

Project Overview

Pocket Wallet is a modern e-wallet web application built using **Next.js**, **TypeScript**, **Tailwind CSS**, and **MongoDB**. The system allows users to:

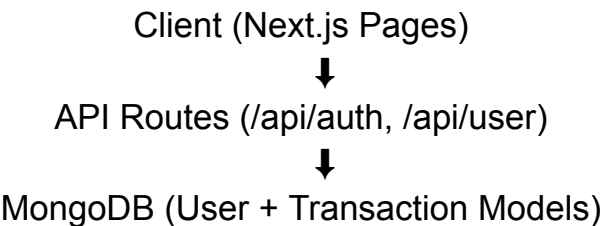
- Register and log in securely
- Add, withdraw, and send money
- Track transaction history
- Experience a futuristic, clean, dark-red themed UI

The primary objective of the project is to simulate a basic digital wallet experience with an intuitive design and robust backend functionality.

Tech Stack

Layer	Tools/Frameworks
Frontend	Next.js (App Router), Tailwind CSS, TypeScript
Backend API	Next.js API Routes
Database	MongoDB via Mongoose ODM
Authentication	JWT Tokens, bcrypt.js for hashing
Email Service	Nodemailer (Gmail SMTP for reset links)

Architecture Diagram



Data Models

name, email, password, balance, transactions[], resetToken, resetTokenExpires

Transaction

userId, type (add/send/withdraw/receive), amount, timestamp, recipientId (optional)

Sign Up with Password Confirmation

Create Your Account

Name

Username

Email

John@example.com

Password

Confirm Password

Create Account

Back to Login

Dashboard with Balance and Actions

Welcome, Pipo

Logout

BALANCE

₱1032.50

Add

Withdraw

Send

TRANSACTIONS

add	₱1000	8/2/2025, 10:18:39 AM
add	₱1000	8/2/2025, 10:18:39 AM
withdraw	₱1000	8/2/2025, 10:18:46 AM
add	₱2000	8/2/2025, 10:18:52 AM
withdraw	₱500	8/2/2025, 10:18:56 AM
add	₱1000	8/2/2025, 10:22:34 AM
withdraw	₱500	8/2/2025, 10:22:45 AM
add	₱22	8/2/2025, 10:35:43 AM
receive	₱500	8/2/2025, 10:37:51 AM
send	₱500	8/2/2025, 10:38:20 AM
add	₱500	8/2/2025, 5:41:29 PM
withdraw	₱500	8/2/2025, 5:41:36 PM
add	₱500	8/2/2025, 5:41:42 PM
send	₱500	8/2/2025, 5:43:05 PM
add	₱1	8/2/2025, 6:15:37 PM
withdraw	₱1	8/2/2025, 6:15:54 PM
send	₱1	8/2/2025, 6:16:12 PM
add	₱1	8/2/2025, 6:16:33 PM
add	₱500	8/2/2025, 6:40:05 PM

Send Money by Username

Welcome, Pipo

Logout

BALANCE

₱1530.50

Add

Withdraw

Send

Send Money

Recipient Email

Amount

Cancel

Send

TR

add		AM
add		AM
with		AM
add	₱2000	8/2/2025, 10:18:52 AM
withdraw	₱500	8/2/2025, 10:18:56 AM
add	₱1000	8/2/2025, 10:22:34 AM
withdraw	₱500	8/2/2025, 10:22:45 AM
add	₱22	8/2/2025, 10:35:43 AM
receive	₱500	8/2/2025, 10:37:51 AM
send	₱500	8/2/2025, 10:38:20 AM
add	₱500	8/2/2025, 5:41:29 PM
withdraw	₱500	8/2/2025, 5:41:36 PM

Add Money

Welcome, Pipo

Logout

BALANCE

₱1530.50

Add

Withdraw

Send

Add Money

Cancel

Add

TR

add

add

with

add

withdraw

add

withdraw

add

receive

send

add

₱2000

₱500

₱1000

₱500

₱22

₱500

₱500

₱500

8/2/2025, 10:18:52 AM

8/2/2025, 10:18:56 AM

8/2/2025, 10:22:34 AM

8/2/2025, 10:22:45 AM

8/2/2025, 10:35:43 AM

8/2/2025, 10:37:51 AM

8/2/2025, 10:38:20 AM

8/2/2025, 5:41:29 PM

Withdraw

Welcome, Pipo

Logout

BALANCE

₱1530.50

Add

Withdraw

Send

Withdraw Money

Cancel

Withdraw

TR

add		AM
add		AM
with		AM
add	₱2000	8/2/2025, 10:18:52 AM
withdraw	₱500	8/2/2025, 10:18:56 AM
add	₱1000	8/2/2025, 10:22:34 AM
withdraw	₱500	8/2/2025, 10:22:45 AM
add	₱22	8/2/2025, 10:35:43 AM
receive	₱500	8/2/2025, 10:37:51 AM

Challenges Encountered & How We Solved Them

Challenge	Solution
Maintaining design consistency across pages	Created a consistent dark-red theme and reused components using Tailwind + Radix UI
Sending money to other users by email was prone to typos	Replaced email with username search or dropdown
Reset password flow requires secure token handling	Implemented token generation, expiry, and email sending via Nodemailer
Lost functionality after styling overhaul	Re-integrated logic from earlier versions into styled components without removing features

Future Enhancements

1. Filter and Search Transactions

- Allow users to filter transactions by type (**add**, **withdraw**, **send**, **receive**) or date.
- Add a simple search input to find specific transactions.
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2. Add Descriptions/Notes to Transactions

- Let users write short notes when sending money or making transactions.
- Helpful for tracking purposes (e.g., "Lunch with John").

3. Download Transaction History as PDF or CSV

- Add a button to export transaction data in **.pdf** or **.csv** format.
- Useful for basic reporting or budgeting.