactions** worth over four trillion Indian rupees. This was a slight decrease compared to January 2021, but still marked a year-on-year growth of over **70% in the volume of transactions**.
- Out of the 2.3 billion transactions, Walmart subsidiary PhonePe had a share of 42.5 percent. It was the **third month in a row that PhonePe topped the list**.

- PhonePe recently crossed the 275-million registered user milestone. It had **over 100 million monthly active users** generating over 1 billion digital payment transactions in January alone. It is targeting to surpass 500-million registered users by December 2022.
- According to the report conducted by the Global Financial Literacy Excellence Center, only **24% of the Indian adult population** is financially literate.
- In comparison to other major emerging economies, the financial literacy rate of India is the **lowest**.
- According to the Deloitte 2020 Millennial Survey, about **80 percent of millennials said that they were stressed about their finances**. This was primarily because their priorities are different from those of the previous generations.
- **77%** of working India relies on personal loans to make ends meet
- Savings and investment are **alien concepts** for the majority of the population.
- Young earning individuals are often ill-prepared to **tackle financial problems** fresh out of college. This prevents them from seeking professional help and anxiety sets in.
- The issue is even more grave for young adults because they **lack formal education** in managing their finances.

2.5

The **average number of finance apps** that smartphone users have installed on their phones.

Think with Google

Google/Ipsos, U.S., "How People Use Their Phones for Finance Activities," n=500, smartphone users aged 18–64 who have finance apps installed on their smartphones, Oct. 2016.

Why Finance Tracker?

1. Individuals and young people **aren't able to manage** their income. There's a disbalance between consumption and savings.
2. Poor financial planning leads to an **uncertain future**. Young adults may feel embarrassed about their condition.
3. Poor spending habits, crises, and unplanned expenses drag people **deeper into debt**.
4. A lot of personal finance tracker apps or software are in the market but not everyone users that. Now it is the time for fintech brands to be early adopters of adding this feature to reach more customers **by expanding their market and providing value to the people**.
5. By helping the users to track and improve their financial situation will make them use the app more frequently. It will increase the screen time of users and also might increase the number of users. This will **open the door to more chances** for the brands to advertise and do business.

Overall it is been found that young people who just stepped into the professional world are suffering and not able to manage their income and expenses properly.

Target Audience

Before the primary research, I set up a target audience by narrowing down the data, which I got from the secondary research.

<u>Product / industry</u>	Fintech
<u>Age range</u>	18-25
<u>Gender(M:F)</u>	50:50
<u>Occupation</u>	Students, Working Professionals
<u>Type of users</u>	People who are already following something to improve their financial wealth. People who have no idea how to improve their financial wealth

Primary Research

To conduct user interviews, the next step was to create the surveys to find my target users. The users were recruited through a **screening form** who fit into my target user group to move forward for the interview. [[Link of form](#)]

Here are the statistics of the responses which I received from the survey:



statistics of the survey

Without talking to real users, I would not have gained qualitative insights as desk research and surveys can only give quantitative insights. Before I started the interviews, I prepared a session guide with a set of questions to understand the user's challenges: their experience, needs, expectations, etc.

User insights

I was able to **empathize with the users** and identified the behavior pattern and a lot of pain points from the interviews. It definitely helped me to validate the assumptions I made.

Users often spend on unwanted things from their income. These **unwanted things** varied from user to user as it depends on their preferences and their situation.

“I am not able to control my spendings on unwanted things. Last month I bought a lot of cosmetic products since it has a discount but after buying it I felt like it was not useful to spend that amount of money.”

Almost all users are not following any typical budget plan and a tracker to keep track of their income. Almost all users are **using their bank statements** to calculate their finances. Only 2 out of 5 users tried or still using a tracker or writing down on paper to calculate their finance for a month.

“I am not using any tracker till now, I used to calculate my expenses by referring the bank’s statement.”

“I tried a tracker app one time but it was too complex to use so I left that. But whenever I needed, I used to note down the expense list on a paper to calculate.”

2 users are not able to save even 10% of the money from their income because of their debt over the things they want. This clearly shows that they spend more than they need and they **lack to plan their finances** and manage their expenses.

“I have to pay dues for my bike and mobile each month because of this I’m not able to save enough money.”

“I hardly save my money because of my debts. Sometimes I can only save 3% to 4% of my income because of other commitments.”

Users want to save their money for their goals like buying vehicles, houses, vacation trips, etc. They also **want to use their savings on investing**. They want to invest their money for their future benefits.

“Right now I am just saving my money to buy a car. It is one of my goals right now.”

“I want to invest in stocks, crypto, etc from the money I saved but I need a guide to learn and start on that.”

After these interviews, I interviewed another user whose age is 29. I did this to understand the behavior and to identify the difference between the selected age group and this age group.

Hypothesis Validation

Continuing further, I validated the hypothesis after primary research and noted the findings as below,

Aa Hypothesis statement	☰ Validation status	☰ Reason
My hypothesis is that there should be a feature to control the user's spending because users spend their income on unwanted things.	Validated	After user interviews, I found that people are not able to control their spendings from their income. This directly leads users to not be able to save enough money for their goals.
My hypothesis is that there should be a way for people to follow a budget plan because my assumption is that most young people don't have a budget plan and they are not prepared to plan their finances.	Validated	Almost most of the users I interviewed are not following any specific budget plan for their financial wealth. They spontaneously try to spend and save from their income.
My hypothesis is users are not using many fintech apps for their benefit and I am yet to find more info for solving this.	Not validated	After finishing the interviews, All the users are using different types of payment apps for their benefits. Rest other fintech apps usage are totally depends on the users' benefits and situation.
My hypothesis is there should be a way for people to track their income and expenses because my assumption is that if people are aware of their income and expenses they might save a lot of money and they can use that wisely.	Validated	After doing both the desk research and user interviews, I found that people are not able to manage their income and spendings. Due to this, they are not able to save enough money.

Overall hypothesis tracker to track their budget **got validated** as most people are not tracking their money by solving this users can put a foundation for them to build their financial wealth.

Research Analysis

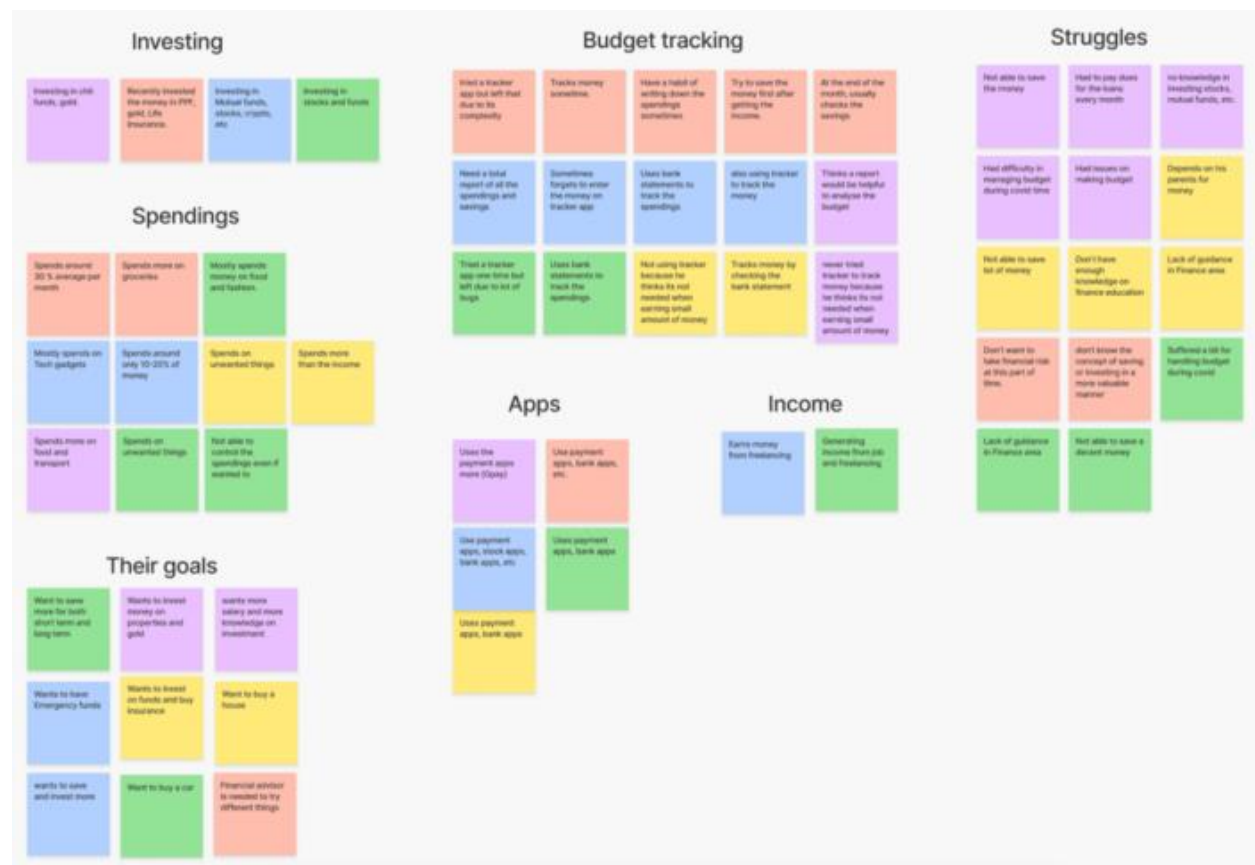
Post the user interviews, I created Affinity mapping, empathy maps, and user personas to help me analyze the idea and narrow down the problems and challenges faced by the users.

Affinity Mapping

To visualize and synthesize all the pieces of information collected from user research and organize multiple sources into one source of truth. I felt

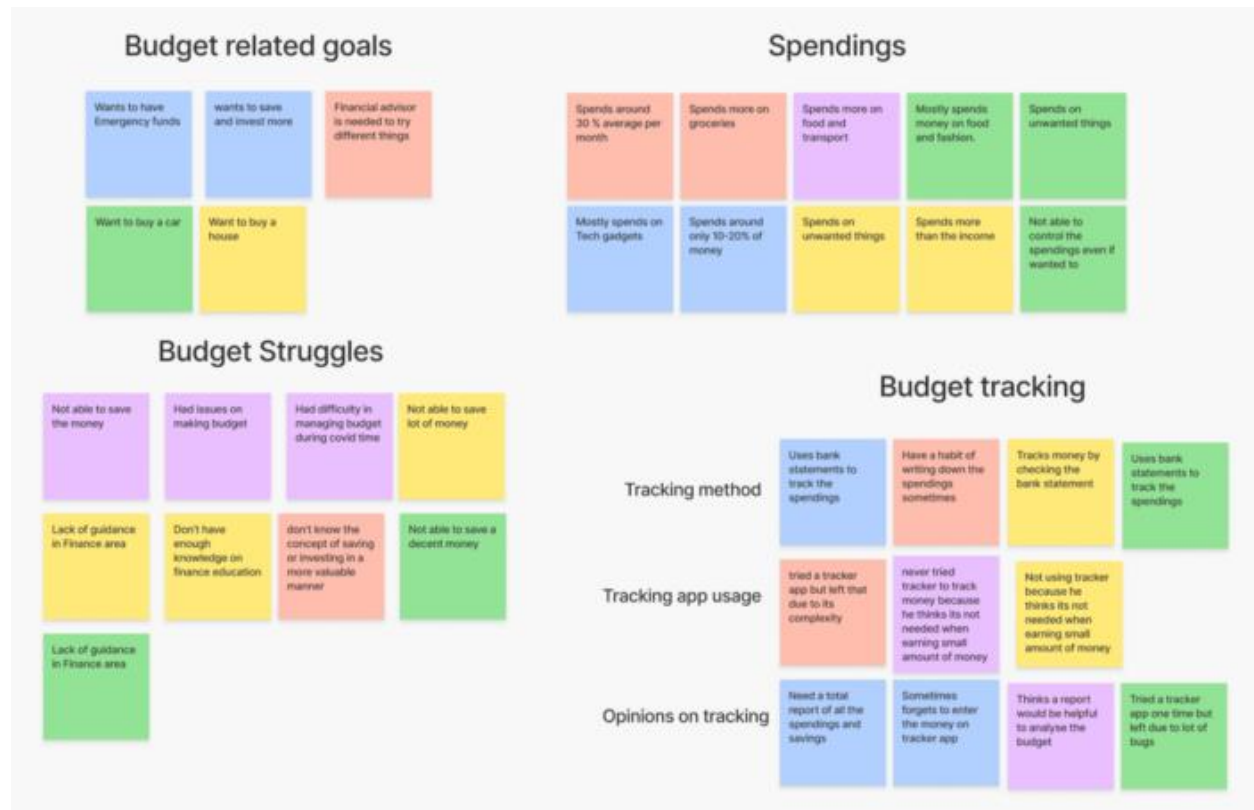
creating an **affinity map** would be a great exercise to help me recognize patterns and analyze the insights.

I collected all the findings from my user interviews on sticky notes. I moved around and grouped the sticky notes under seven groups initially.



Iteration 1

Then from there, I was able to identify and scope down the insights into 4 groups regarding the financial status of the users which helped me to **recognize and analyze the data**. This helped me to proceed further by referencing this diagram as I work on the later stages of this case study.



Iteration 2

User sets

I identified two different types of users emerging from my user interviews and the affinity diagram.

Unplanned group— Users who are not able to create a budget plan and track their spendings. So far they are not good at financial planning. They are struggling with their spendings. They are not able to save money.

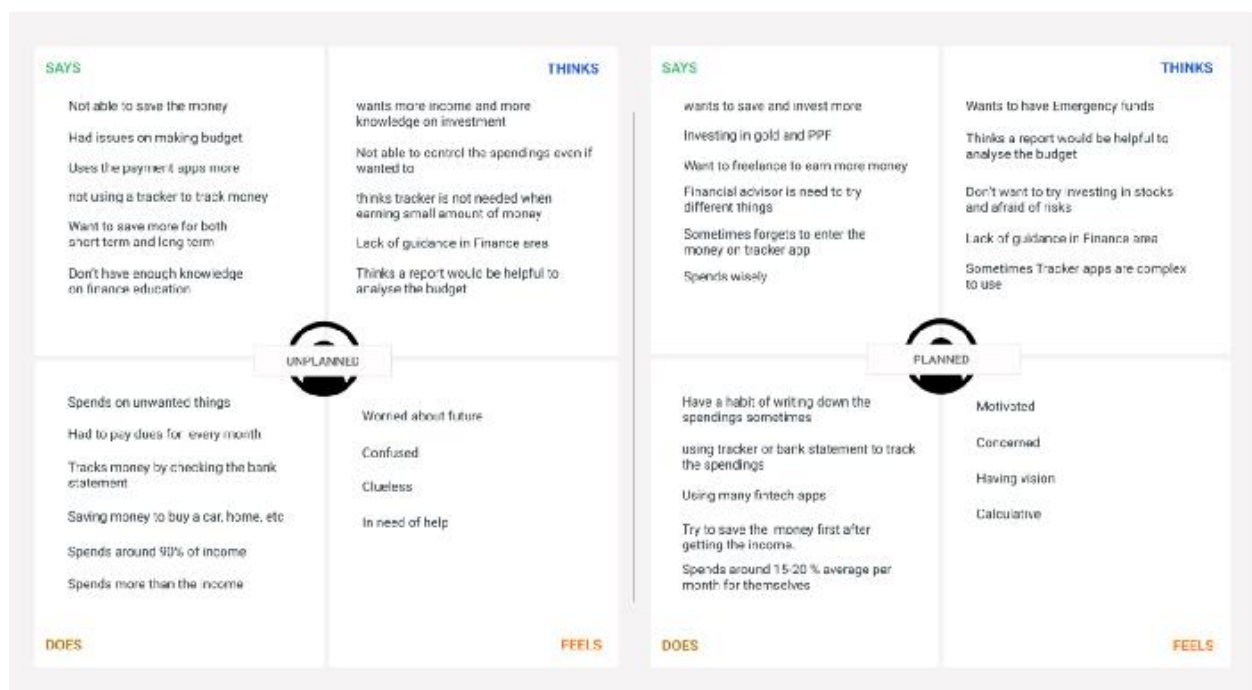
Planned group— Users who already have certain knowledge on how to plan their budget. They are saving a decent amount of money. They are already using a tracker to track their spendings.

Yes I know what you're thinking, I am not good at giving names 😊

Empathy Mapping

After defining the user sets, I drafted the insights into an Empathy map to find out if there are any gaps in my current learnings about my users

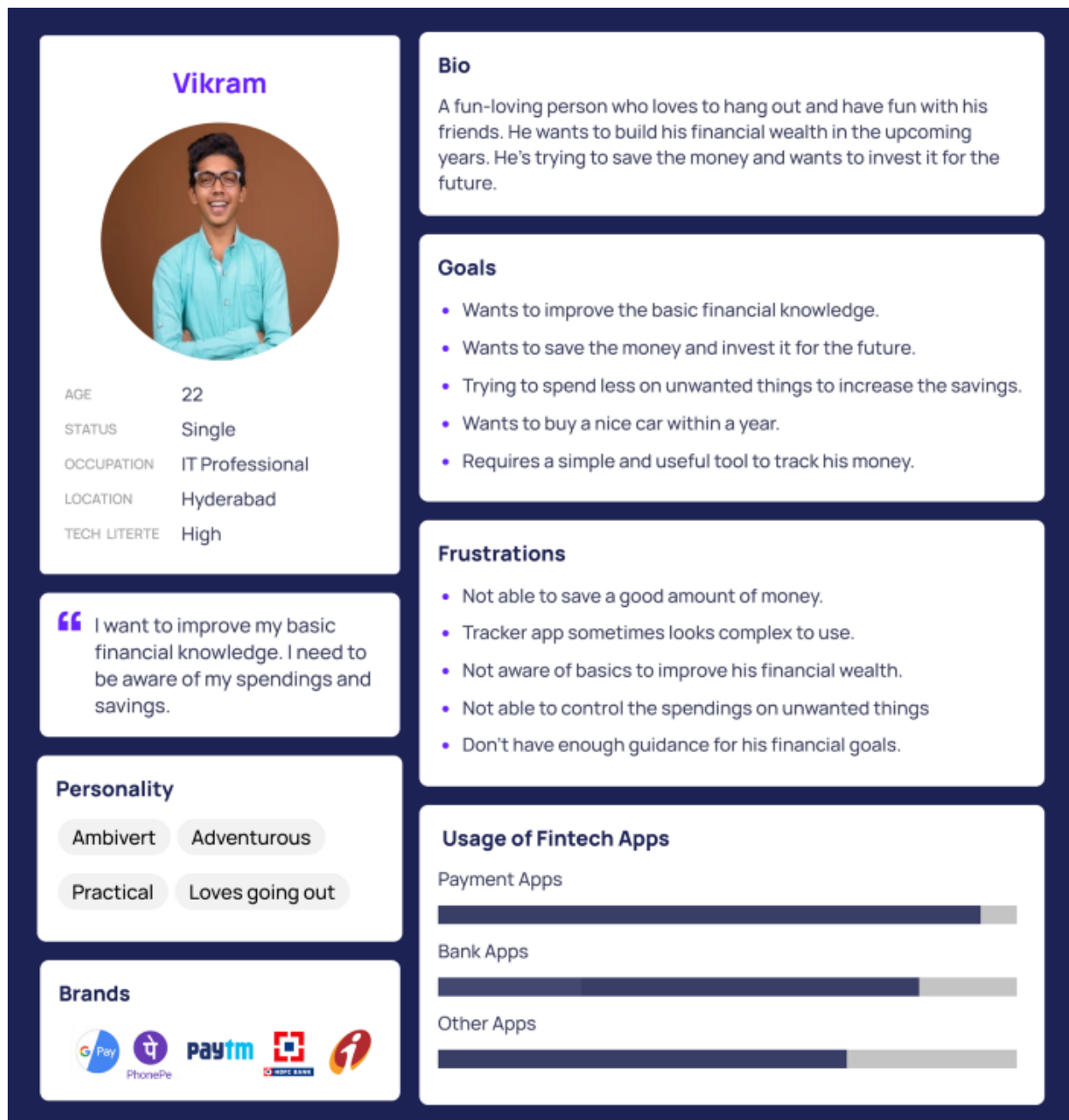
At this stage, Empathy mapping proved to be really useful for integrating learnings and research notes about my users from the data which I gathered during the user research. It helped me to **get a clear understanding** of the user's mind — their **emotions and their actions** regarding their financial wealth.



User Persona

I created a user persona to give a representation of my target audience. It helped me to get a clear understanding of user behaviors and needs and define for whom I should provide the solution and what is necessary for them **from a user-centered perspective**.

I decided to scope down the target user set to only the “Unplanned” to proceed further as they are the one who need the solution first.



Reframing the problem statement

Post research, after analyzing all the insights I tried to reframe the problem statement to proceed and build wireframes.

Young people have poor spending habits and poor control over finances. Due to this, they are not able to save enough money. PhonePe wants to

improve this by helping them to create a budget and track their money to save more for their goals.

Re-Ideation

Though I came up with the ideas for the tracker after finishing the Individual brainstorming and group brainstorming session, I had to reiterate my ideas after talking to the users. Below are the ideas I came up with as the final solution,

PhonePe Finance Tracker, where people can use this to improve their financial status and **lay a foundation** for their financial wealth by keeping tracking their finances.


Features of the Product 💡

Budgets — Users can create a budget by choosing a budget plan (50/30/20% rule or 70/20/10% rule or they can choose a plan based on their preference) and the duration for the budget (Periodic or One-time). Using this, they can **keep track of their finances and keep them under control** with their budget plan for a selected period.

Goals — Users can save and manage their money **for their goals**. For example, If a user wants to save money for a new house or vehicle, they can use this feature to save and keep track of their money for their goal.

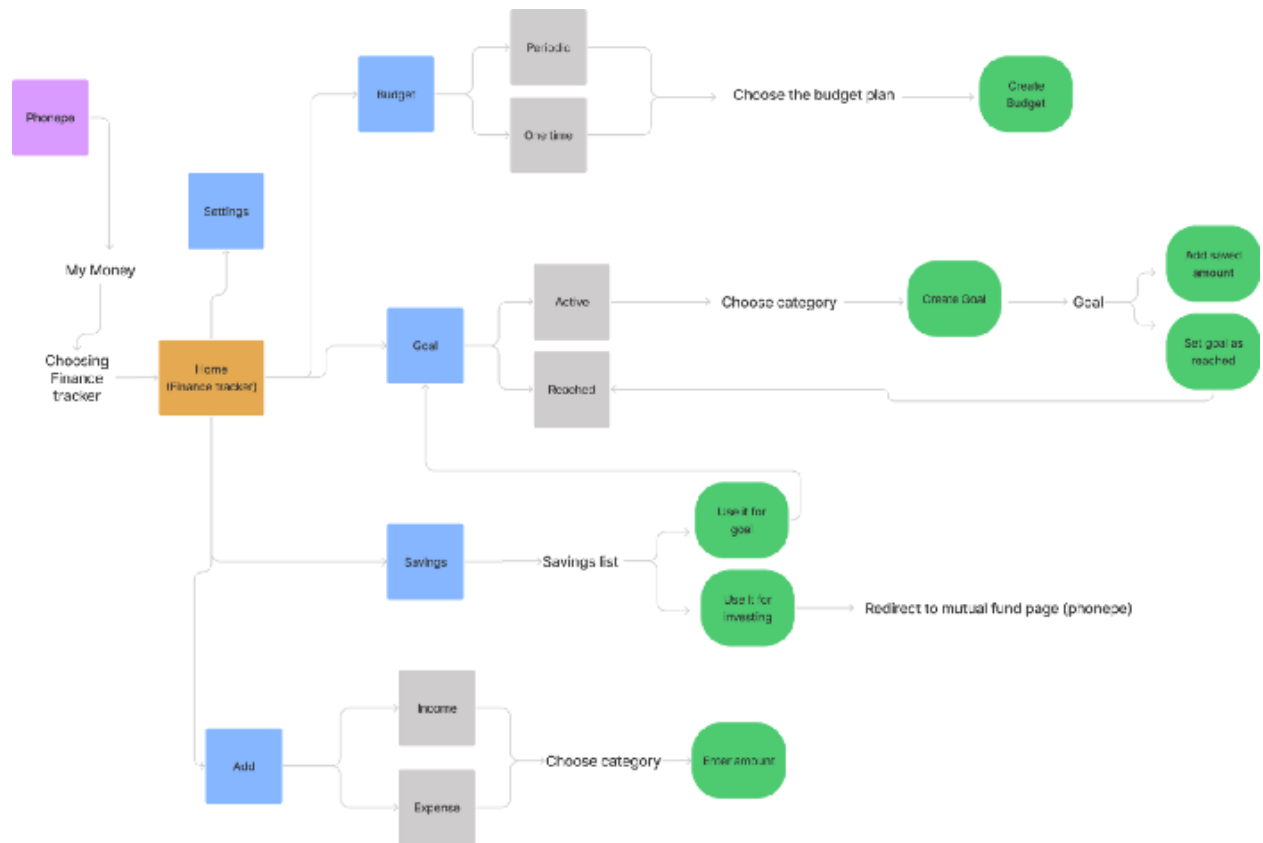
Savings — For the users who want to turn their savings into a meaningful one they can use this feature and use their savings **for their goals, investing**, etc.

Connecting Solutions to Insights

<u>Aa</u> Solution I provided	 Insights from Research
<u>Budgets</u>	<p>Individuals and young people aren't able to manage their income. There's a disbalance between consumption and savings. (SR)</p> <p>Poor spending habits, sudden crises, and unplanned expenses drag people deeper into debt. (SR)</p> <p>Users I interviewed also confirmed that they are not following any budget plan regularly for their financial wealth. They are not able to control their expenses on unwanted things. (PR)</p>
<u>Goals</u>	<p>Almost all users I interviewed want to save their money for their goals like buying new gadgets, bike, car, etc. They also complained that they are not able to keep track of their savings for their goals. (PR)</p>
<u>Savings</u>	<p>Savings and investment are alien concepts for the majority of the population. (SR)</p> <p>Users told that they are saving their money mostly for their goals and for investments. They also want to save a lot for their future. (PR)</p>

User Flow

After finalizing my ideas, I created a user flow with all the features that could help the user in this problem.



Low fidelity wireframes

I started with **pen & paper (low fidelity wireframes)** and iterated to see how the solutions are coming up.

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x Budgets

Recurring | One-time

Budget status

Set

+

x New Budget ✓

Name

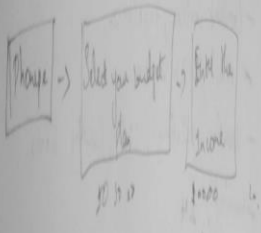
Budget plan

Period

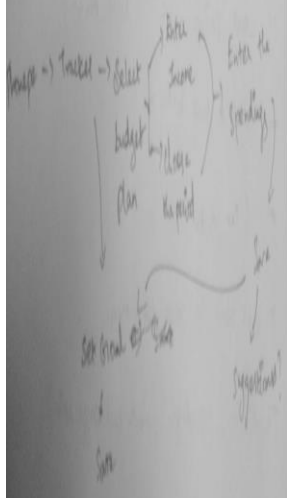
☒ Recurring Re plan

Income

How much spend
and save?



Enter the name



Expenses

Expenses

0 0 0

0 0 0

0 0 0

0 0 0

7 8 9

4 5 6

1 2 3

0 del

For income
include the
money to the
budget

Expenses

Expenses

Expenses

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Expenses

x Goals

Active | Paused

Goal Status
and

①

x New Goal

Categories

○

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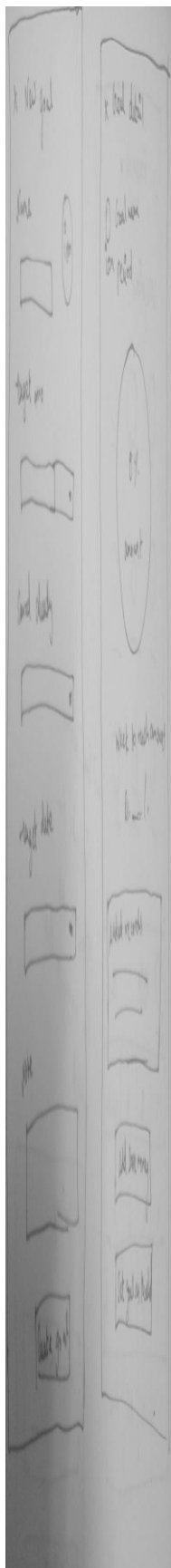
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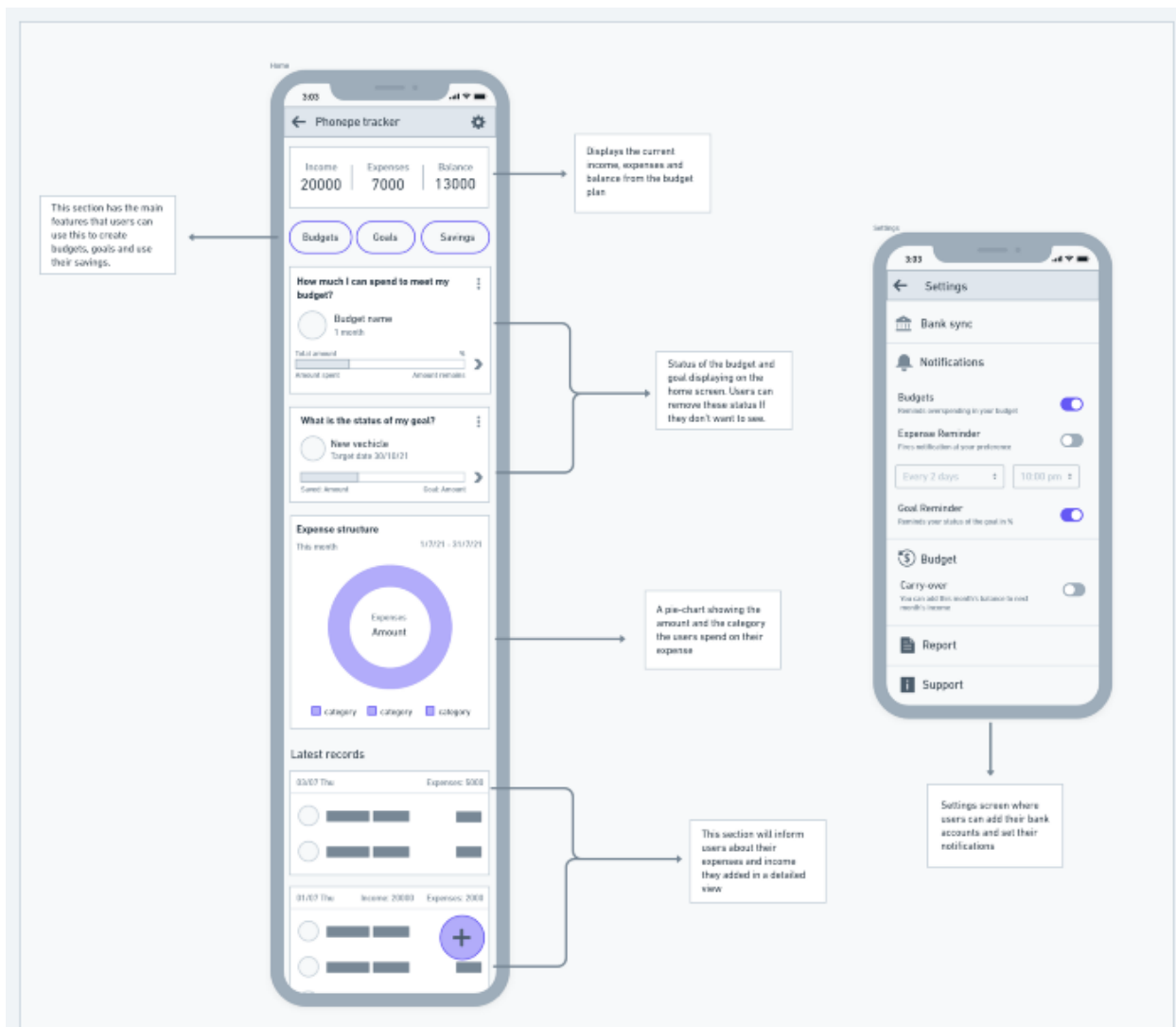
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High fidelity wireframes

After finishing up the wireframes using pen and paper, I tried to bring the high-fidelity wireframes digitally to see how the wireframes are coming up and how clear it is after putting certain content on the screens.



Home screen and Settings

I conceptualized that the finance tracker feature can be added on the home screen of the PhonePe since the application has already existing features like **Recharge, Bike Insurance, Liquid funds**, etc. So that the users can click

the finance tracker on the home screen of the PhonePe and will land on the home screen page of the finance tracker.

Home screen — This is the main screen where users can **land and navigate to multiple screens** like Budgets, Goals, Savings, etc. This screen also displays the current income, expenses, and balance on the top section. Below that 3 buttons(Budgets, Goals, Savings) are placed to let users use the product's main features.

Then they can see the status of the Budget and Goal they created which they can also remove if they don't want to. Then an Expense structure will be shown to the users in a form of a pie chart so that they can understand the category they spent visually. Below that they can also view the latest records entered by them either an income or expense. A floating button is also placed on the home screen that users can use and add the expense/income to their budget.

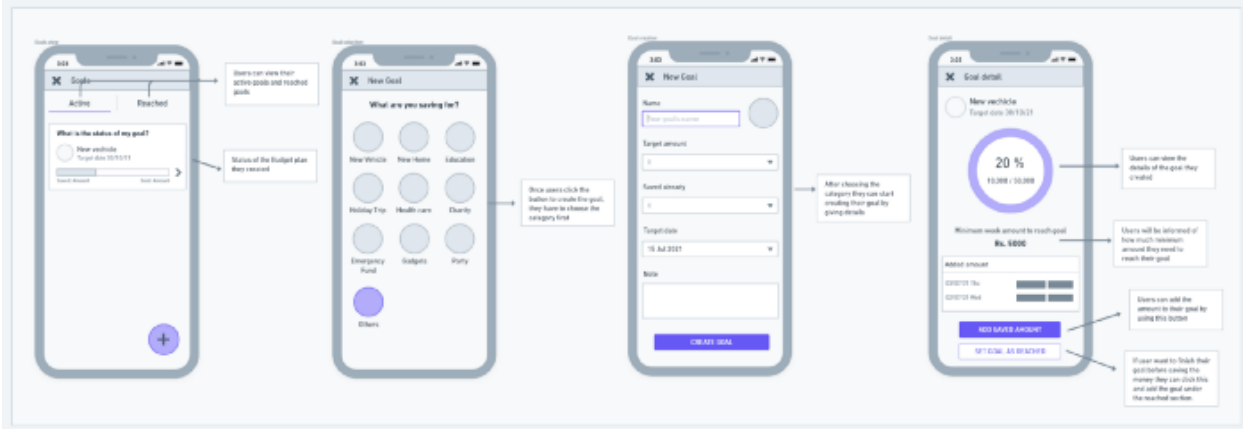
Settings — Users can add their bank accounts here so that the transactions made by them can be automatically captured. They can also set the notification reminder on their preference. A carry-over option is included where people can add their month's balance to the next month's income. A report option is also provided to download their financial report in a pdf format if needed.



Budget screens

Budgets — After clicking the Budgets button on the home screen, users will land on the first screen of the picture as shown above. Users can create either a **periodic budget or one-time budget** initially, they can also change this while creating the budget.

After clicking the floating button, they will be redirected to the budget creation page. Once they landed here, a pop-up screen will be displayed to let the users know what is budget plan is and how they can use it. Then they can **select the budget plan and duration they want** to proceed further. They can also give their custom budget plan and a custom date (under the one-time) if they want. After selecting everything a card will show the users how much money they can spend excluding their saving% from the budget plan they chose.

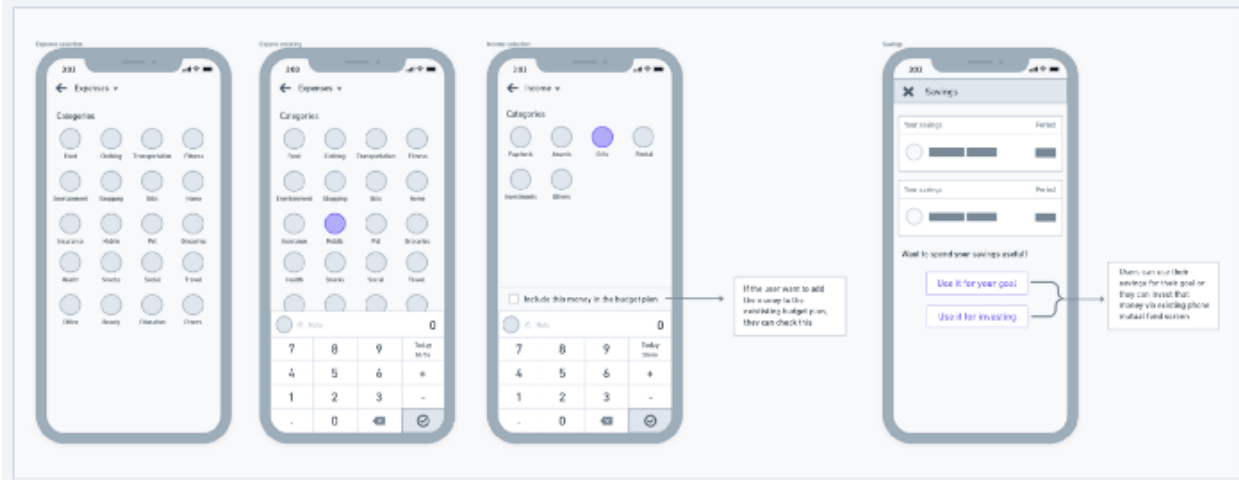


Goal screens

Goal — After clicking the Goal button on the home screen, users will land on the first screen of the picture as shown above. Here they can view the status of the existing goals if they have already been created.

After clicking the floating button, they will be redirected to the **Goal category** page. Users have to choose the category of the goal they want, after that they can give the details regarding their goal.

The last screen shows that once the goal is created they can click the status of the goal and view the goal detail screen. Here the users will be informed regarding the money they already saved and the money needed for the rest of the **target date**. They can also add the saved amount to the goal and if they want to finish their goal before saving the money they can click the Set goal as a reached button.



Expenses/Income and Savings screen

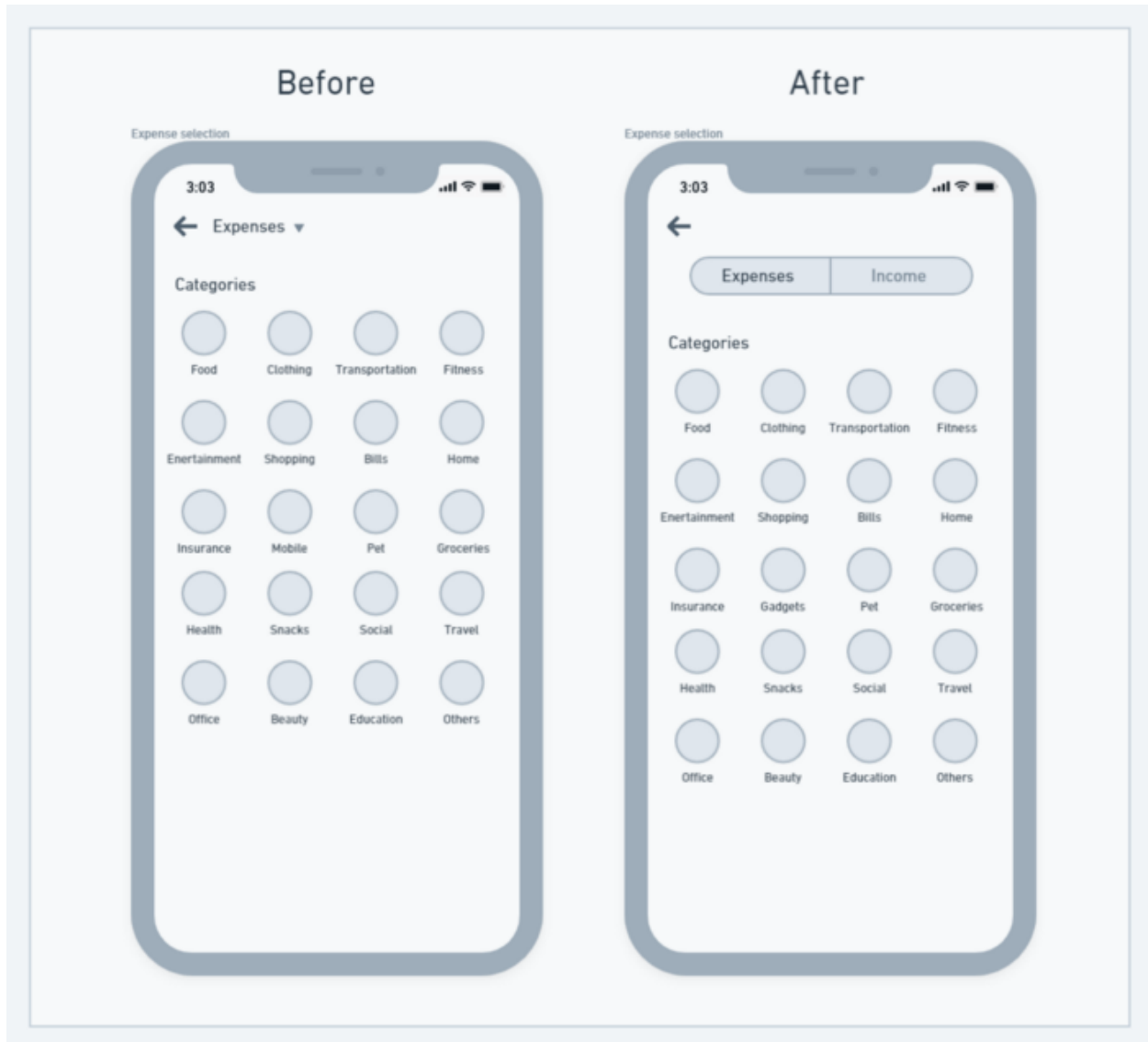
Expenses/Income — After clicking the floating button on the home screen, users will land on the first screen of the picture as shown above. Here they can choose the category of expenses or income they want. Once they choose the category, they can **enter the amount and choose the date**.

Savings — The money they saved while choosing the budget plan i.e if they choose a 50–30–20% plan for their budget 20% of the money will be added here. Users can also **use those savings for their goals or for investing**.

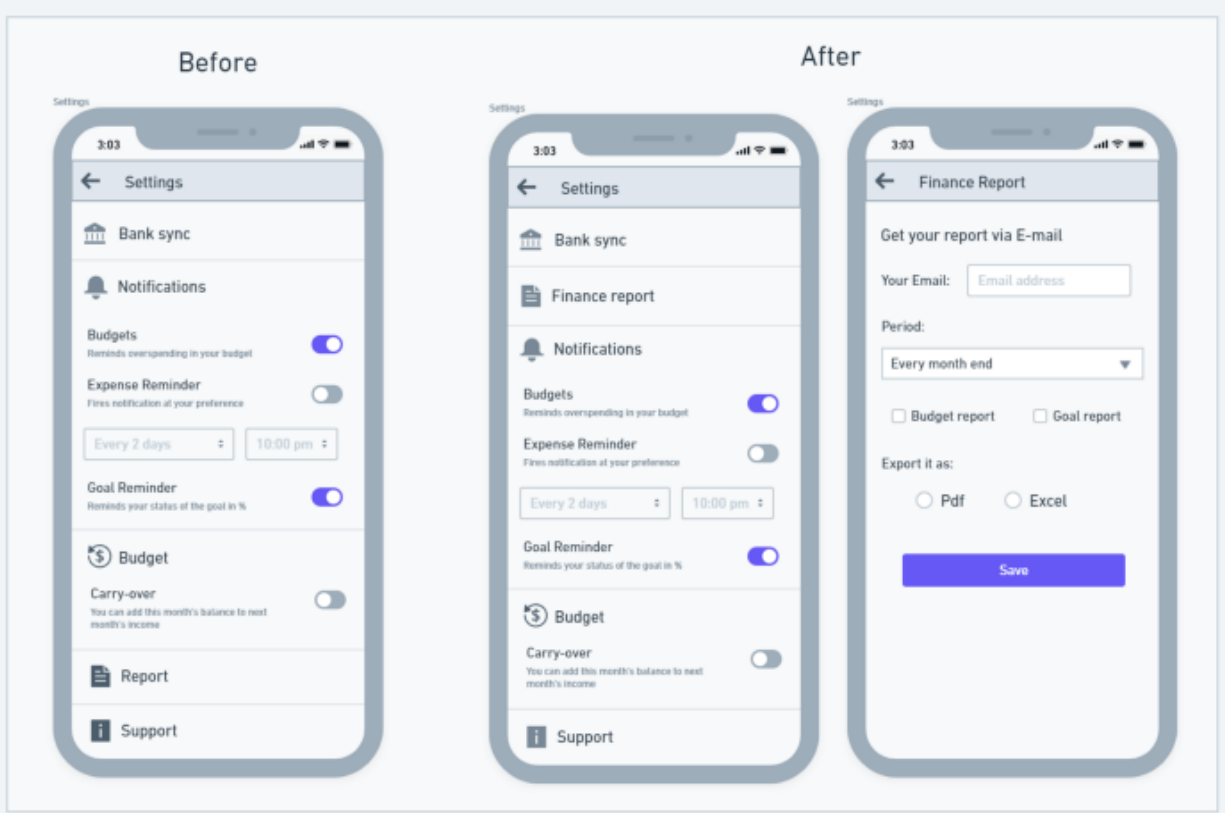
Peer Reviews

After finishing my wireframes, I went ahead to get some feedback from my peers so that I could iterate upon my solutions and make them better. We had a group call, where I explained the process and discussed it with them. Based on suggestions, I did a few changes which are as follows:

- Initially, the navigation for the users to change from Expenses to Income or vice versa was meant to be in a form of a dropdown menu. Upon suggestion, I changed that into a **tab-like button**. This will help the users to quickly navigate to either expenses or income to enter the money.

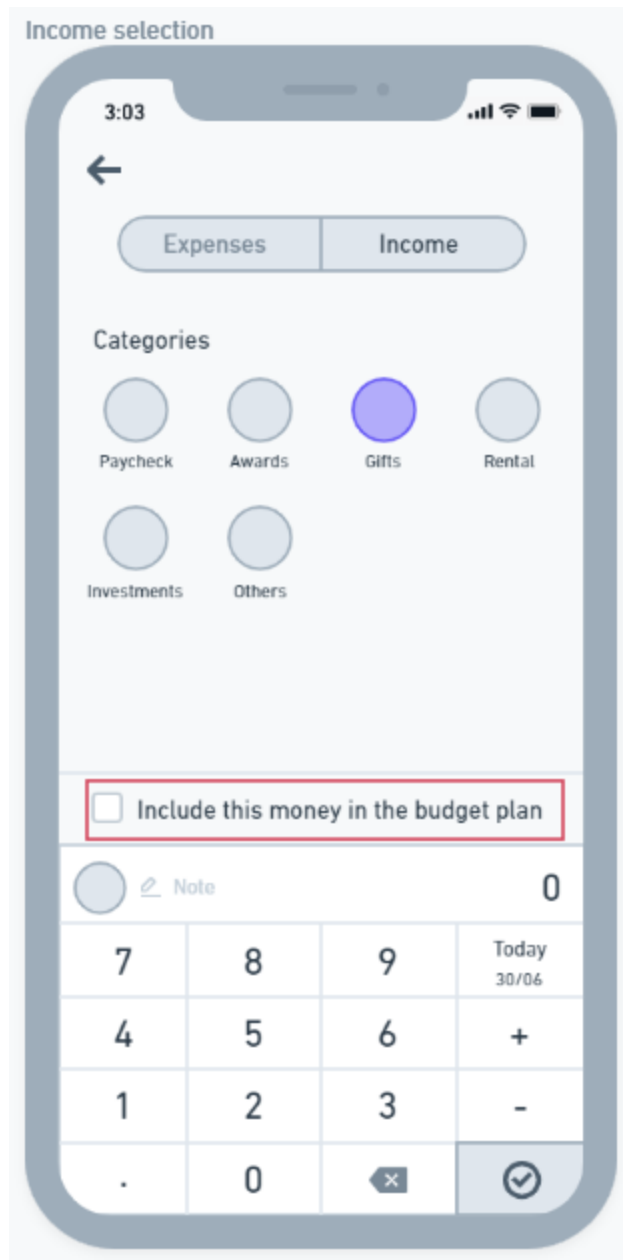


2. For the finance report option, Initially I just mentioned it as 'report' in the settings screen. After getting the suggestions from my peers that it will mislead the users, I changed the name from **'Report'** to **'Finance report'**, and also I moved that option to the top order of the menu. And also to prioritize that, I have added the detailed options once the users click the finance report option to get their report.



3. During the discussion, my peers got confused about the option I gave for the users to **include the money in the budget plan** while entering the amount for the income.

They felt it is not needed for the users. After discussing this for some time, we finally arrived at a solution to decide on this after testing it with the users.

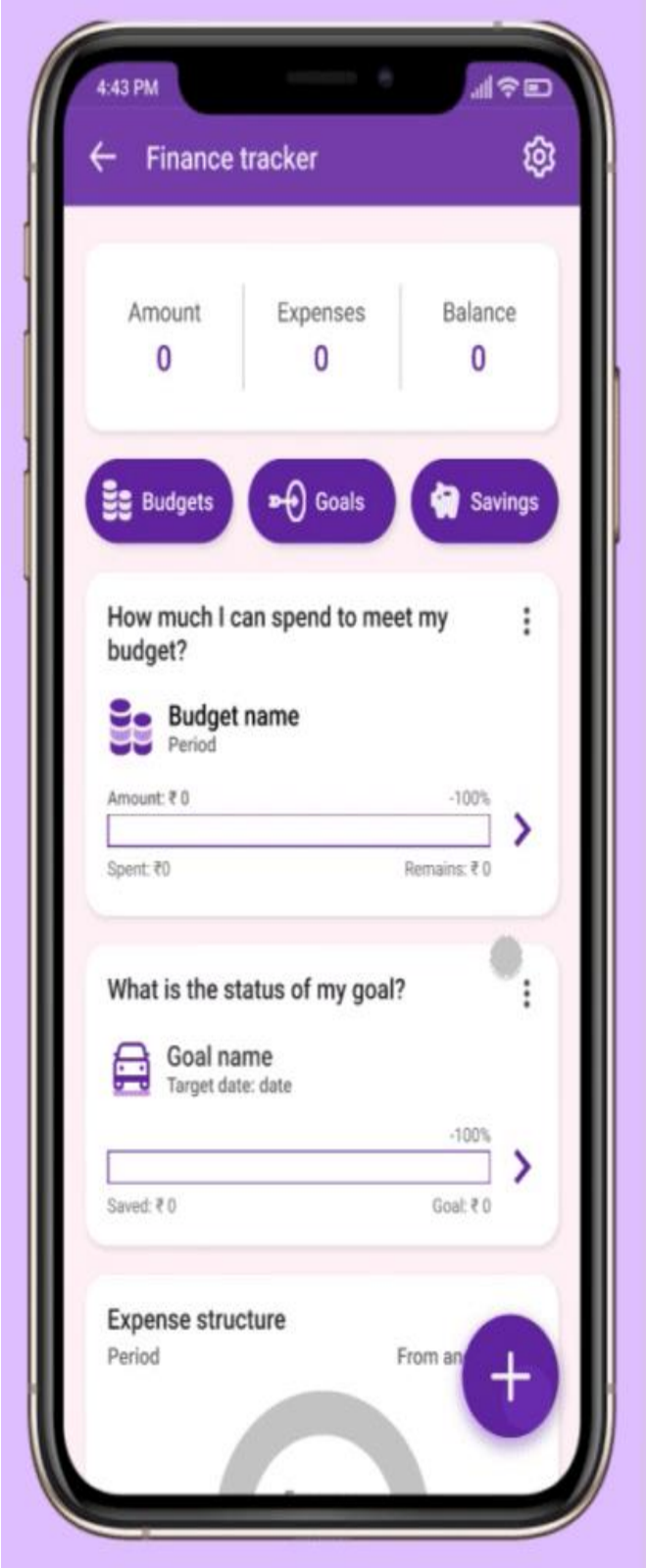


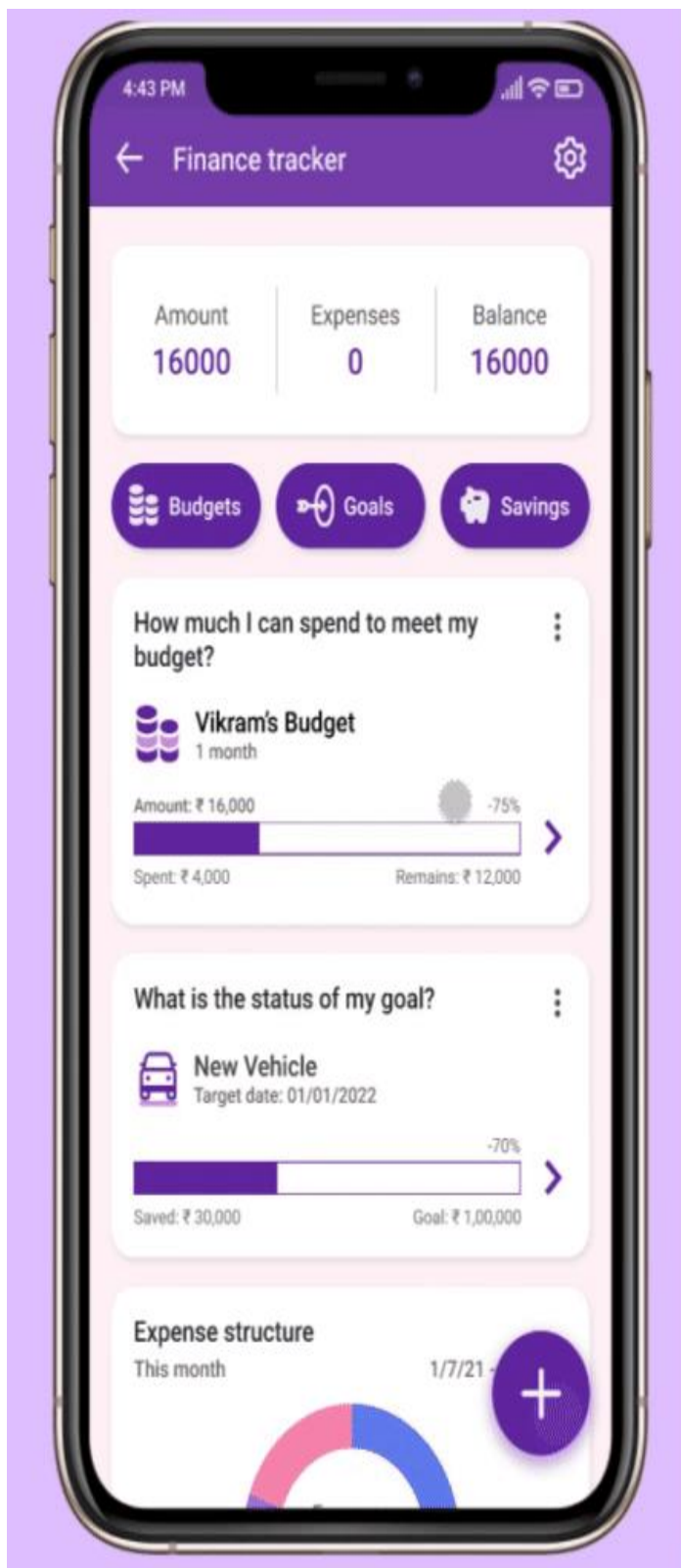
Here you can access all the wireframes with better clarity ([Link](#))

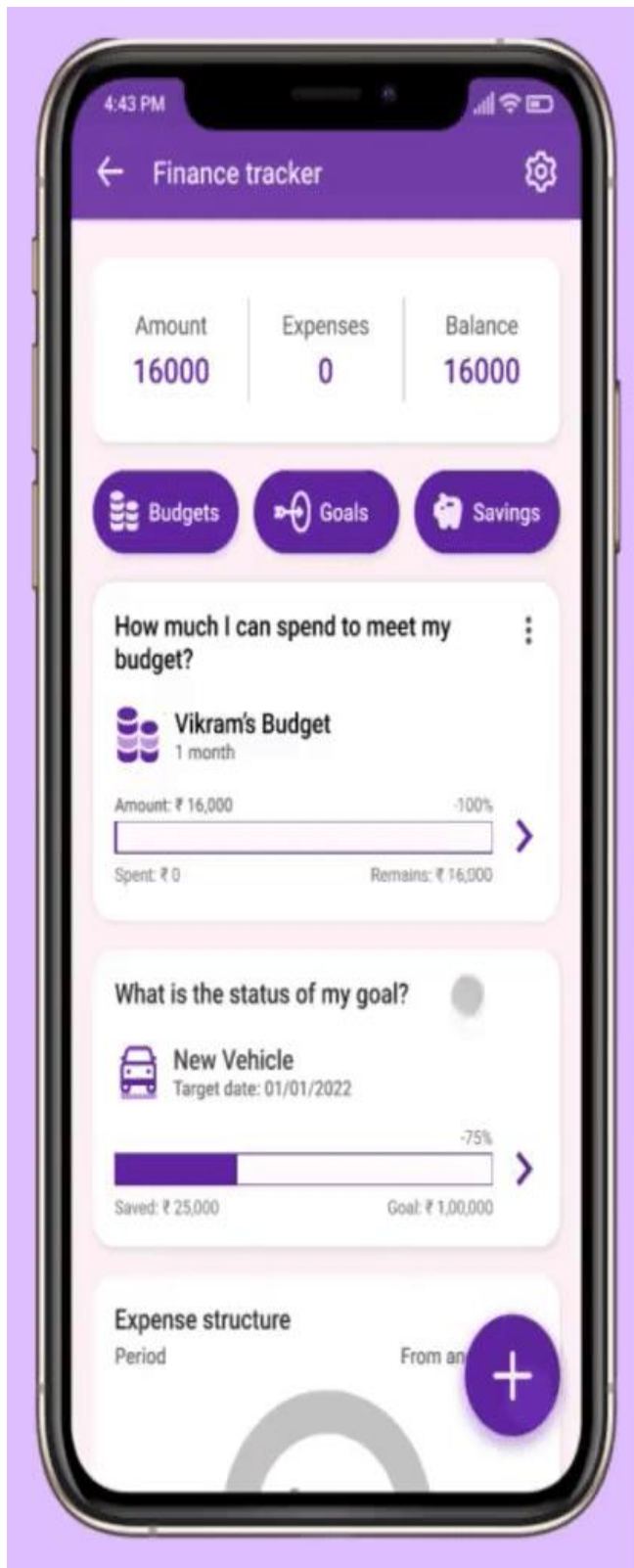
UI & Prototype

After finalizing the wireframes, I went ahead by creating UI screens and prototypes on Figma to test it with the users.

Since this is my personal project, I explored and added my personal touch with the already existing PhonePe design.





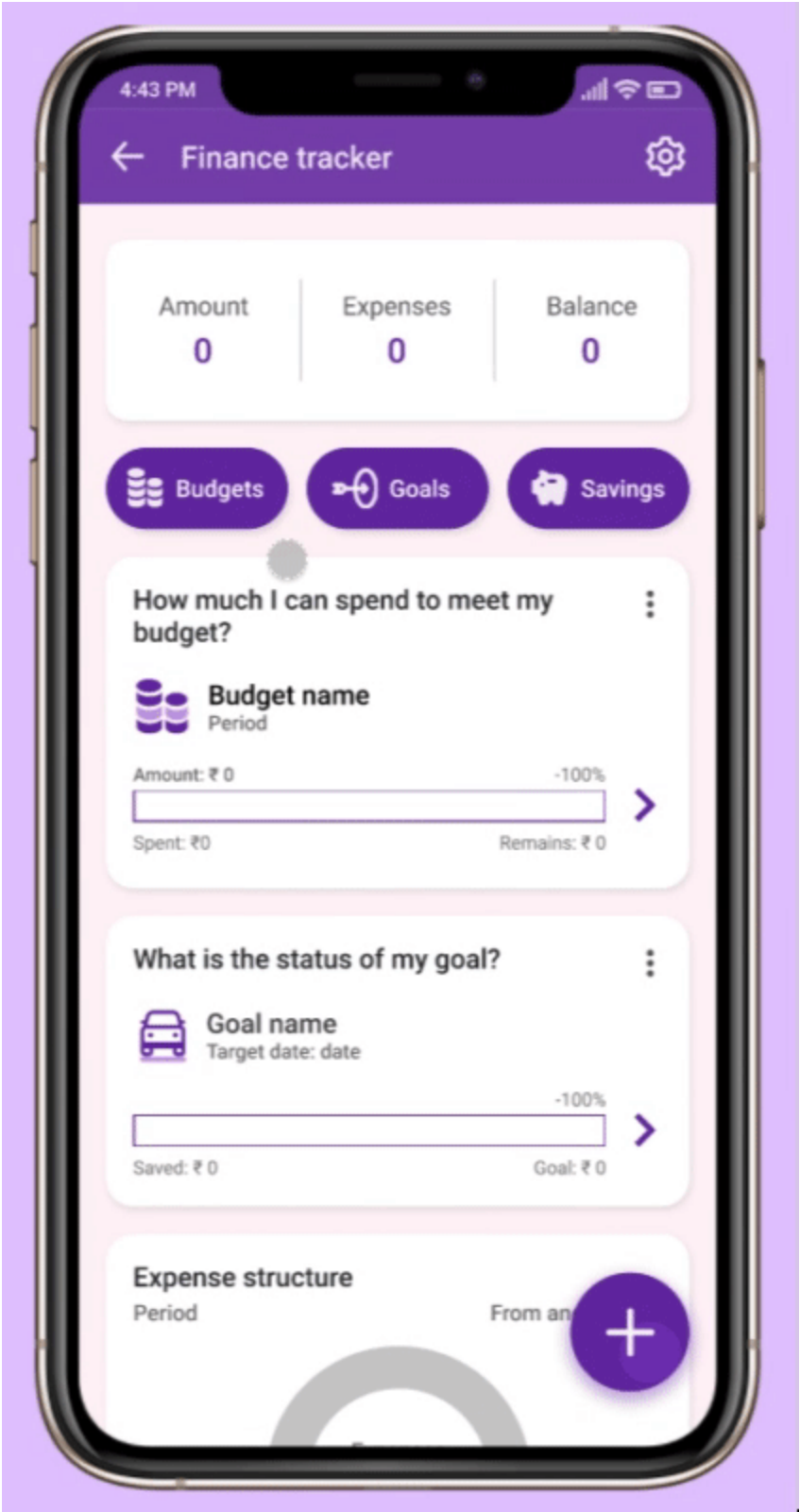


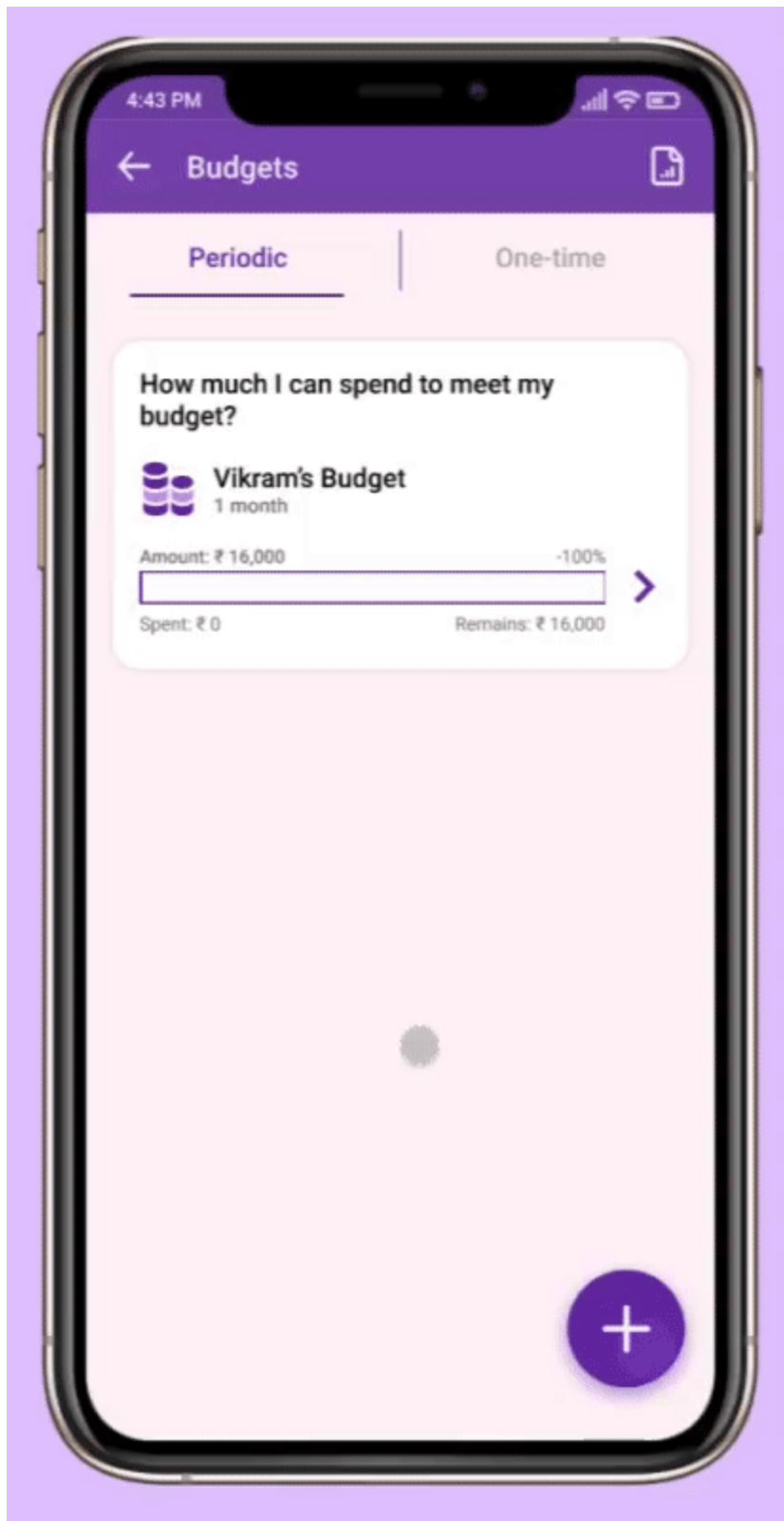
1. Goal creation screen, Expense/income recording screen, and savings screen

1. **Goal** — Users can start creating their goals. They can use this feature to save, manage and keep track of their money for **their goal**.

Expense/income — Users can choose the category of expenses or income they want. Once they choose the category, they can enter the amount and choose the date.

Savings — The money they saved while choosing the budget plan i.e if they choose a 50–30–20% plan for their budget 20% of the money will be added here. Users can also use those savings for their goals or for investing.

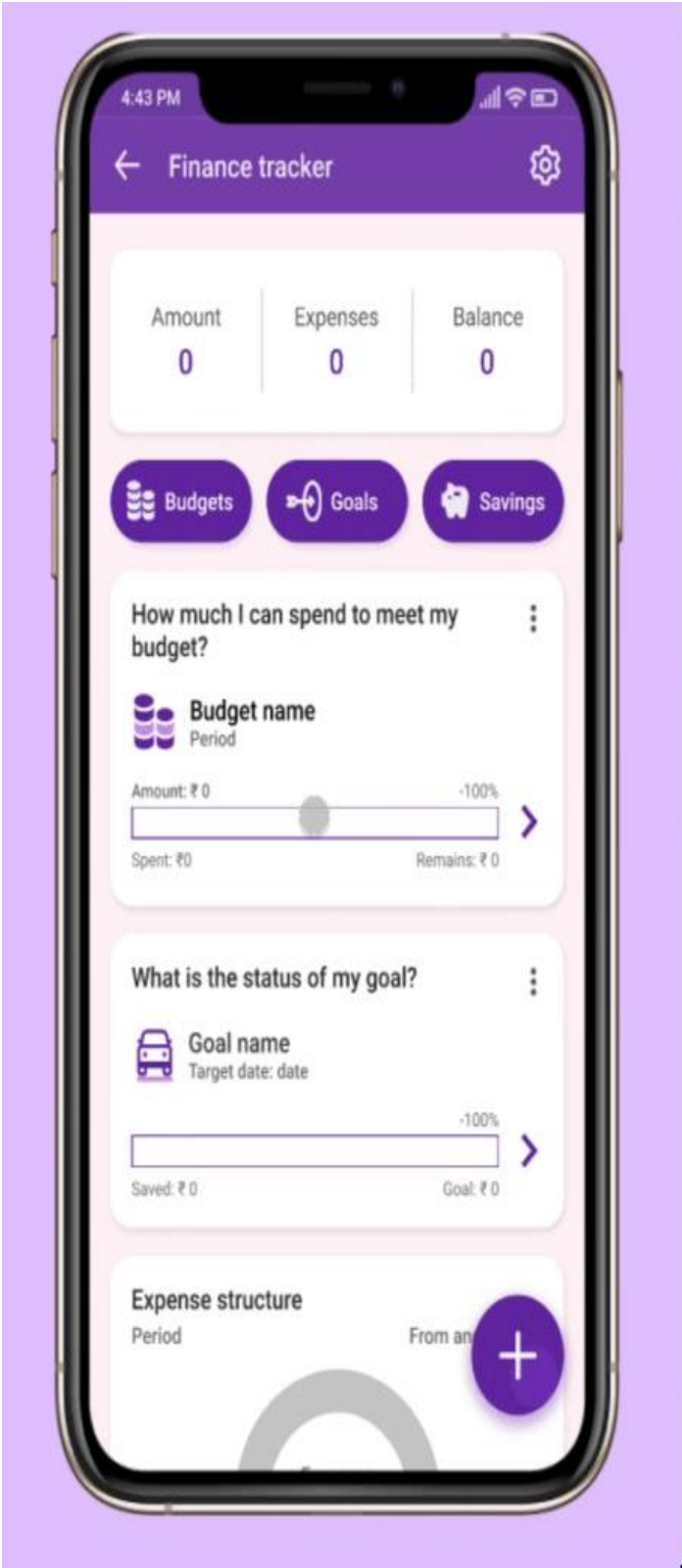


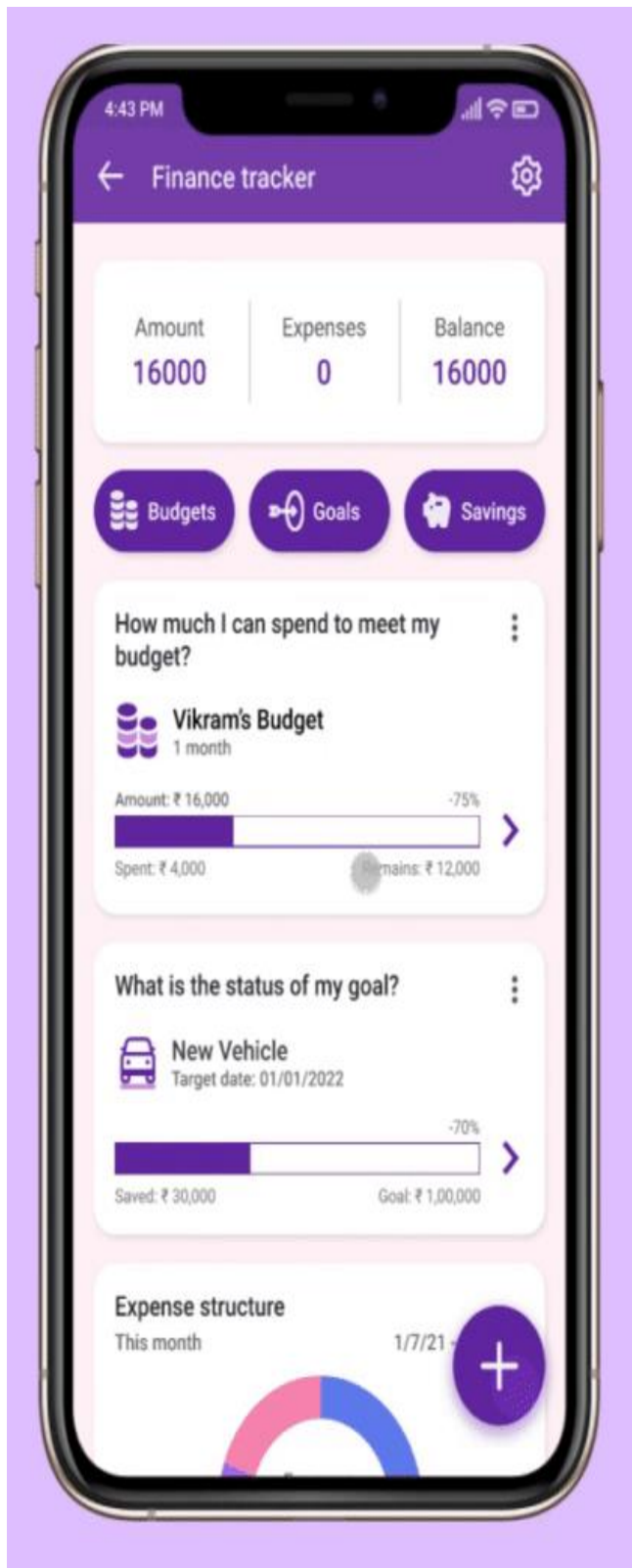


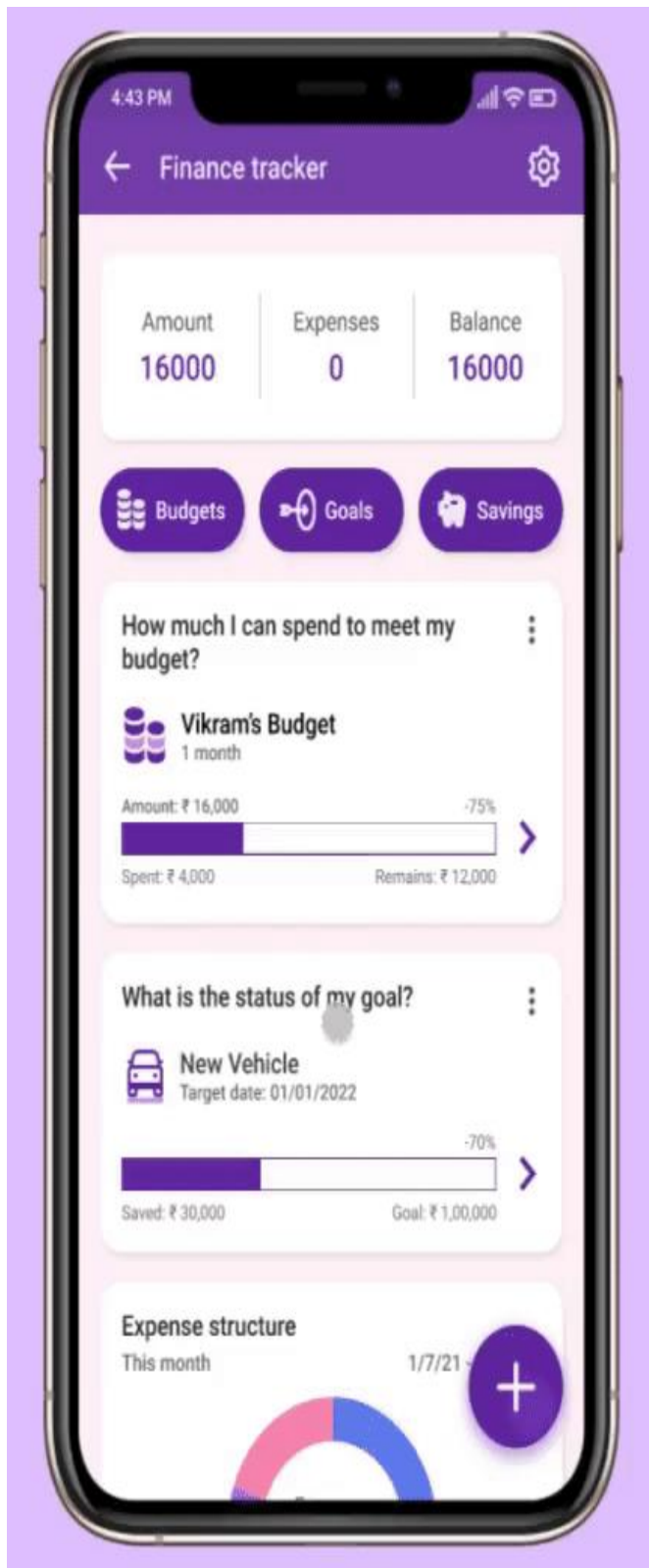
2. Creating Periodic and One-time

Budget screens

2. **Budgets** — Users can choose their budget plan and create their budgets for their needs. Users can create either a **periodic budget or one-time budget** initially, they can also change this while creating the budget. Using this, they can keep track of their finances and keep them **under control** with their budget plan for a selected period.







3.. Empty state and filled information of Home screen, the Settings screen

3. Home screen — Users have to navigate to all the important features of the tracker from the home screen. This is the main screen where users can land and navigate to multiple screens like Budgets, Goals, Savings, etc.

Settings — Users can set the notification reminder on their preference. A **carry-over option** is included where people can add their month's balance to the next month's income. A report option is also provided to download their financial report in a pdf format if needed.

Usability Testing

To evaluate the prototype's usability, I conducted usability testing using **Jackob Neilson's 10 Heuristic principles**. I evaluated based on the severity scale ranges 0–4 indicating the ease of usability.

I tried to do this activity as clear as possible since I did this activity for the first time 😊

<p>Principle 1: Visibility of system status The system should always keep users informed about what is going on through appropriate feedback within a reasonable time.</p>		<p>Principle 2: Match between system and the real world The system of could make the user's language, with words, phrases, and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.</p>		<p>Principle 3: User control and freedom Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialog. Support undo and redo.</p>		<p>Principle 4: Consistency and standards Users should not have to wonder whether different words, situations, or actions mean the same thing.</p>		<p>Principle 5: Error prevention Even better than good error messages is a careful design that prevents a problem from occurring in the first place. Other strategies: warnings, confirmations, and confirmations to reduce the error and present users with a clearly visible path back to the previous state.</p>	
<p>Severity Number (Add the severity number according to the above-mentioned scale)</p>	1	<p>Severity Number (Add the severity number according to the above-mentioned scale)</p>	0	<p>Severity Number (Add the severity number according to the above-mentioned scale)</p>	0	<p>Severity Number (Add the severity number according to the above-mentioned scale)</p>	2	<p>Severity Number (Add the severity number according to the above-mentioned scale)</p>	1
<p>Issues (Explain the issue that you found using the heuristic analysis of the principle)</p>	Not able to track income	<p>Issues (Explain the issue that you found using the heuristic analysis of the principle)</p>	Not able to give info on a natural way. Explain the issue to the user. They can click on the 'Add Income' button.	<p>Issues (Explain the issue that you found using the heuristic analysis of the principle)</p>	Not able to give info on a natural way. Explain the issue to the user. They can click on the 'Add Income' button.	<p>Issues (Explain the issue that you found using the heuristic analysis of the principle)</p>	Not different types of items to view is unique for the user view. The sign is more look in Expense page and Goal selection page.	<p>Issues (Explain the issue that you found using the heuristic analysis of the principle)</p>	Give an error message for the first time and prevent it from happening.
<p>Recommendations (Explain briefly what you feel will be the fix for the above issue)</p>	While dealing with users' right-hand side, they can click on the 'Add Income' button.	<p>Recommendations (Explain briefly what you feel will be the fix for the above issue)</p>	While dealing with users' right-hand side, they can click on the 'Add Income' button.	<p>Recommendations (Explain briefly what you feel will be the fix for the above issue)</p>	While dealing with users' right-hand side, they can click on the 'Add Income' button.	<p>Recommendations (Explain briefly what you feel will be the fix for the above issue)</p>	While dealing with users' right-hand side, they can click on the 'Add Income' button.	<p>Recommendations (Explain briefly what you feel will be the fix for the above issue)</p>	While dealing with users' right-hand side, they can click on the 'Add Income' button.
<p>Principle 6: Recognition rather than recall Describe the user's memory and the memory of the system. The user should not have to remember information from one part of the dialogue to another. Critical actions by use of the system should be visible or easily retrievable whenever appropriate.</p>		<p>Principle 7: Flexibility and efficiency of use Accelerators — shortcuts for the power user — may often speed up the interaction for the power user, but the system can cater to both the power user and the novice user. Allow users to tailor frequent actions.</p>		<p>Principle 8: Aesthetics and minimalist design Changes should not contain information that is irrelevant or rarely needed. Every extra unit of information in a dialogue only adds to the clutter and obscures the information that is relevant and obscures the information that is relevant.</p>		<p>Principle 9: Help users recognize, diagnose, and recover from errors Error messages should be written in plain language. The context, possibly indicating the problem, and constructively suggest a solution.</p>		<p>Principle 10: Help and documentation Even though it is better if the system can be used without documentation, it is still a good idea to provide help and documentation. They can be used when needed to learn more about the system and its features.</p>	
<p>Severity Number (Add the severity number according to the above-mentioned scale)</p>	2	<p>Severity Number (Add the severity number according to the above-mentioned scale)</p>	0	<p>Severity Number (Add the severity number according to the above-mentioned scale)</p>	1	<p>Severity Number (Add the severity number according to the above-mentioned scale)</p>	0	<p>Severity Number (Add the severity number according to the above-mentioned scale)</p>	1
<p>Issues (Explain the issue that you found using the heuristic analysis of the principle)</p>	Not able to track income	<p>Issues (Explain the issue that you found using the heuristic analysis of the principle)</p>	Not able to give info on a natural way. Explain the issue to the user. They can click on the 'Add Income' button.	<p>Issues (Explain the issue that you found using the heuristic analysis of the principle)</p>	Not able to give info on a natural way. Explain the issue to the user. They can click on the 'Add Income' button.	<p>Issues (Explain the issue that you found using the heuristic analysis of the principle)</p>	Not different types of items to view is unique for the user view. The sign is more look in Expense page and Goal selection page.	<p>Issues (Explain the issue that you found using the heuristic analysis of the principle)</p>	Give an error message for the first time and prevent it from happening.
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So, after doing this activity, I found that the maximum severity level as per my understanding was **2**, which is “**Minor usability problem: fixing this**”

should be given low priority”. After evaluation, I felt most of the issues needed to be tested with the users to get more clarity on how they feel while they’re using this.

User Testing

User testing was done with the real users to observe and analyze how the users were interacting with the application and whether the solution is solving the user problems or not.

I tested my prototype with 3 users virtually over a zoom call. I asked them to perform a task on the prototype and following that, I asked questions related to that task and user responses.

TASKS GIVEN

Task 1

Scenario - Imagine you have Rs.20,000 now as a income and you want to create a budget for a month. You want to save the money from this and you want to monitor all this. Choose the budgets option from the home screen and create a periodic budget for a month.

Task 2

Scenario - You want to buy a new bike by next new year. That bike costs around Rs.1,00,000 and you already saved Rs.20,000 for that. Choose the Goals option from the home screen and start creating a goal. After creating a goal, try to add more money by clicking the goal card.

Task 3

Scenario - You want to enter your food expense and an income which you received as a gift. Enter your records by using the floating button on the home screen.

Task 4

Scenario - You already saved your money by using the budget. Now you want to use that money for your goal. Choose the savings option from the home screen and add your savings to your goal.

Key quotes from the users 🗣️

“The Goal option will be useful for me. It will be helpful to save and track the money for the goals. Budgets looks good but the plan which I have to choose seems complex as I have to divide the spendings to needs and wants. Overall the application is also to use and interact. The instructions are clear for me.”

“Budgets will help me to have a control in spendings. The custom mode in having a budget plan will help a lot. Also while entering the records for expense/income the interactions are good. I feel the option for including the income to a budget is complex to understand or not needed for me.”

“Budgets and goals look good to interact with. Choosing the budget plan seems difficult to understand. I felt lost while interacting with the Home screen which displays the status cards. The option for including the income to a budget is difficult to understand. Other things are useful and easy to interact”

Revised Prototype 

After testing the prototype with the users, I iterated the screens after finding out the users were having certain issues while interacting with the prototype.

Before

4:43 PM

← New Budget ✓

Name

Vikram's Budget

Select your Budget plan ?

None

50-30-20(%) budget

70-20-10(%) budget

Custom

☒ Repeats the same budget plan and period after this ends

Income

0

How much you can spend and save?

Period	From and To Date
You can spend 0% (Needs+Wants) from your income	₹ 0
You can save 0% from your income	₹ 0

After

4:43 PM

← New Budget ✓

Name

Vikram's Budget

Select your Budget plan ?

None

80-20(%) budget

70-30(%) budget

Custom

☒ Repeats the same budget plan and period after this ends

Income

0

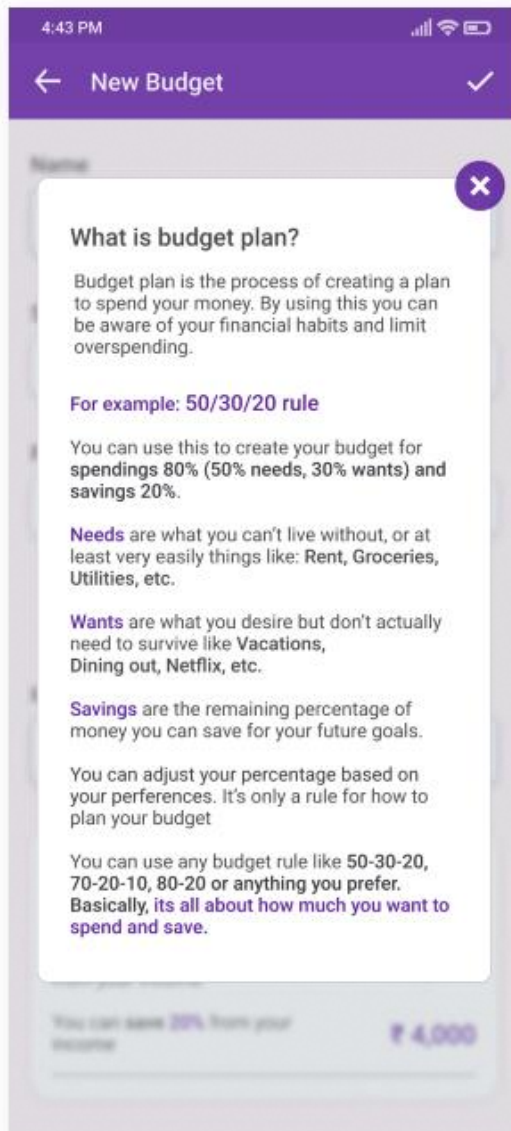
How much you can spend and save?

Period	From and To Date
You can spend 0% (Needs+Wants) from your income	₹ 0
You can save 0% from your income	₹ 0

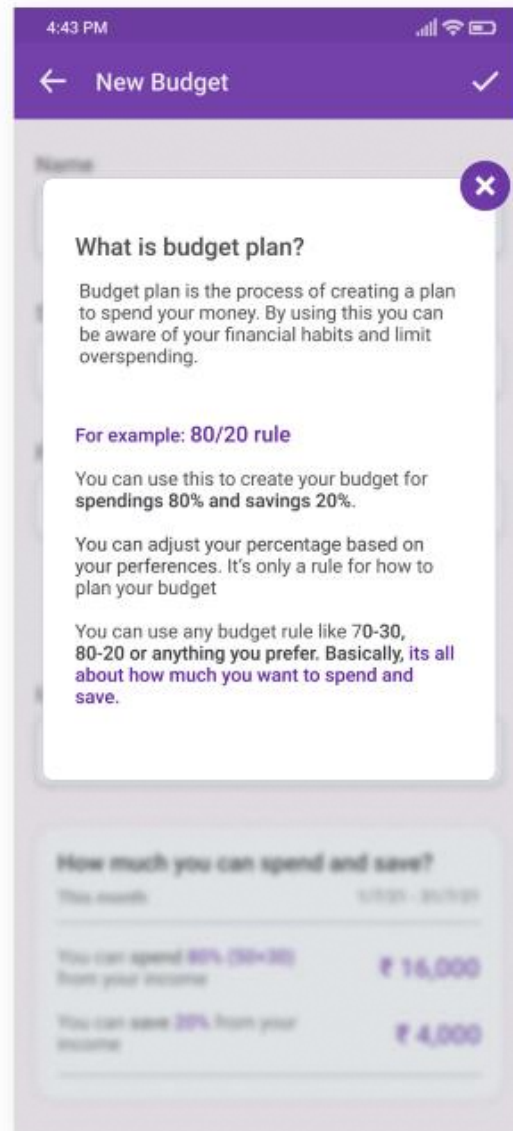
Iteration 1: During testing, users were having a problem understanding the budget plan. They felt that the 50/30/20 rule is complex as they have to divide their expenses into needs and wants which they considered as hard to do.

In the Iterated prototype, I changed the concept of the budget plan from 50/30/20 or 70/30/10 rule to **80/20 rule**. It will allow users to divide their income into only spending and savings. In this way, users can understand this concept easily.

Before



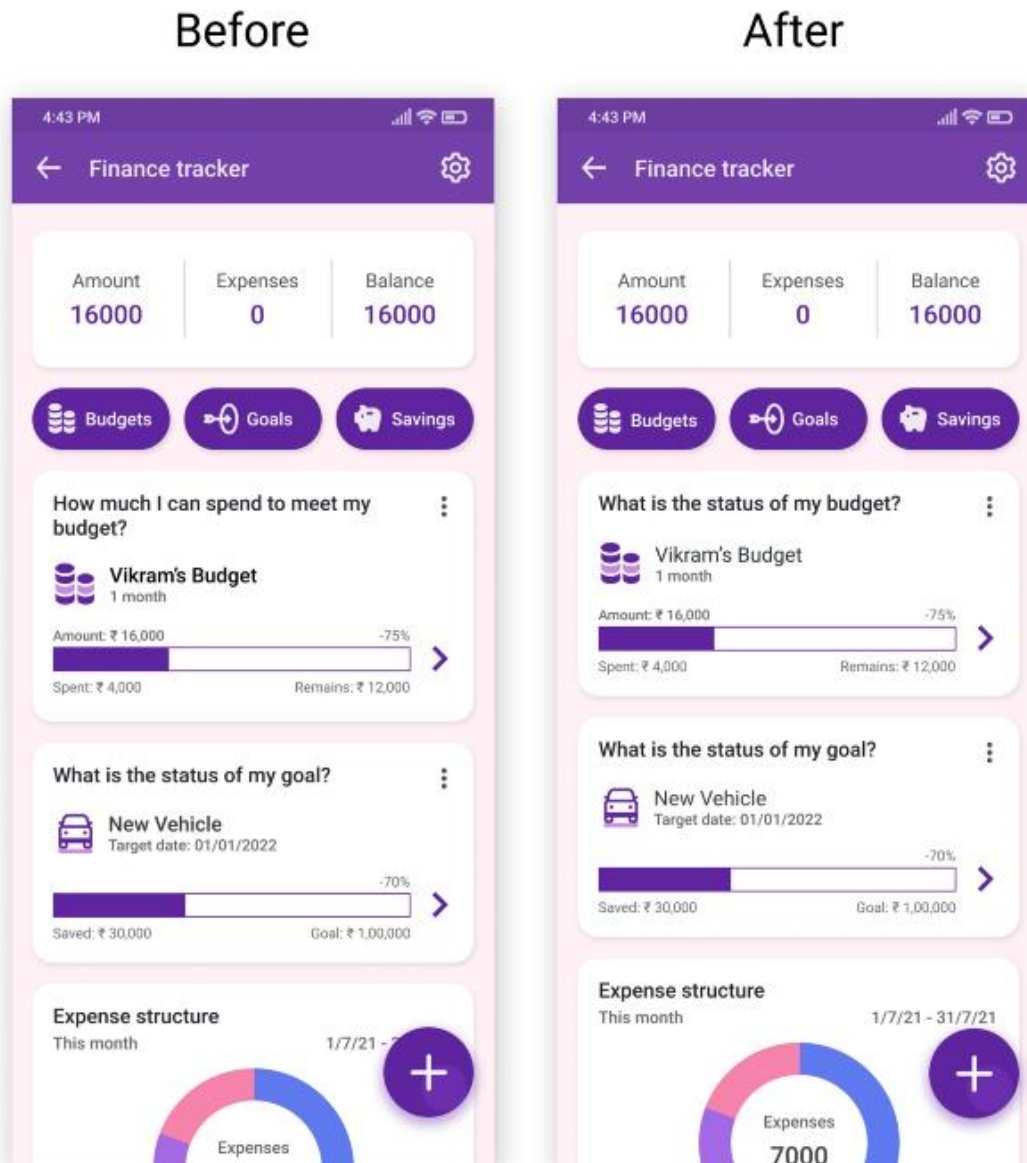
After



Iteration 2

Iteration 2: During testing, users were also **not giving enough time to read** the info regarding the budget plan.

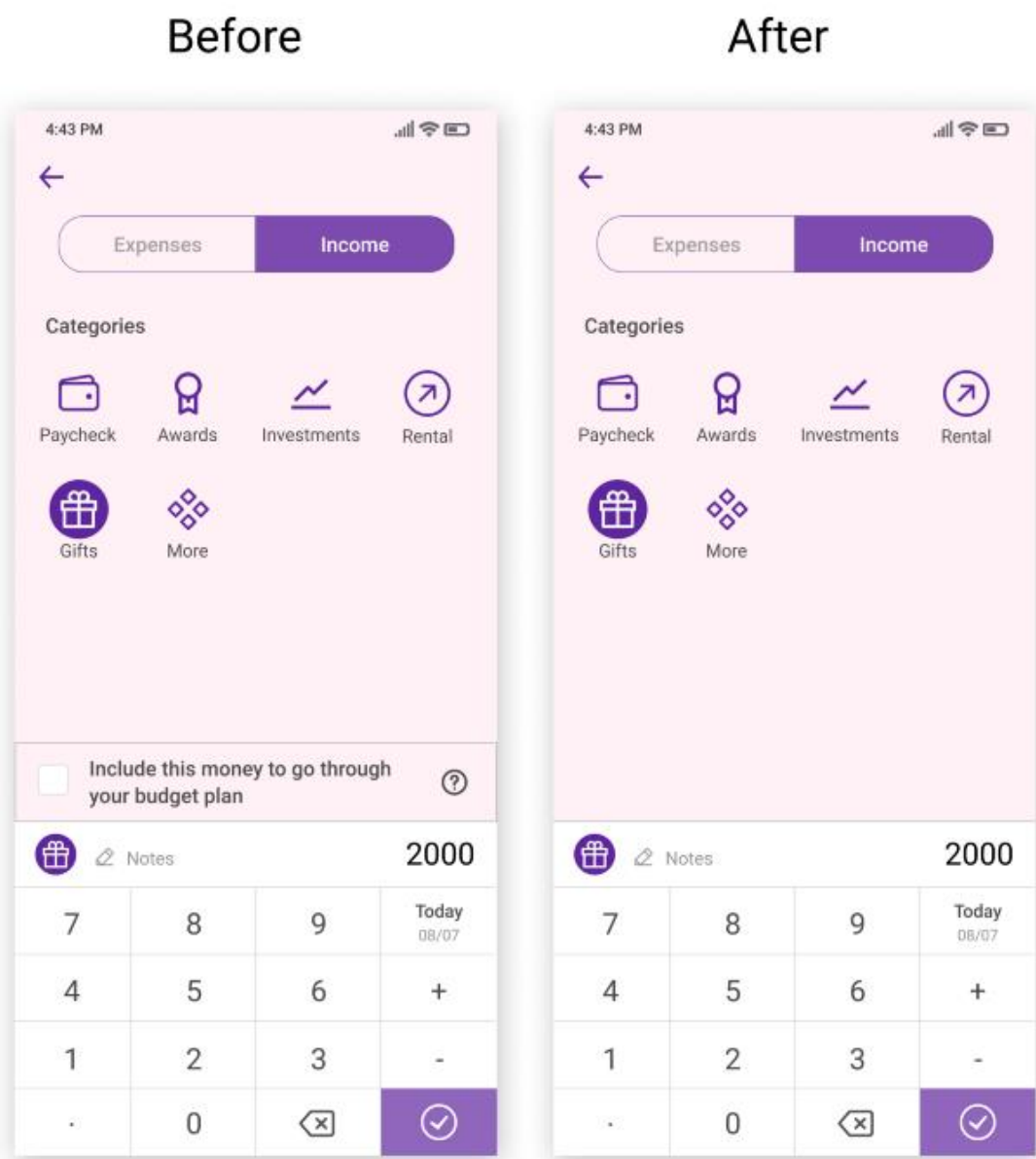
In the Iterated prototype, based on the changes I made to iteration 1, I tried to reduce and show the **information as simple as possible**. This will help users to quickly grab the concept of the budget plan.



Iteration 3

Iteration 3: During testing, I noticed that users were having a hard time **understanding and focusing** on the status cards of the home page.

In the Iterated prototype, I changed the **tagline for the status** of the budget card and **reduced the weight** of the text. This would make sure that users would read and understand the status cards on the home screen.



Iteration 4: During testing, Users were **not able to recognize** the concept of adding the money to go through the budget plan while adding the income. They mentioned that it is not needed to record the money and proceed.

In the Iterated prototype, I **removed** that option to include the money this will clear the blocks for them to add the income smoothly to their budgets.

What is next?

I want to keep a lot of things for the future scope of the project since building financial knowledge is immense for the people. The **ideas which I brainstormed** early can be retouched again to make them useful for people. The tracker can further be improved with the interactions between the screens and solutions with **more iterations**.

Overall, this tracker will lay a foundation for building financial wealth but still a **lot of things can be added** under this layer to improve the financial status of people.

Major takeaways from this project

I had ups and downs throughout this project. I had plenty of roadblocks to proceed further on each stage of the project.

7. I learned a lot about how to **iterate on ideas** through brainstorming sessions and what can be given priority to proceed further on this project.
8. I was able to **explore and learn more** about the fintech industry which is new for me.
9. The problem statement which I chose helped me to understand how people are **managing their finances** and how they are trying to make their future bright.

10. Heuristic evaluation, a new method that I learned and used in this case study helped me **to spot the errors ahead of time**.

After finishing this project, when I looked back it added a lot to **my learning curve** from the problem statement to finishing the iterations after testing. Its been an incredible learning experience for me throughout the course.