

Java and Web technologies Mini-Project

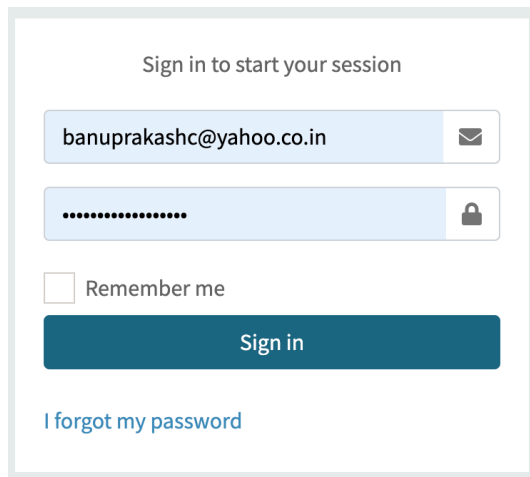
Personal Finance Manager

App to help you keep track of your expenses and income, so you can spend less and save more. By keeping track of your expenses and your income you can budget accordingly and save money.

Who is it for?

This application is for people who want to track their finances, keep an eye on their money without having to upload their financial records to the cloud.

1. Registration: User needs to register before using the application.
2. Login



Sign in to start your session

banuprakashc@yahoo.co.in

.....

☐ Remember me

Sign in

[I forgot my password](#)

3. Once on successful login for first time user is redirected to "Getting Started" page as shown below:

.

Finance Manager

May 1st, 2023 - May 31st, 2023

banuprakashc@yahoo.co.in

Search...

Dashboard

FINANCIAL CONTROL

Budgets

Bills

ACCOUNTING

Transactions

OTHERS

Accounts

Classification

Reports

Logout

Welcome to Finance Manager!

Getting started

To get started with this tool please enter your bank's name and the balance of your main checking account. Do not worry yet if you have multiple accounts. You can add those later.

Bank name

SBI

Balance

₹

1560000

Submit

- Once account is added, user is redirected to the Dashboard. For subsequent login user will be redirected to this page directly.

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IN + OUT THIS PERIOD

₹ 0.00

₹ 0.00 + ₹ 0.00

BILLS TO PAY

Paid:

SPENT

₹ 0.00

Per day: ₹ 0.00

NET WORTH

₹ 1,560,000.00

Your accounts

SBI

Initial balance for "SBI"

₹1,560,000.00

Create - ₹ 1,560,000.00 -

Cash wallet

There are no transactions (in this period) for asset account "Cash wallet".

Create - ₹ 0.00 -

Dropdowns :

SBI

Initial balance for "SBI"

Create - ₹1,560,000.00 -

Create new withdrawal

Create new deposit

Create new transfer

Create - ₹1,560,000.00 -

Show

Reconcile

Edit

Delete

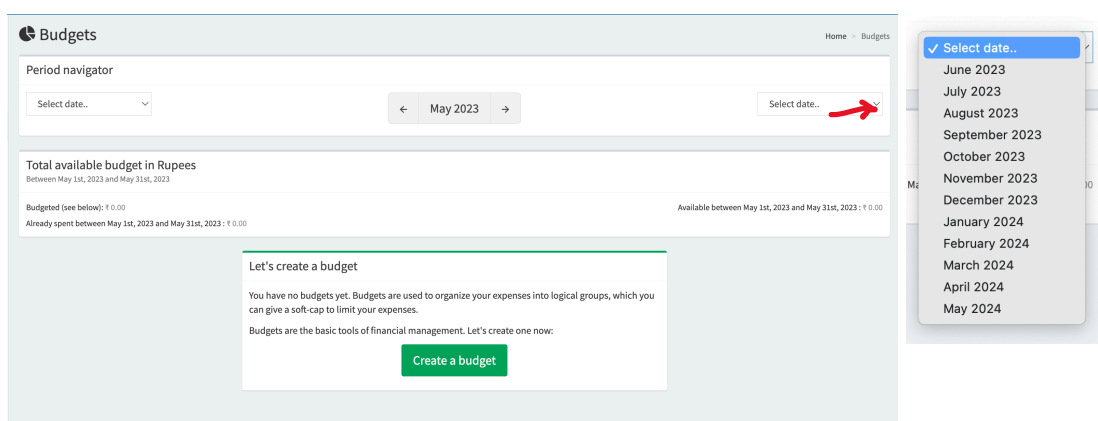
5. Budgets

Once you start creating transactions you start to realise that in a month, the same kind of stuff always comes back. For example:

- Bills
- Groceries
- Cigarettes
- Going out for drinks
- Clothing

Likewise, you should start to notice that you always spend the same amount of money on these things. That amount may be too high for your tastes, and you may want to change that. Or at least, keep track of it.

These things are budgets. Budgets are a kind of "category" that come back every single month. Bills are recurring (rent, water, electricity). You buy groceries every day. You need to pay rent every month.



Adding money to a budget

Automatic budgeting

Edit or create a budget and pick from the following options:

a. Fixed amount

For example amount is set to 2000 monthly will give you an automatic budget amount of 2000, valid for one month, every month. This will happen automatically. Other periods are explained further ahead.

b. Rollover ("Add an amount every period")

Rollover budget amounts can be used to "save up" money in a budget. Application will take the budget left from the previous period and add the configured amount to the budget.

If you set it to "monthly" (2500):

January, the budget will be set to 2500.

February, the budget will be set to 5000.

March, 7500 etc.

If you spend money in your budget, this will be reflected in the budget. For example, with the example budget now at 7500, this is what happens when you spend 2000:

April, the budget will be set to 8000: $7500 + 2500 - 2000$.

May, 10500. Same logic.

If at any point you spend more than the amount in the budget, the routine will start over. So if you spend 12000 (which is more than 10500):

June, the budget will be set to 2500 again.

c. Adjusted ("... and correct for overspending")

If you set an adjusted budget amount, the budget amount will be set every period to the amount you specify. If you have overspent this amount in the previous period, this will be corrected in the current period.

Example: you have a monthly budget of 500 for clothes.

January, the budget amount will be set to 500

February, the budget amount will be set to 1000

You spend 1250 in February.

March, the budget amount will be set to 250 ($1000 + 500 - 1250$)

Create a new budget

Home > Budgets > Create a new budget

Mandatory fields

Name

Groceries

Optional fields

Auto-budget

Add an amount every period

Currency

Rupee

Auto-budget amount

7200

Auto-budget period

Monthly

Attachments

Choose files

No file chosen

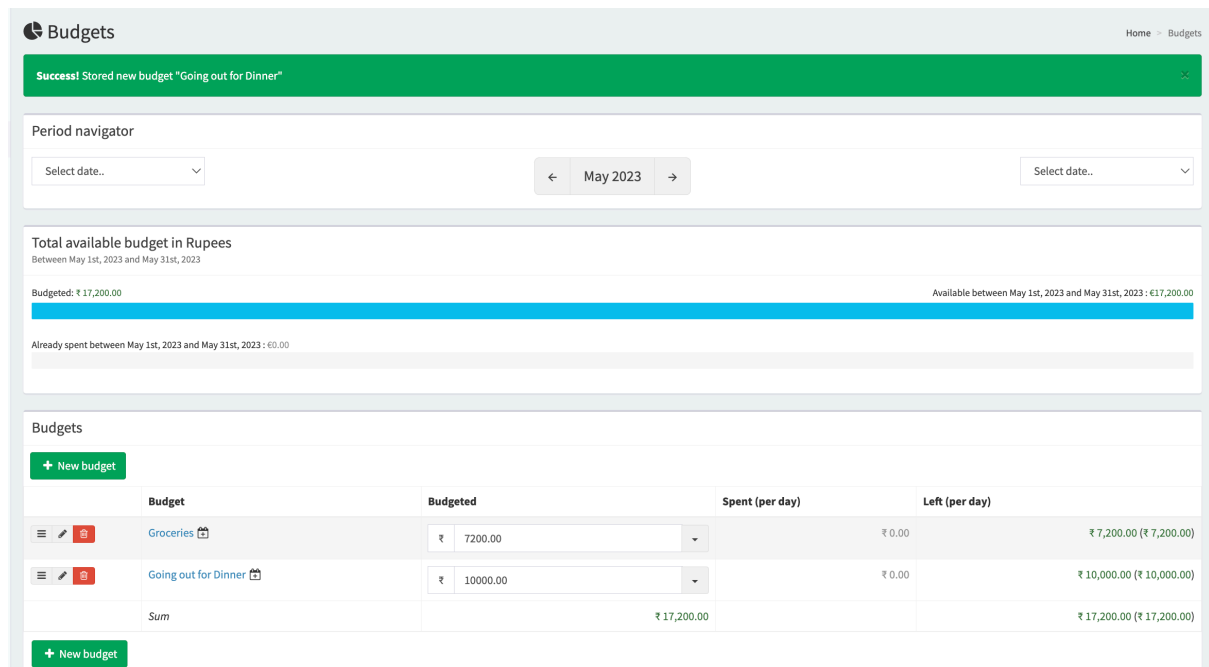
Maximum file size: 64 MB

Options

Return here

☐ After storing, return here to create another one.

Store new budget



Bills

You can keep an eye on your expected recurring expenses by creating bills. Things like rent and utilities must be paid every month and Firefly III can keep track of such things.

When you create a bill, you tell Firefly III in what range you expect the bill to be. You also input the title of the bill, and how often the bill is expected to be paid.

The name is descriptive only and is not used internally.

- Minimum amount: 7000
- Maximum amount: 8000
- Description: Monthly rent


- Repeats every month

You can also set the end date and the extension date.

These properties by themselves are mostly cosmetic. They allow application to predict for you how much you should expect to spend on these bills. On the frontpage, a little box will tell you how you're doing.

If you enter a number in the "skip" field, the bill will be automatically skipped every X times; a bill that arrives every 3 months can be entered by filling in "2".

If you edit a bill and change the amount, the rule will not be automatically updated to match. When you delete the bill, transactions associated with the bill will lose this association but will not be deleted.

 Bills


Home > Bills

Let's create a bill!

You have no bills yet. You can create bills to keep track of regular expenses, like your rent or insurance.

Do you have such regular bills? Create a bill and keep track of your payments:

Create a bill

 Bills Create new bill

Home > Bills > New bill

Mandatory fields

Name

Rent

Currency

Rupee (₹)


Minimum amount

35000

Maximum amount

35000

Date

 29/05/2023

Repeats


monthly

Skip

0


Optional fields

End date

 31/12/2023

Optional field. The bill is expected to end on this date.

Extension date

 05/01/2024

Optional field. The bill must be extended (or cancelled) on or before this date.

Notes

Rental agreement expires on 31-dec 2023, might renew by 5 JAN 24

This field supports [Markdown](#).

Attachments

Choose files

No file chosen

Maximum file size: 64 MB

Group

Group

Options

Return here

☐ After storing, return here to create another one.





Store new bill

Bills

Home > Bills

Bills

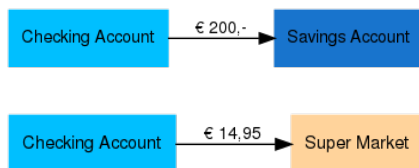
+ Create new bill

	Name	Relevant rules	Amount	Paid this period	Next expected match	Repeats
(ungrouped)						
≡	 	Internet	~ ₹2,250.00	Expected today	May 30th, 2023	monthly
≡	 	Rent	~ ₹35,000.00	May 30th, 2023	June 30th, 2023	monthly
Sum (active and expected bills only)			₹37,250.00			

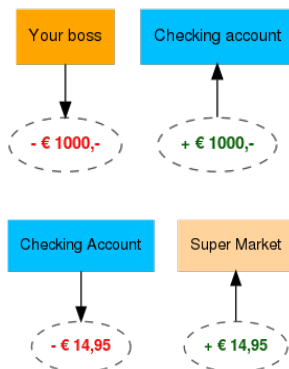
+ Create new bill

Transactions

Money moves from A to B. It doesn't matter if this is an expense, your salary or you moving money around: *money moves from A to B*:



You get money and your boss loses it. You spend money and the Supermarket "earns" it:



Each transaction is stored twice. Once as a loss (for one party), and once as a profit (for the other party). This seems pretty pointless, and technically it is. But it was designed back when clerks could be fraudulent and this double-entry system stopped fraud.

↔ Transactions + Create new deposit

Transaction information

Description

Money back for Team Lunch @Holiday Inn

🗑

Source account

Office

🗑

Destination account

SBI

🗑

Date

30/05/2023

📅

🗑

Rupee

Amount

10000

🗑

Transactions:

All expenses between May 1st, 2023 and May 31st, 2023

+ Create a new transaction

Description	Amount	Date	Source account	Destination account	Category	
← Expensive Lunch with Team	-₹12,500.00	May 30th, 2023	SBI	Holiday Inn	Actions ▾	<input type="checkbox"/>
← Rent for the month of May 2023	-₹35,000.00	May 30th, 2023	SBI	Landlord	Actions ▾	<input type="checkbox"/>

Show all transactions without grouping them by date.

May 2023

Transactions2

Spent-₹47,500.00

All revenue between May 1st, 2023 and May 31st, 2023

+ Create a new transaction

Description	Amount	Date	Source account	Destination account	Category	
→ Money back for Team Lunch @Holiday Inn	₹10,000.00	May 30th, 2023	Office	SBI	Actions ▾	<input type="checkbox"/>

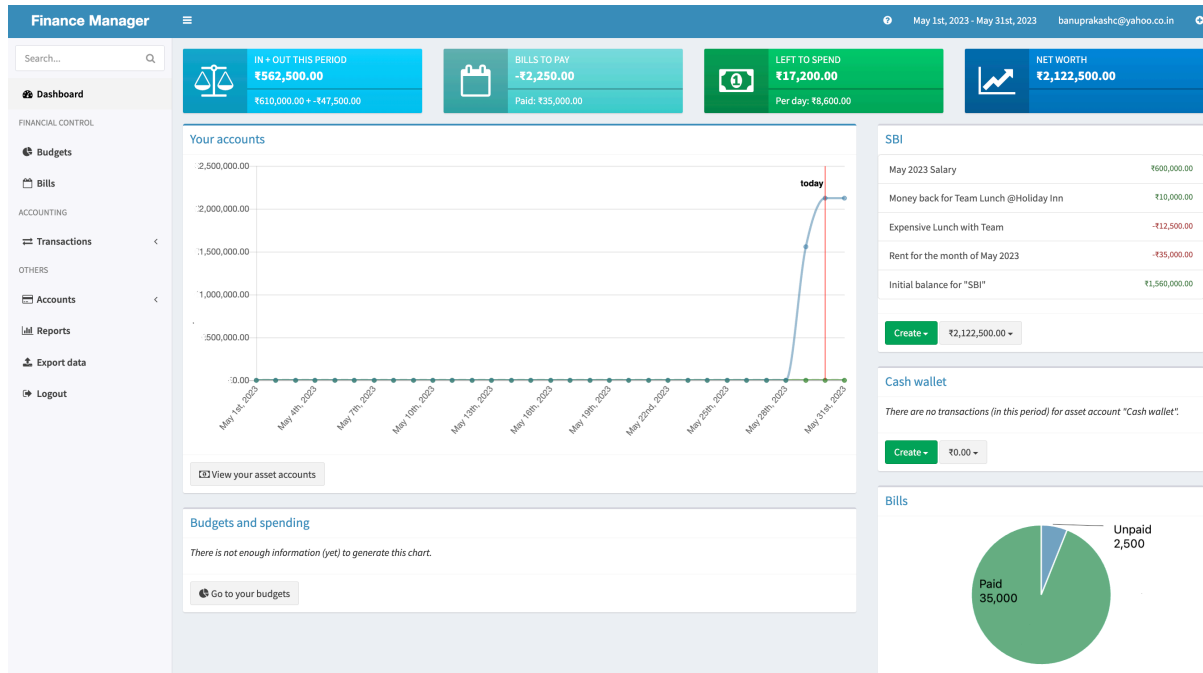
Show all transactions without grouping them by date.

May 2023

Transactions1

Earned₹10,000.00

Dashboard:



Reports:

Default Financial Report from Jan 1st to Dec 31st

1. Bar Char [Income vs expenses]
2. Line Chart [Net worth with Month on X axis and Net worth Y axis]
3. Tabular data for Revenue/Income and one for expenses

Technology Stack to be used for this Project:

- Building REST Apis
 - Build REST APIs using Spring Boot
 - Use MySQL for Persistence
 - All RestControllers should be unit tested using JUnit and Mockito
 - Use OpenAPI/ Swagger for Documentation
 - Use RestTemplate/PostMan for testing APIs
- Building UI components
 - Build UI components using REACT
 - Use Redux for State management
 - Use React-Router-DOM for routes
 - Use React Testing Library for Unit testing React components
 - Use Cypress for E2E testing
- Fake RESTful web services using json-placeholder during development stage
- Use Bootstrap/Bulma/Tailwind for Responsive Web design
- Use Font-awesome for icons
- Security
 - Spring Security with JWT for authorization