Personal Finance Tracker

By Makoto, Tetsuya, and Jonathan.

November 3, 2025

Objectives

Emphasize with Python programming, pandas for data handling, and matplotlib for visualization, along with GitHub for collaboration and version control.

Architecture
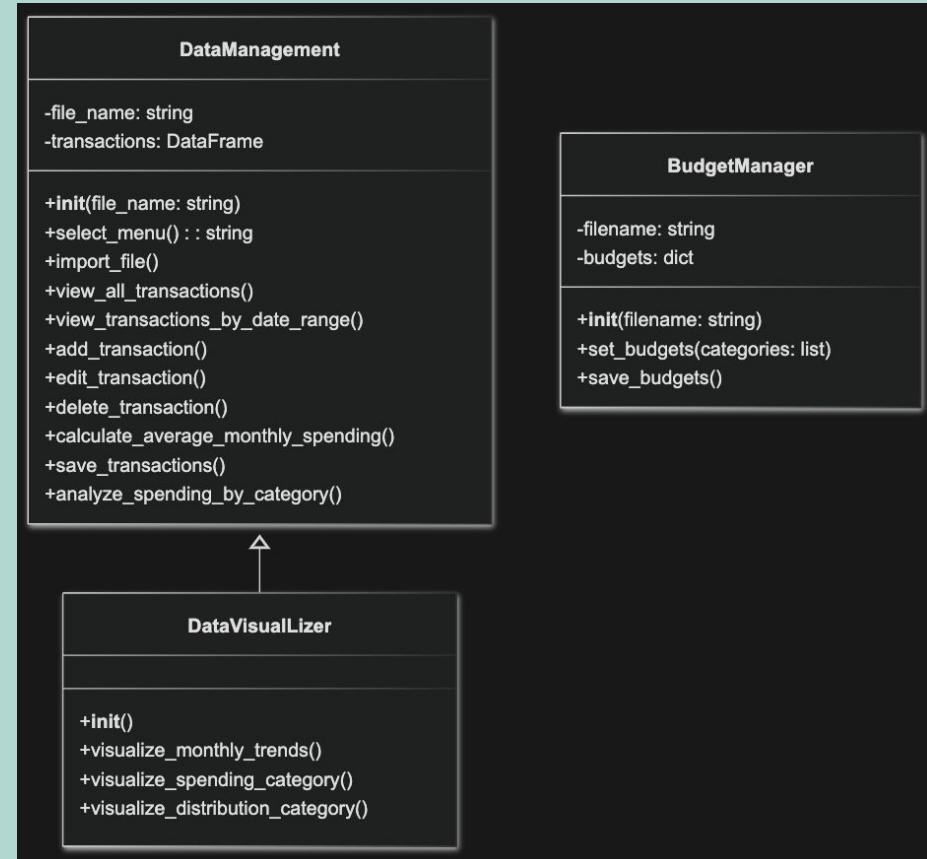
app.py

data_management.py

Live Demo

Data Management

1. Csv import
2. **View all transactions**
3. View transactions by date ranges
4. **Add/Edit/Delete transactions**
5. **Spending by category**
6. **Average monthly spending**
7. Top spending category
8. ~~Set monthly income~~
9. Save transaction to csv
10. Exit

Data Visualization

1. **Visualize spending trend**
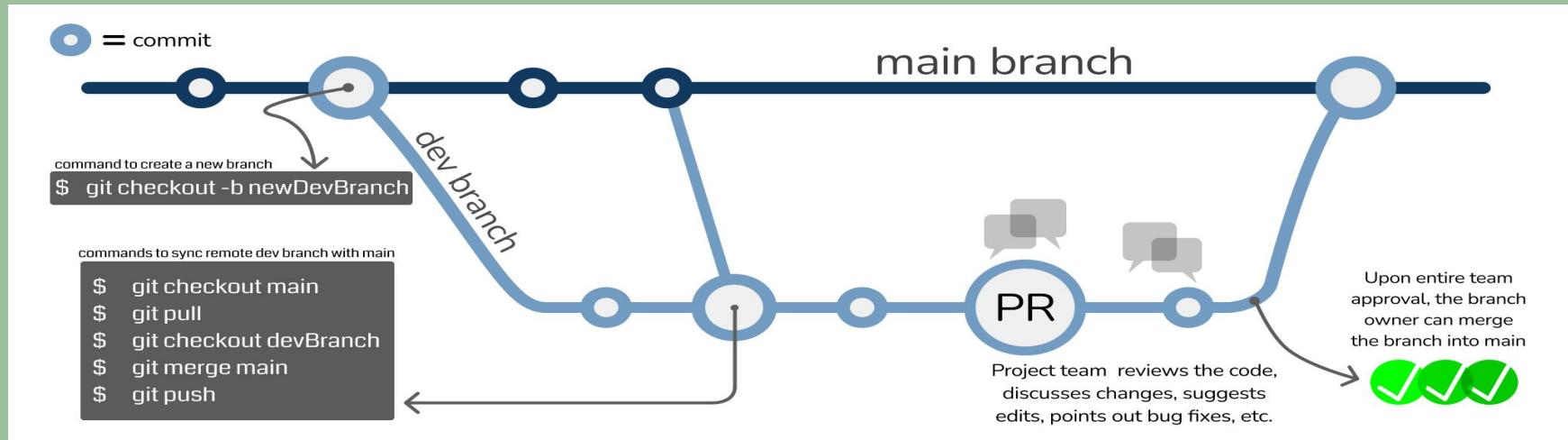
Budget Management

1. **Set category budget**
2. **Check budget status**

- Bold: Show live demo
- Strike through: Not implemented

GitHub Collaboration

- List up issues
- Branches for each issues.
- Pull requests for code review.
- Merging work into main branch.

= commit

main branch

command to create a new branch
```
$ git checkout -b newDevBranch
```

dev branch

commands to sync remote dev branch with main
```
$   git checkout main
$   git pull
$   git checkout devBranch
$   git merge main
$   git push
```

PR

Project team reviews the code, discusses changes, suggests edits, points out bug fixes, etc.

Upon entire team approval, the branch owner can merge the branch into main

Branch Naming Convention

When creating a new branch, please follow this naming convention:
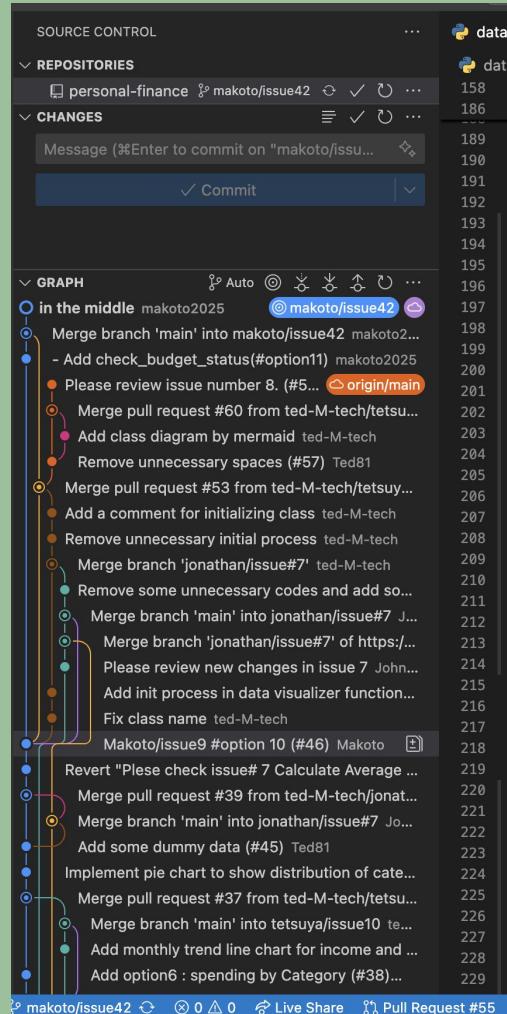
`[developername]/issue[#]`

For example: `john/issue123`

This makes it easy to identify who is working on the branch and which issue it relates to.

Branching Strategy

```
main (trunk)
  |
  +-- [developername]/issue[1] (feature branch)
  |      |
  |     (commit)
  |      |
  |     (commit)
  |      /
  +-- (merge)
  |
  +-- [developername]/issue[2] (feature branch)
  |      |
  |     (commit)
  |      /
  +-- (merge)
  |
  (HEAD)
```

SOURCE CONTROL

REPOSITORIES

personal-finance makoto/issue42

CHANGES

Message (⌘Enter to commit on "makoto/issu...

✓ Commit

GRAPH Auto

in the middle makoto2025 makoto/issue42

Merge branch 'main' into makoto/issue42 makoto2...

- Add check_budget_status(#option11) makoto2025

Please review issue number 8. (#5... origin/main

Merge pull request #60 from ted-M-tech/tetsu...

Add class diagram by mermaid ted-M-tech

Remove unnecessary spaces (#57) Ted81

Merge pull request #53 from ted-M-tech/tetsuy...

Add a comment for initializing class ted-M-tech

Remove unnecessary initial process ted-M-tech

Merge branch 'jonathan/issue#7' ted-M-tech

Remove some unnecessary codes and add so...

Merge branch 'main' into jonathan/issue#7 J...

Merge branch 'jonathan/issue#7' of https:/...

Please review new changes in issue 7 John...

Add init process in data visualizer function...

Fix class name ted-M-tech

Makoto/issue9 #option 10 (#46) Makoto

Revert "Plese check issue# 7 Calculate Average ...

Merge pull request #39 from ted-M-tech/jonat...

Merge branch 'main' into jonathan/issue#7 Jo...

Add some dummy data (#45) Ted81

Implement pie chart to show distribution of cate...

Merge pull request #37 from ted-M-tech/tetsu...

Merge branch 'main' into tetsuya/issue10 te...

Add monthly trend line chart for income and ...

Add option6 : spending by Category (#38)...

makoto/issue42 0 0 Live Share Pull Request #55

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DS201 Final Project - Personal Finance Tracker App

Add status update   Insights   Workflows 5

Backlog ▾ | Priority board | Team items | Roadmap | In review | My items | + New view

Filter by keyword or by field   Discard   Save

Backlog 4 / 5   Estimate: 0
This item hasn't been started

○ personal-finance-tracker-app #15
[Bonus] Add Income Management Feature

○ personal-finance-tracker-app #17
[Bonus] Add "Suggestions for Better Budgeting" Feature

○ personal-finance-tracker-app #18
[Bonus] Develop Extended Data Visualizations

○ personal-finance-tracker-app #61
Change budget class to inheritance.

Ready 0   Estimate: 0
This item can be started.

In progress 2 / 3   Estimate: 0
This is actively being worked on

○ personal-finance-tracker-app #16
[Bonus] Implement Budget Setting and Alerts

○ personal-finance-tracker-app #58
Make a presentation

In review 2 / 5   Estimate: 0
This item is in review

○ personal-finance-tracker-app #8
Calculate and show the average monthly spending functionality

○ personal-finance-tracker-app #42
[Bonus] 11.Check Budget Status

Done 25   Estimate: 0
This has been completed

⊘ personal-finance-tracker-app #6
Delete a transaction functionality
P1 S

⊘ personal-finance-tracker-app #49
Show Top Spending Category

⊘ personal-finance-tracker-app #10
A line chart for monthly spending trends
M

⊘ personal-finance-tracker-app #3
View transactions within a specific date range functionality

⊘ personal-finance-tracker-app #19
Add tasks to collaborate

⊘ personal-finance-tracker-app #36
[Bug] Fix view all transactions function to show all transactions
S

⊘ personal-finance-tracker-app #14
Make menu feature

⊘ personal-finance-tracker-app #1
CSV File Import Functionality

Project Reflections

- During the development of the *Personal Finance Tracker App*, we faced several challenges, especially in managing data and integrating different functions.

- Working collaboratively on GitHub

- We improved our skills in Python, pandas, and matplotlib, visualize spending patterns, and debug code efficiently.

- This project also helped us understand the importance of communication, teamwork, and clear documentation in software development.

Thank you for your attention !!!

☺
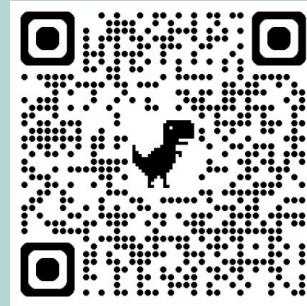
Our Linkedin

Tetsuya

Maco

Johnny