GSoC 2023: Final Work Submission

Who am I?

Hi! My name is Rachit Gupta and I am from Georgia, United States. Currently, I am a sophomore at the Georgia Institute of Technology in Atlanta, majoring in Computer Science with an intended minor in Linguistics. I am deeply passionate about exploring the intersection between people and technology and devising ways to make their interaction more seamless and efficient.

Over the years, I have developed a keen interest in various aspects of computer science, including software engineering, artificial intelligence, and natural language processing. I have also been fascinated by the role of language and communication in shaping our understanding of the world around us, which led me to pursue a minor in Linguistics.

Apart from my academic pursuits, I am an avid sports enthusiast and enjoy playing basketball and badminton. I also love to explore the city and immerse myself in the rich cultural experiences it has to offer. With my diverse range of interests and a drive to learn and innovate, I am excited to make a meaningful contribution to the world of computer science and beyond.

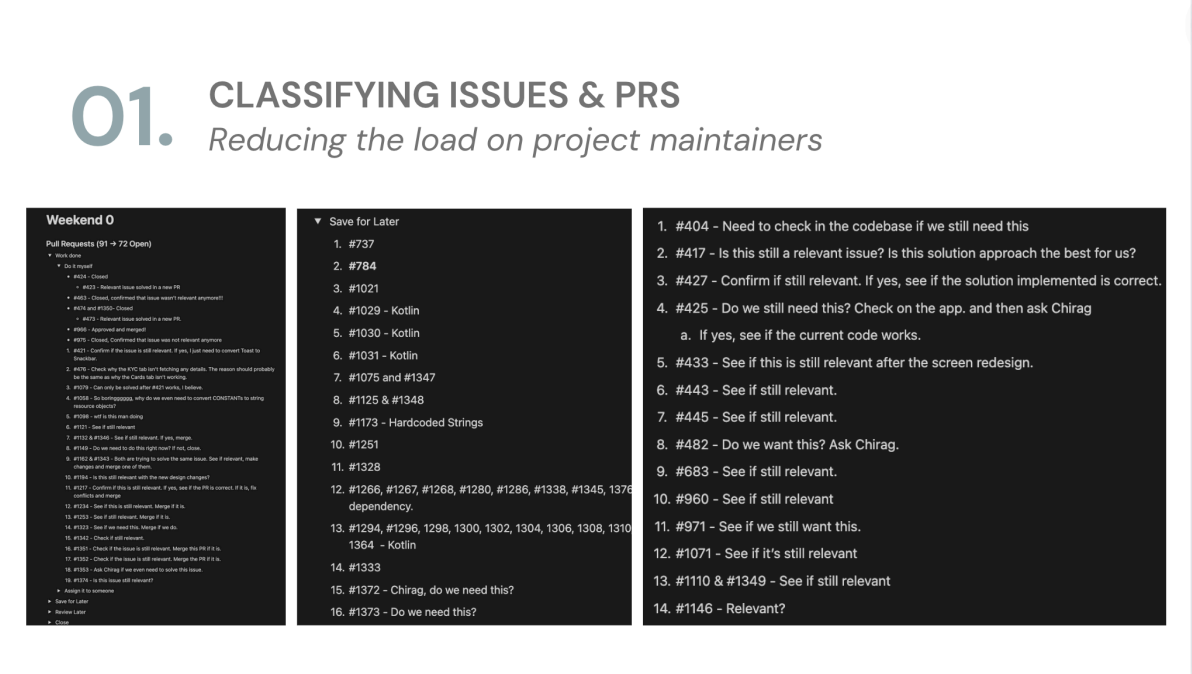
A short description of the goals of the project.

I worked on Mifos Pay: OpenMF's Mobile Wallet. It is a feature rich reference wallet app that demonstrates the capabilities of Mifos. Our longer vision aligns with the Open Wallet Foundation Framework, a consortium of companies and non-profit organizations collaborating to drive global adoption of open, secure and interoperable digital wallet solutions.

The goal for my project was to help boil down the longer term use cases for the mobile wallet and then construct a prototype for the newly discussed app. The new prototype had to be in alignment with the other work done by the Mifos — standardizing the UI using the new Mifos UI library and migrating from Java to Kotlin.

What I did.

Classifying Issues and PRs.



Migrating from Java to Kotlin

Phase 1

A. Implemented Package by package conversion.
B. Ran into a butterknife related issue.
C. Discussed with my mentor to remove butterknife completely and instead implement Kotlin's data/view binding.

Phase 2

A. Implemented data/view binding for EditProfile Activity. The code could compile.
B. Ran into an issue with instance URL. Couldn't log in to the app anymore to test my code.
C. Pivoted to another task.

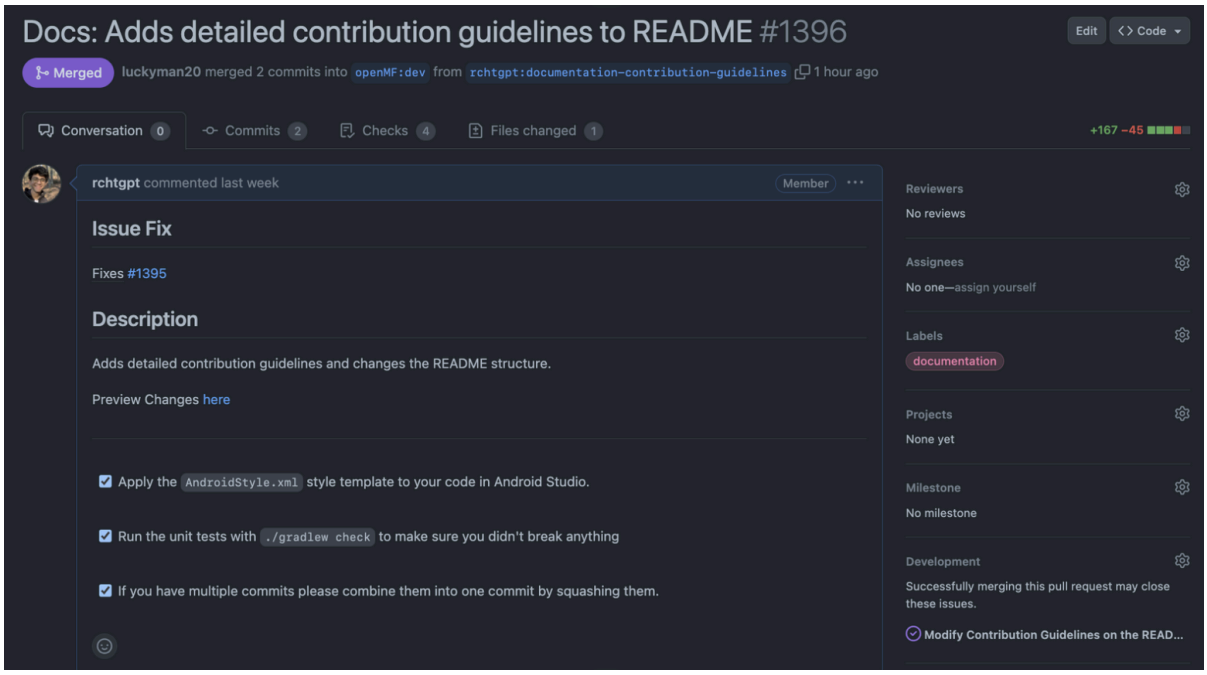
Writing Contribution Guidelines for Incoming Contributors

Phase 1

Analyzed the previous Contribution Guidelines. Realized that it lacked formal language, elaborate steps, and technical details like How to Solve Merge Conflict Using Git.

Phase 2

Proposed my own draft & suggested that we merge this with the README file itself so that it's easily accessible.



Drafting a Product Requirements Document

Met with the Mifos team over Zoom calls.

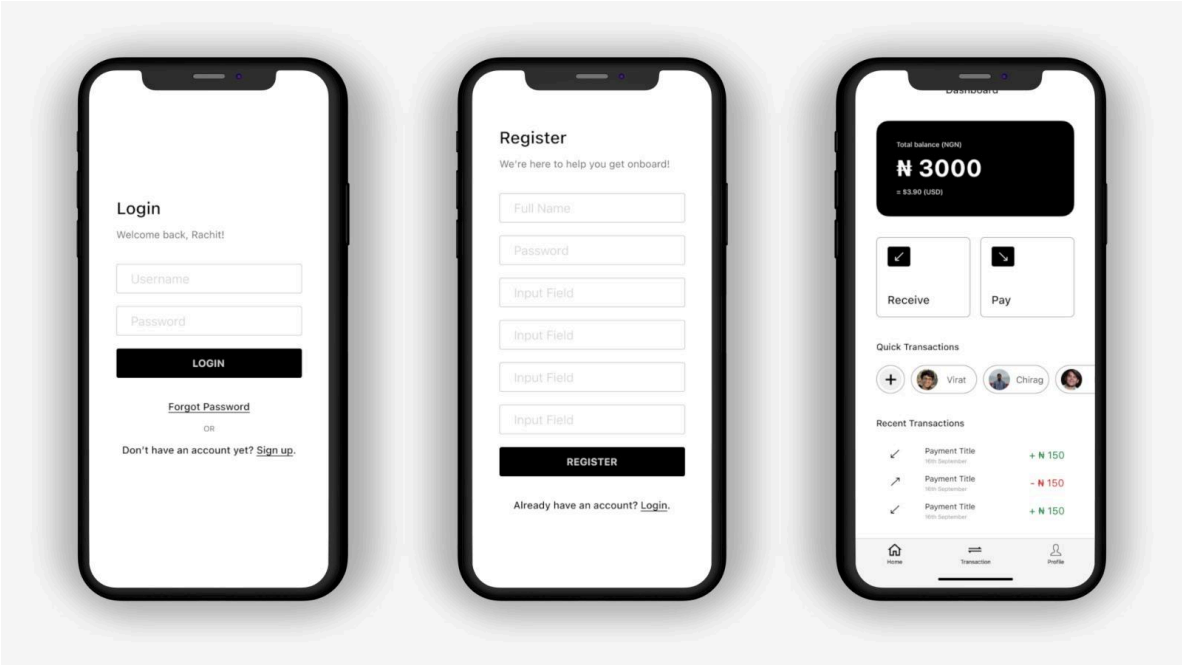
Main takeaways from our discussions:

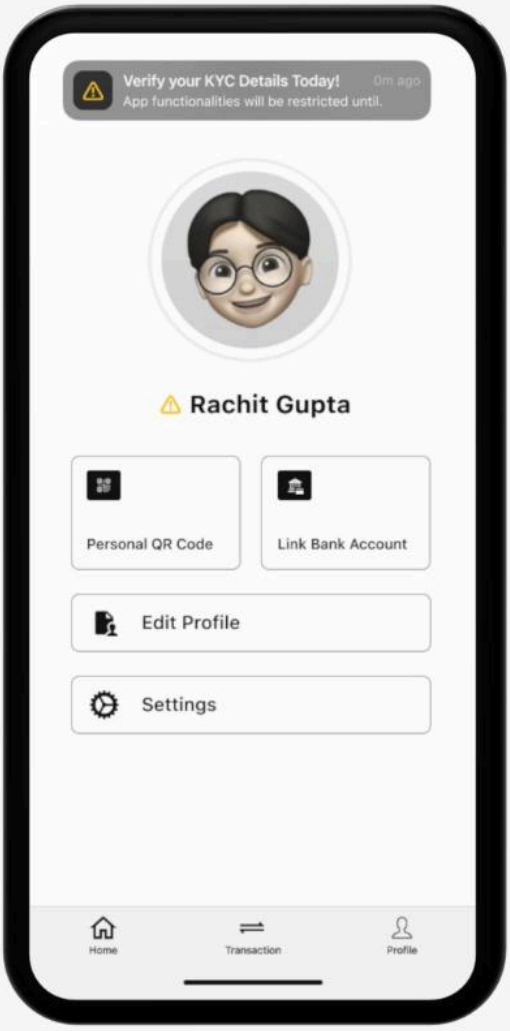
- The app shouldn't be India centered anymore. We want to make it global.
- The app should leverage the Mifos UI design library.
- Add use-cases that support G2P (Government to Person payment) programs.

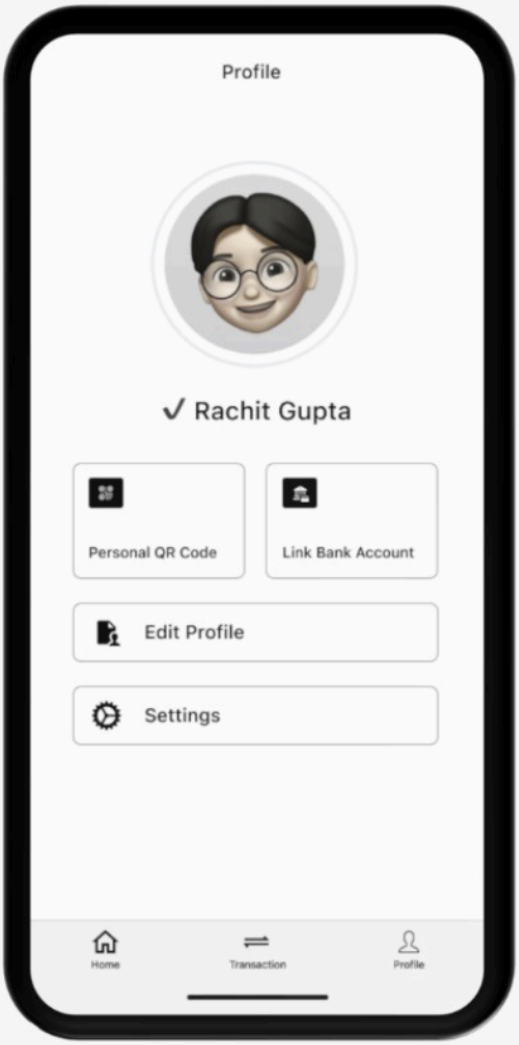
Redesigning mockups for the Mobile App

This task was the most important work during my GSoC period since it has to be followed for the years to come — and, rightfully so, it also took most of my bandwidth.

Video prototype of the mockups: https://youtu.be/wtLe6kM49oU


Login
Welcome back, Rachit!
Username
Password
LOGIN
Forgot Password
OR
Don't have an account yet? Sign up.
Register
We're here to help you get onboard!
Full Name
Password
Input Field
Input Field
Input Field
Input Field
REGISTER
Already have an account? Login.
Total balance (NGN)
₦ 3000
≈ $3.90 (USD)
Receive
Pay
Quick Transactions
Virat
Chirag
Recent Transactions
Payment Title
+ ₦ 150
Payment Title
- ₦ 150
Payment Title
+ ₦ 150
Home
Transaction
Profile


Verify your KYC Details Today!
0m ago
App functionalities will be restricted until.
⚠ Rachit Gupta
Personal QR Code
Link Bank Account
Edit Profile
Settings
Home
Transaction
Profile


Profile
✓ Rachit Gupta
Personal QR Code
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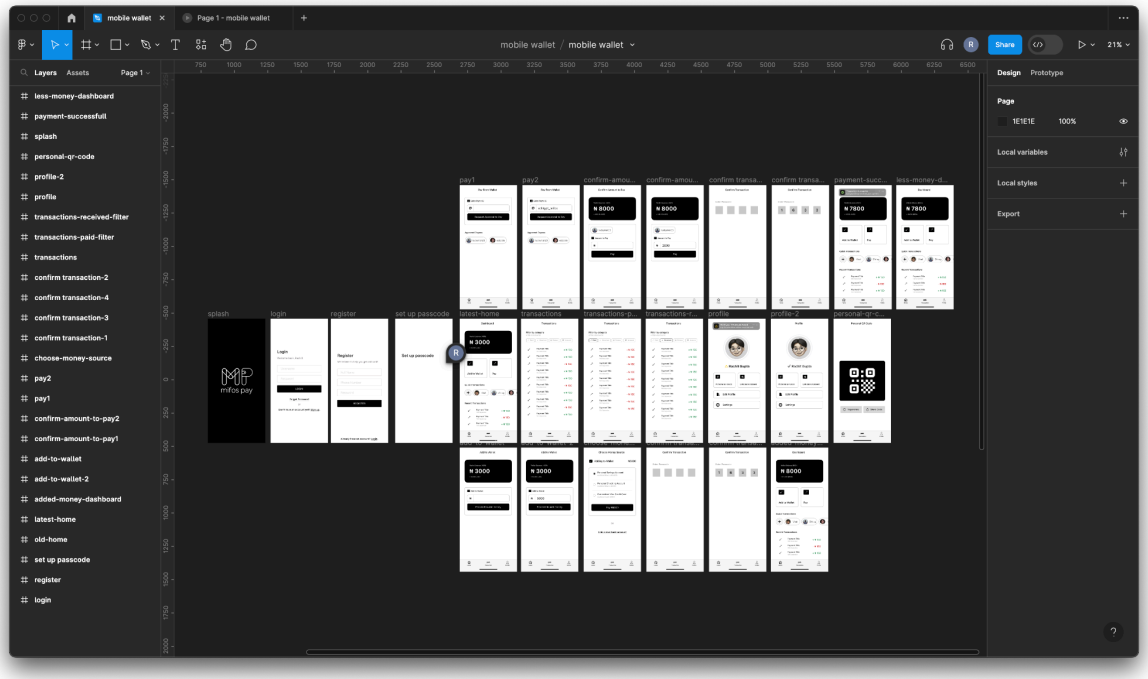
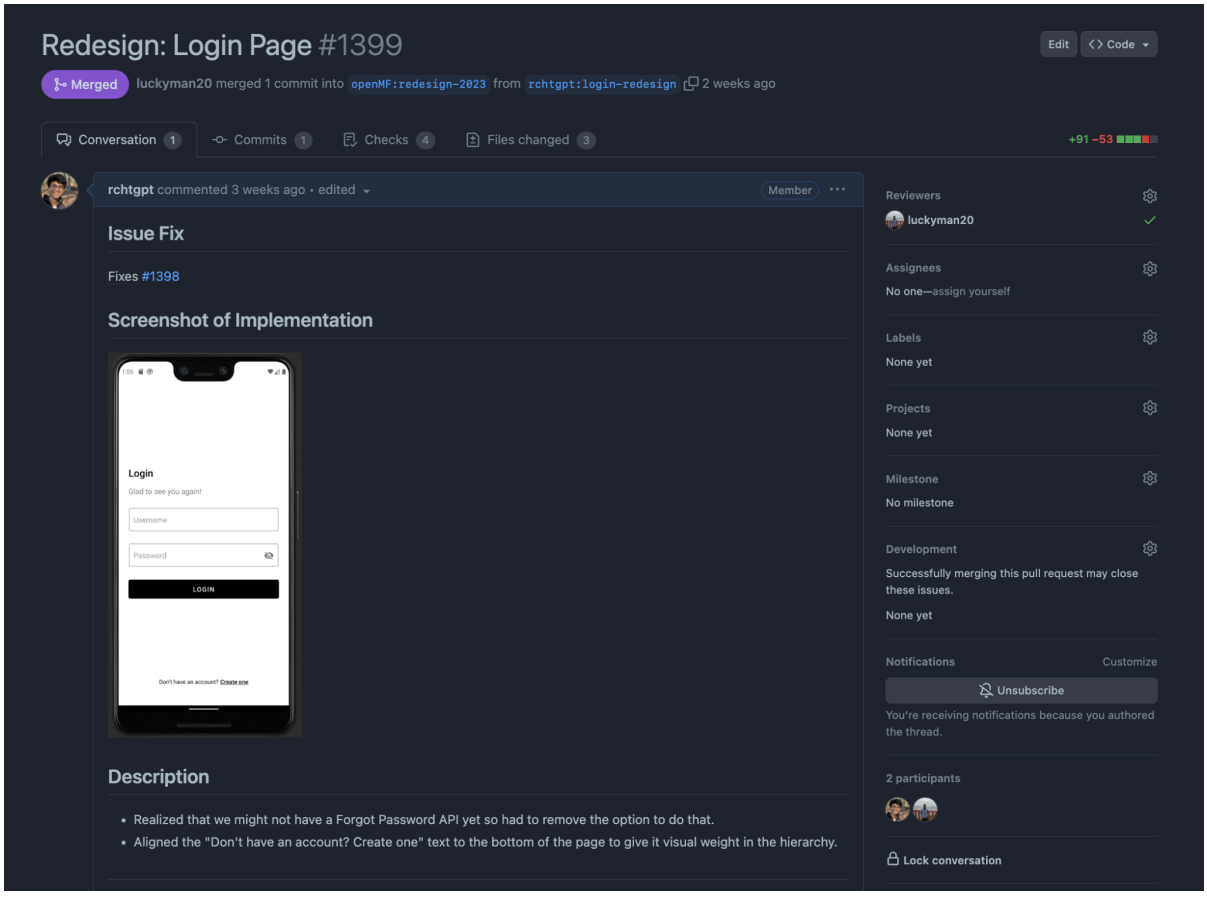


Implementing the redesigned app frontend



Redesign: Home page fragment #1403

Edit | Code

Open | rchtgpt wants to merge 1 commit into `openMF:redesign-2023` from `rchtgpt:home-redesign`

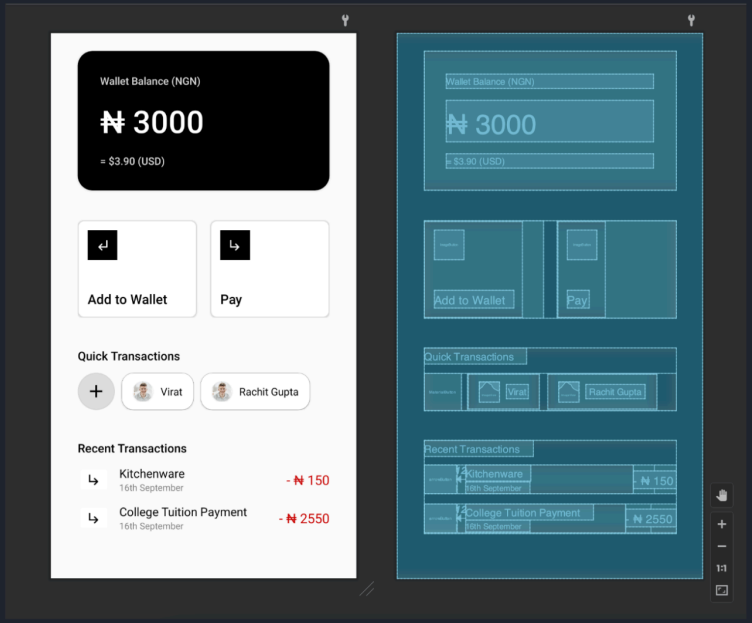
Conversation 1 | Commits 1 | Checks 4 | Files changed 5 | +337 −0

rchtgpt commented 2 weeks ago — Member

Issue Fix

Fixes #1402

Screenshots



Reviewers: luckyman20

Still in progress? Convert to draft

Assignees: No one—assign yourself

Labels: None yet

Projects: None yet

Milestone: No milestone

Development: Successfully merging this pull request may close these issues. None yet

Notifications: Customize — Unsubscribe

You're receiving notifications because you authored the thread.

2 participants

Maintainers are allowed to edit this pull request.

Lock conversation

Redesign: Pay from Wallet screen #1405

Edit | Code

Open | rchtgpt wants to merge 1 commit into `openMF:redesign-2023` from `rchtgpt:pay-from-wallet`

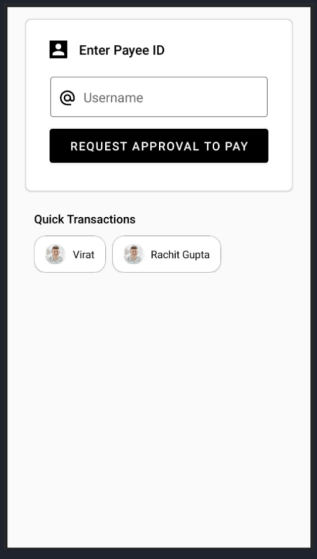
Conversation 0 | Commits 1 | Checks 4 | Files changed 4 | +187 −0

rchtgpt commented last week — Member

Issue Fix

Fixes #1404

Screenshots



Reviewers: No reviews

Still in progress? Convert to draft

Assignees: No one—assign yourself

Labels: None yet

Projects: None yet

Milestone: No milestone

Development: Successfully merging this pull request may close these issues.

Redesign Pay From Wallet Screen Fragment

Notifications: Customize — Unsubscribe

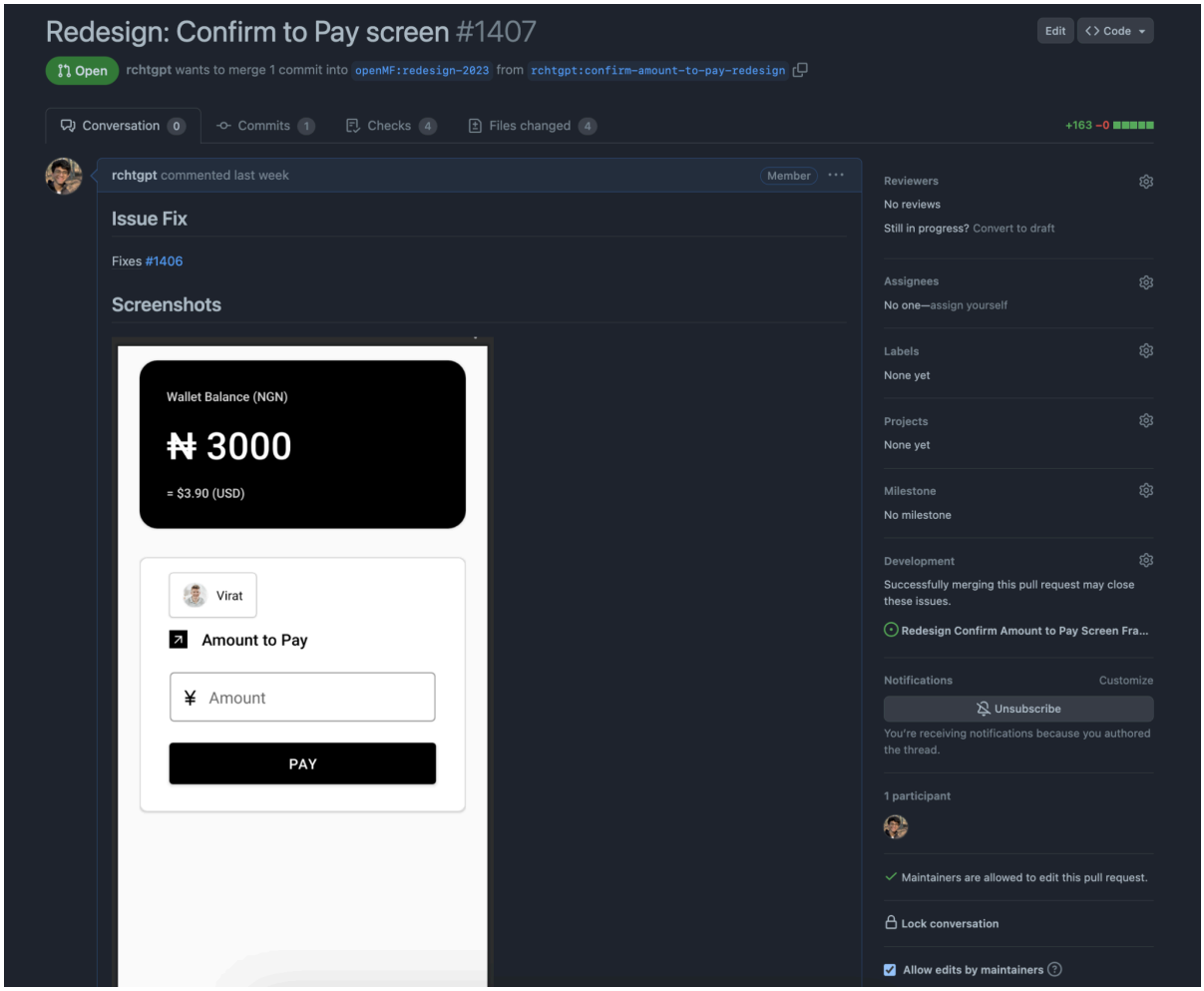
You're receiving notifications because you authored the thread.

1 participant

Maintainers are allowed to edit this pull request.

Lock conversation

- [x] Apply the `AndroidStyle.xml` style template to your code in Android Studio.



The current state.

The Figma mockups for the Android app are presently being translated into the frontend development phase. Future developers will actively convert the visual design elements from the Figma mockups into the codebase of the Android app. This involves translating layouts, graphical assets, and interactive components into XML/Jetpack Compose and Kotlin code. The developers are also ensuring that the app's interfaces adapt effectively to various screen sizes and orientations typical of Android devices. Interactive elements are being integrated to ensure a smooth user experience, and connections to backend services or APIs are being established as needed. Thorough testing is being conducted to ensure that the app functions as intended across different Android devices and versions. This effort aims to transform the Figma mockups into a fully functional and aesthetically coherent Android application.

What's left to do.

The remaining tasks involve the integration of the newly redesigned frontend screens with the backend APIs. To achieve this, a few modifications need to be made to the entry points within the backend API. This integration process entails ensuring that data flows seamlessly between the frontend and the backend, enabling dynamic content to be fetched and displayed on the app's interfaces. Collaborative efforts between frontend and backend developers are crucial at this stage to ensure that the user experience is coherent and that the app's functionality aligns with the design intent. Once these integration tasks are

completed and tested, the Android app will be poised to provide users with a polished and fully functional experience, seamlessly combining the visual appeal of the frontend with the data processing capabilities of the backend.

What code got merged (or not) upstream.

Redesign

https://github.com/openMF/mobile-wallet/pull/1407

https://github.com/openMF/mobile-wallet/pull/1405

https://github.com/openMF/mobile-wallet/pull/1403

https://github.com/openMF/mobile-wallet/pull/1401

https://github.com/openMF/mobile-wallet/pull/1399

Documentation

https://github.com/openMF/mobile-wallet/pull/1396

Kotlin Migration

https://github.com/openMF/mobile-wallet/pull/1392

https://github.com/openMF/mobile-wallet/pull/1391

https://github.com/openMF/mobile-wallet/pull/1390

https://github.com/openMF/mobile-wallet/pull/1389

https://github.com/openMF/mobile-wallet/pull/1388

https://github.com/openMF/mobile-wallet/pull/1387

https://github.com/openMF/mobile-wallet/pull/1386

https://github.com/openMF/mobile-wallet/pull/1384

Fixing Old Issues

https://github.com/openMF/mobile-wallet/pull/1379

https://github.com/openMF/mobile-wallet/pull/1378

Any challenges or important things you learned during the project.

The most significant hurdle emerged as a shift from the project's originally envisioned scope. Initially poised for intensive backend development tasks such as integrating the latest

Payment Hub EE version and implementing the new Mifos Design Library, the project's demands took an unexpected turn. Necessitated by a higher-level project requirement, my focus transitioned from developer to project manager. Much effort was directed towards extensive consultations with my mentor to meticulously craft a comprehensive Product Requirements Document. This document served as the foundation for intricate technical directives, outlining the operational framework and desired functionalities of our application. This adaptation, though challenging, underscored the project's dynamic nature and the need to fluidly balance development prowess with overarching project management responsibilities. The project's trajectory presented an unparalleled opportunity for growth. The shift from my initial role as a developer to that of a project manager was a pivotal juncture that demanded a reevaluation of my skills and responsibilities.