



RZF POS MOBILE

2025 - Mobile App

Stakeholders : UI/UX

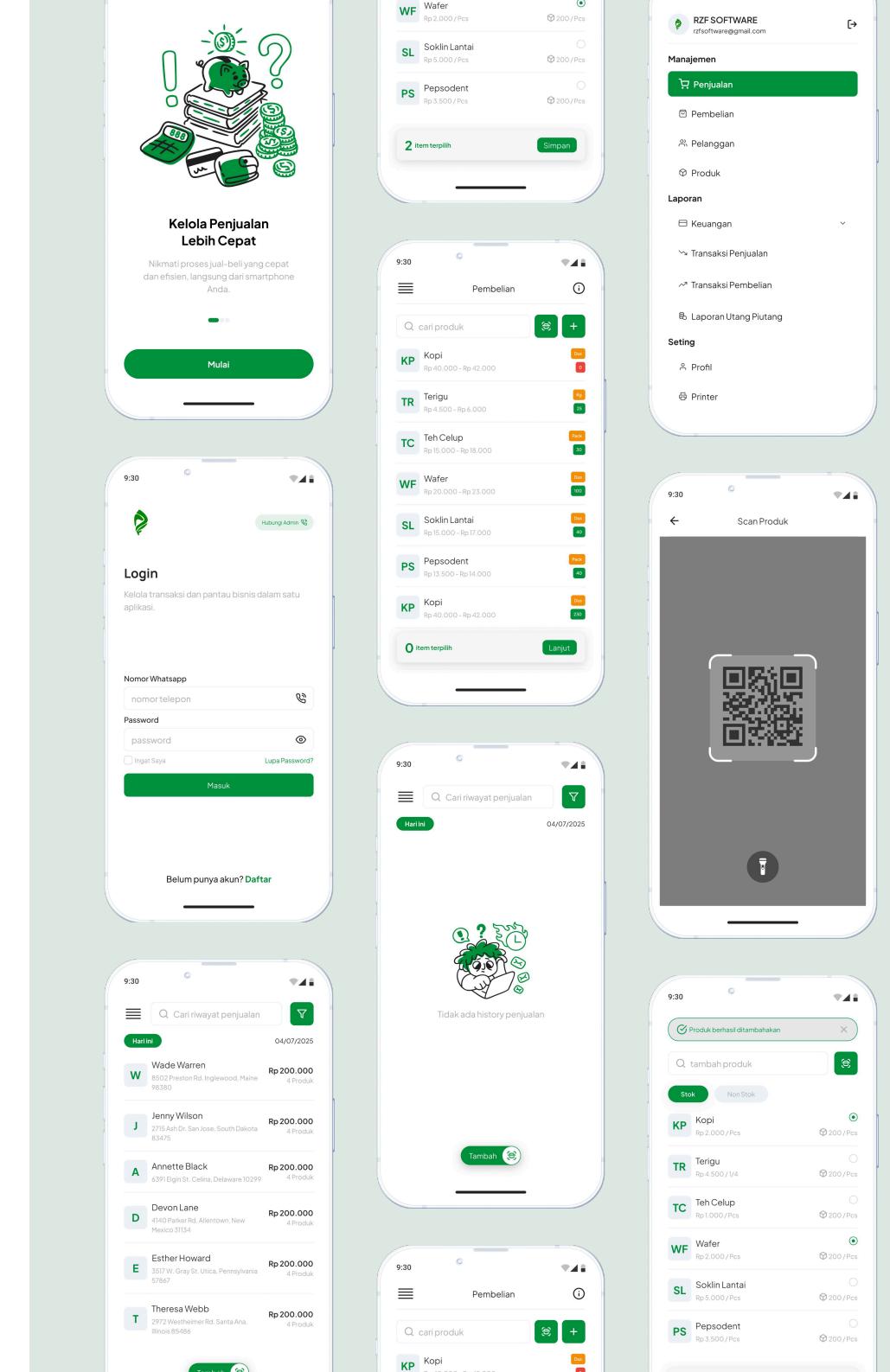
Background :

My team and I are developing an offline-based Point of Sale (POS) application specifically for MSMEs in Indonesia. This project arose from a real need in the field, where many small businesses struggle with overly complex or cloud-based cashier applications with high subscription fees.

Most existing POS applications require an internet connection and additional equipment like a computer or a large printer, which is not suitable for small businesses like grocery stores and small shops. This situation presents a barrier for small businesses in accessing technology that could support their operations.

Objective :

Presenting an offline-based POS application with a one-time purchase system (no monthly subscription), which allows users to make a one-time payment to get full access.



Problem Statement :

Many MSMEs in Indonesia, particularly small shops, grocery stores, and other micro-enterprises, still use manual bookkeeping or unstable systems to manage their daily transactions.

POS applications available on the market generally:

1. Require an internet connection,
2. Require monthly subscriptions, which can be financially burdensome for small businesses.

As a result, many MSMEs struggle to accurately record sales, accurately consolidate inventory, and improve their business performance.

This hinders operational efficiency and long-term business growth.

Customer Promises



Users only need to make a one-time payment to immediately use all features, without monthly or annual fees.



Designed with a simple interface that can be used by anyone, even by shop owners who are not familiar with technology.



The app still runs smoothly even without an internet connection – ideal for areas with limited network coverage.



Provides efficient recording, reporting, and stock features so business owners can focus on sales, not technical matters.

Business Goals



Expanding the adoption of POS applications among MSMEs that have not previously used transaction recording technology.



Generating revenue through a buy-out model, with upsell opportunities for additional features in the future.



Reduce churn rate by creating a satisfying user experience from the start.



Building a reputation as the best offline POS solution for micro and medium markets.

User Persona



Rony Nursyahban
20 years
Kuningan - Jawa Barat
Grocery Store Owner

Bio :

Roni runs a small grocery store at home. He usually records inventory and customer debts in a notebook. However, because he often forgets or loses the notebook, he started trying a note-taking app to help him stay more organized. Mr. Rudi isn't tech-savvy, so he wanted a simple, uncluttered app. He often uses an Android phone with a small screen for work.

Frustasi :

- Frequently losing manual records:
Roni used to record debts and inventory in a notebook, but the notebook was often lost or damaged.
- Difficulty in structured record-keeping:
Manual records are difficult to track, inefficient, and make the shop's management unorganized.
- Device limitations:
He only has an Android phone with a small screen, so the app must be optimized for low-end devices.
- Not always having an internet connection:
Because he lives in an area with unstable signal, he needs a POS application that can run offline.

Customer Journey

	Login	Transaction	Report	Feature Navigation	Data Management
Goal What is the user trying to accomplish? What is the problem to be solved?	Users want to quickly and securely access key features (sales, stock, reports) through the app.	Users want to record sales and purchase transactions quickly.	View sales, purchasing, and financial data at a glance.	Quickly find and switch between features.	Easily manage Products, Customers, and Suppliers.
User action What actions are they currently taking? How are they doing it? What information are they seeking?	Enter email and password or use PIN/OTP.	Select product, enter quantity, save transaction.	Click "Report", select the time period, view the summary.	Click on the "Sales", "Reports", etc. from the sidebar.	Click on the "Products" or "Customers" menu to add/edit data.
Quotes and sentiment How do they feel in this moment? Happy, neutral, confused, frustrated	"The application must be easy to open, I don't like complicated things." → Calm down, a little hesitant, hopefully fast.	"The important thing is to be able to click and enter immediately." → Focused, practical, want it fast.	"I just want to know how much profit I made today." → Want to be efficient, don't like complicated data.	"I often use the Reports menu; it should be at the top." → Familiar, wants quick access.	"There should be an option to add customers from the transaction page too." → Wants efficiency.
Thoughts/Utterances What is the user thinking, musing or saying in this moment	"Hopefully you'll get in straight away and won't forget your password again."	"Where's the item? The product name doesn't appear."	"Can Excel be downloaded?"	"Where was the products menu again?"	"Where's the add product button?"
Pain points What were the consistent and significant pain points experienced?	<ul style="list-style-type: none">Forgot password.There is no quick login option.	<ul style="list-style-type: none">Product search is slow.It takes a lot of clicks.	<ul style="list-style-type: none">The interface is too technical.Can't export.	<ul style="list-style-type: none">Too many menus, confusing.No highlight for the active menu.	<ul style="list-style-type: none">No quick action button.Data is hard to find.
Opportunity What are some things that could improve this moment? Where do the opportunities for solutions arise?	Add a 'Remember Me' feature or PIN login.	Add barcode scanning or quick search features.	Add simple filters and export features.	Group the menus & display the most frequently used ones first.	<ul style="list-style-type: none">Add a "+ Add" button that is always visible (sticky).Provide search and data filter features.Add Quick Actions from the list (e.g., "Edit", "Delete", "View Details").Integrate between modules (e.g., add customers from the transaction page).
Design Requirements What are some key design needs identified? This may represent the need to utilise a design systems component, create a variation, etc. Base this on the users painpoints and opportunities. What does the user need here?	<ul style="list-style-type: none">Minimalist login form.Clear "Forgot password" button.Mobile responsive.	<ul style="list-style-type: none">The add transaction button is clear.Navigation to products is fast and intuitive.	<ul style="list-style-type: none">Gunakan grafik atau angka besar untuk ringkas.Filter mudah digunakan.Eksport Data	<ul style="list-style-type: none">Sticky sidebar.Highlight the active menu.Icons + text.	<ul style="list-style-type: none">Action buttons (add, edit, delete) should be consistent and easily accessible.Provide a search bar and category filters.Use a responsive list/grid layout.Add small notifications (toasts) for successful actions (e.g., "Product added successfully ✅").

🏁 Competitor Analysis

SMEs, small shops, and local stores increasingly need a user-friendly mobile POS (Point of Sale) application that can operate offline and support simple operations. However, the current market offers a variety of mobile POS applications with different features and target users.

This project aims to compare our mobile POS product with competitors that have been in the market longer. The main focus is to understand the strengths, weaknesses, and opportunities for feature development, especially in offline mode, and how our product can be more relevant for SMEs with basic cash register needs.

Company Name	Your product	Competitor A
User	Small SMEs, local eateries, offline stores, simple cash registers	SMEs, retail stores, dining establishments
Primary Target audience	Small business owners with straightforward operations	Store owners, small eateries, and growing culinary businesses
Secondary target Audience	Small business owners with straightforward operations	Store owners, small eateries, and growing culinary businesses
Customer reviews	-	⭐ 4.6/5 (Play Store), highly praised for its comprehensive features
Product	Android-based Mobile POS with comprehensive master & reporting features	Android Mobile POS with barcode scanning, inventory management, & cloud backup
Product strengths	<ul style="list-style-type: none">⚡ Fully offline (except for registration)📊 Comprehensive reporting🧠 Simple user experience	<ul style="list-style-type: none">✅ Multiple features🔗 Online & offline capabilities🖨 Direct receipt printing
Product weaknesses	<ul style="list-style-type: none">❌ Receipt printing not available yet❌ Multi-user support not implemented yet	<ul style="list-style-type: none">❌ UI is somewhat cluttered❌ Some features are only available in the premium version

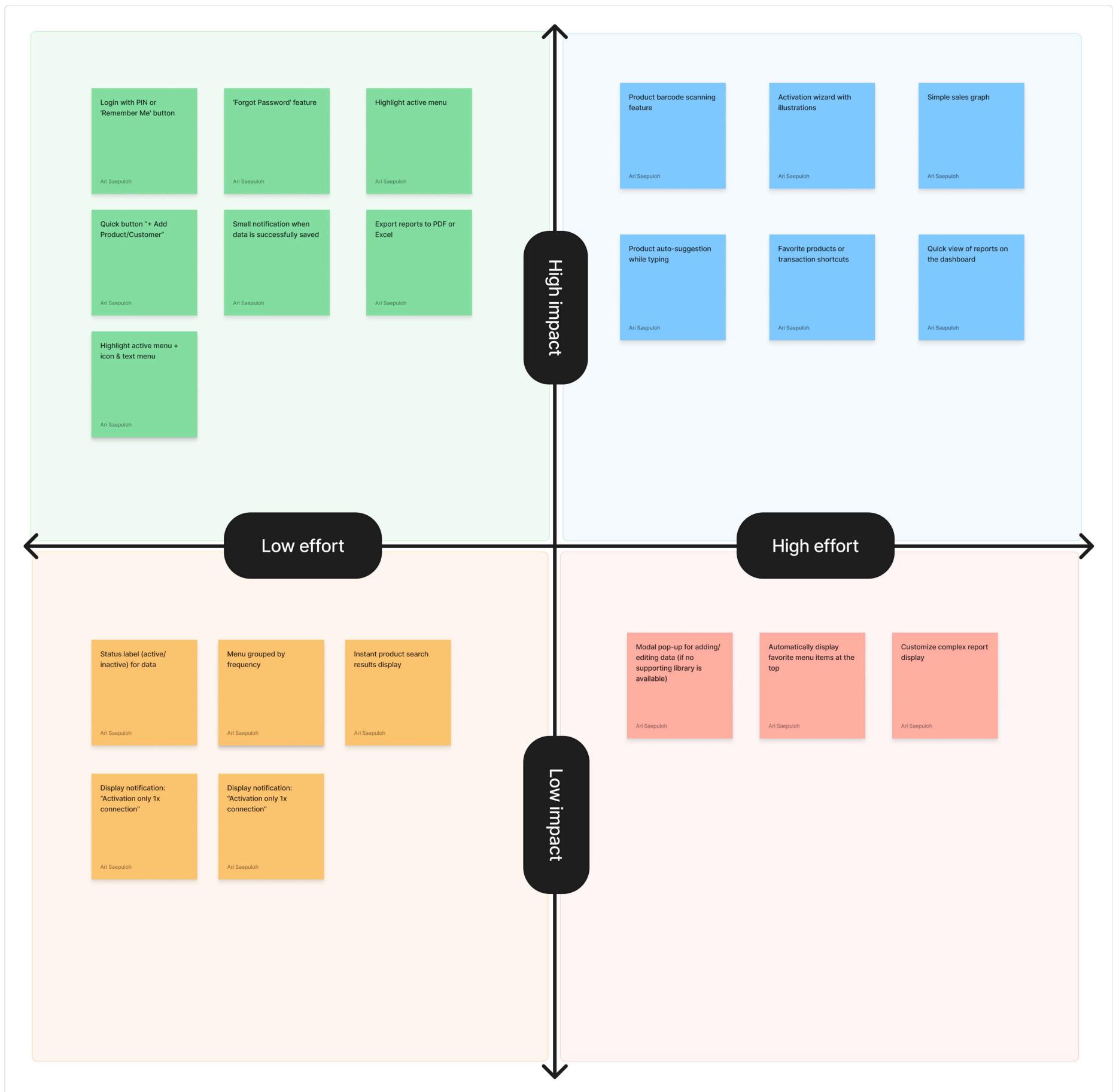
Impact & Effort Matrix

In the development of the Offline Mobile POS application, there are many features that we want to add, such as receipt printing, multi-user support, and automatic synchronization. However, limitations in time, team capacity, and budget prevent us from implementing all features at once.

A prioritization method is needed to ensure that feature development is effective and meets market needs. One method used is the Impact & Effort Matrix.

Objectives:

- To map out the ideas and features we want to develop for the Offline Mobile POS.
- To determine feature priorities based on the combination of impact and development effort.
- To assist the team in establishing a realistic development roadmap.

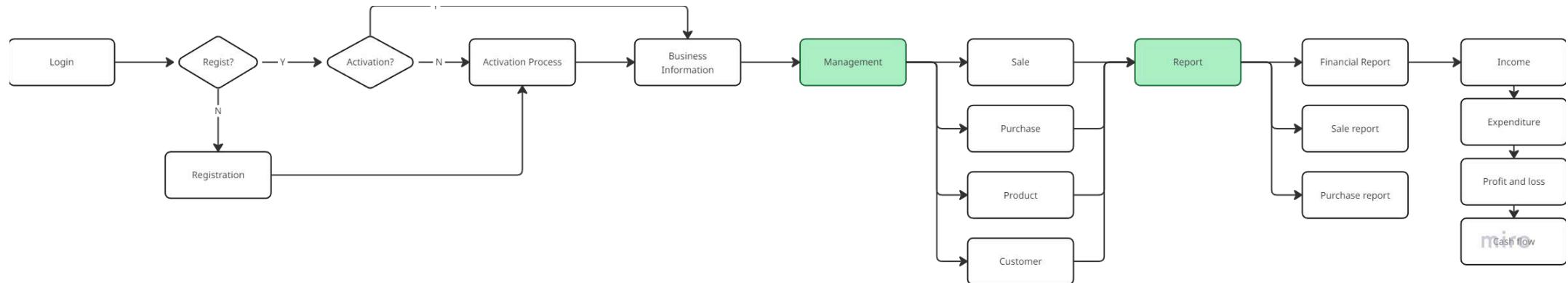


Process Flow

The diagram illustrates the main process flow within the POS system for SMEs, starting from the login and registration processes, account activation, to managing sales data, purchases, products, customers, and financial reports. This application is designed to simplify operational processes for small and medium enterprises, especially those that have not yet fully utilized digital systems. With this flow, users can:

- Log in and register independently,
- Manage business information along with sales and purchase transactions,
- Monitor product and customer data,
- Access comprehensive financial reports such as sales, purchases, income, and profit and loss statements.

This flow helps enhance operational efficiency, data transparency, and better business decision-making.



Design System

In an effort to enhance visual consistency and product development efficiency, I have designed a Design System that serves as the primary foundation for application interface development. This Design System is intended for continuous use by design and development teams, ensuring that all visual and interactive elements used across various application pages remain uniform, manageable, and scalable.

The system includes:

- A primary and secondary color palette tailored to brand identity and accessibility needs.
- Consistent typography styles for all headings, body text, labels, and buttons.
- Reusable UI components such as buttons, input fields, cards, tables, notifications, and navigation.

With this Design System in place, the design process becomes more efficient, development time is reduced, and collaboration among teams flows more smoothly. More than just a visual guide, this Design System also acts as a single source of truth for creating a comprehensive and professional user experience.

Foundations → Color

Sistem desain kami memanfaatkan serangkaian gaya warna yang tepat sebagai titik awal yang sempurna untuk merek atau proyek apa pun. Dalam hal warna, kontras sangat penting untuk memastikan teks terbaca.

Untuk mendukung kebutuhan berbagai aplikasi, kami menyediakan palet warna utama dan sekunder.

Color

Main colors style (Primary) Warna primari adalah warna "merek", dan digunakan di semua elemen interaktif seperti tombol, tautan, input, dsb.



Secondary colors style

Warna sekunder adalah warna yang mendukung atau melengkapi warna primari.



Foundations → Typography

Sistem desain kami memanfaatkan serangkaian gaya tipografi yang tepat guna. Kami telah mengikuti

prinsip-prinsip dasar dalam memastikannya cukup tanggap untuk digunakan di hampir semua

platform.

Typography

Plus Jakarta Sans

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Result UI

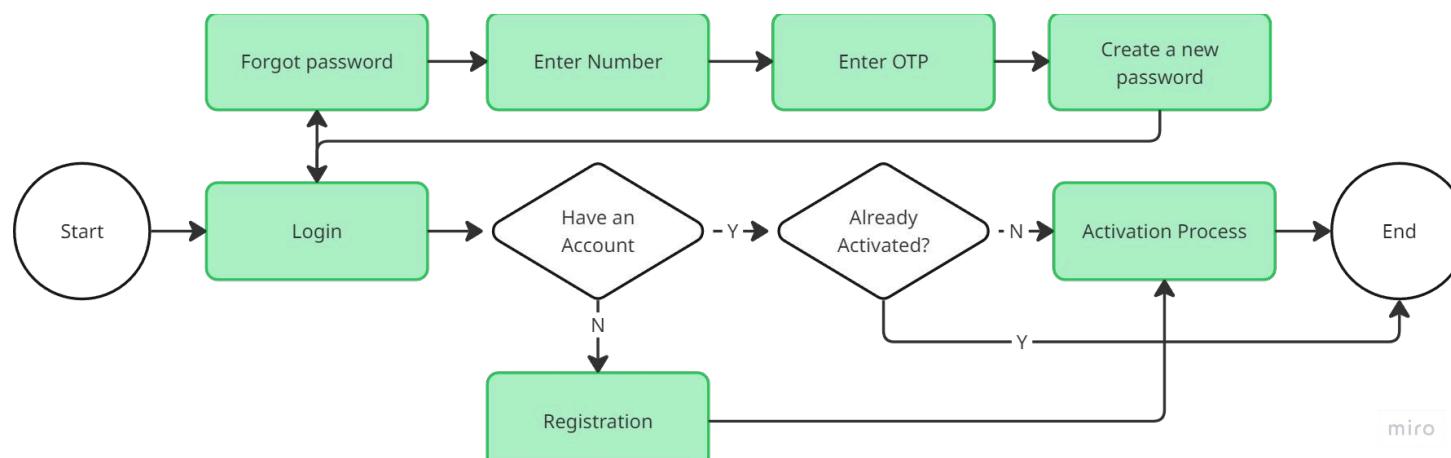
Login, Register & Forgot Password

As part of the development of the mobile POS system, I designed a user authentication flow that includes three main scenarios: login, new account registration, and password recovery. The goal is to provide an intuitive and efficient user experience, especially for new users and those who forget their credentials.

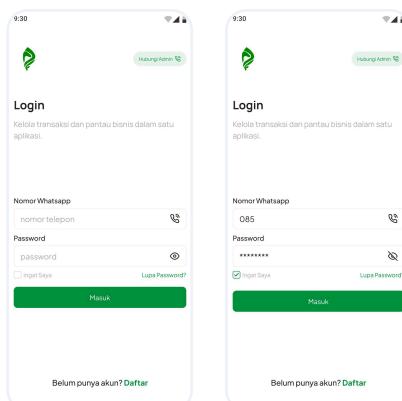
Flow Details:

- Login: Users can log in with an existing account. If the account has not been activated, the system will direct them to the activation process.
 - Registration: For new users, the process starts from the registration form to account activation.
 - Forgot Password: If users forget their password, the system will request the registered number, send an OTP, and allow password reset.
- This flow design emphasizes efficiency, clarity of steps, and user account security with OTP validation and a structured activation process.

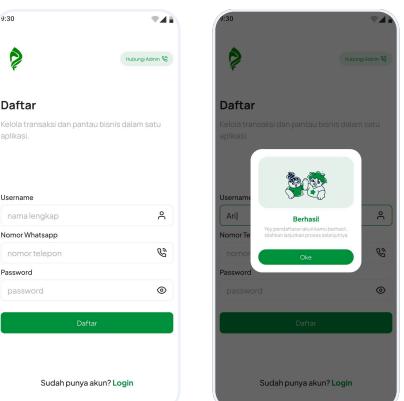
User Flow



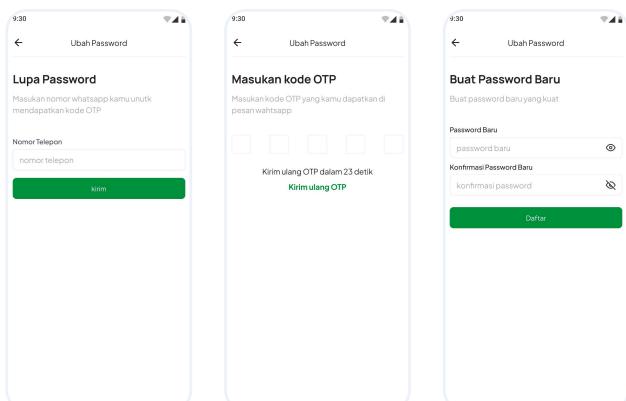
Hi-fi design (Login)



Hi-fi design (Register)



Hi-fi design (Forgot Password)



Result UI

Activation & Business Information

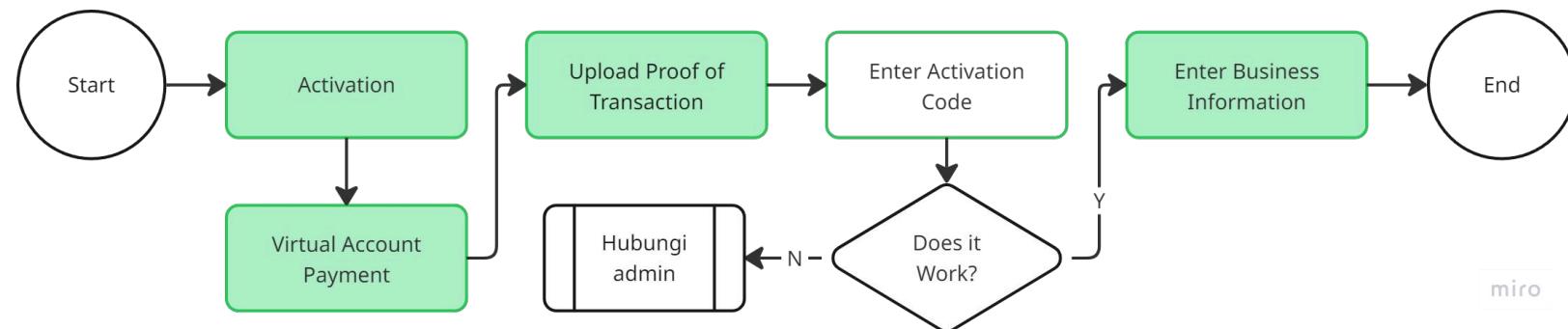
The account activation process is designed to ensure that users have made their payments and have legitimate access to the system. Once registered, users need to activate their accounts to access all application features.

Process Details:

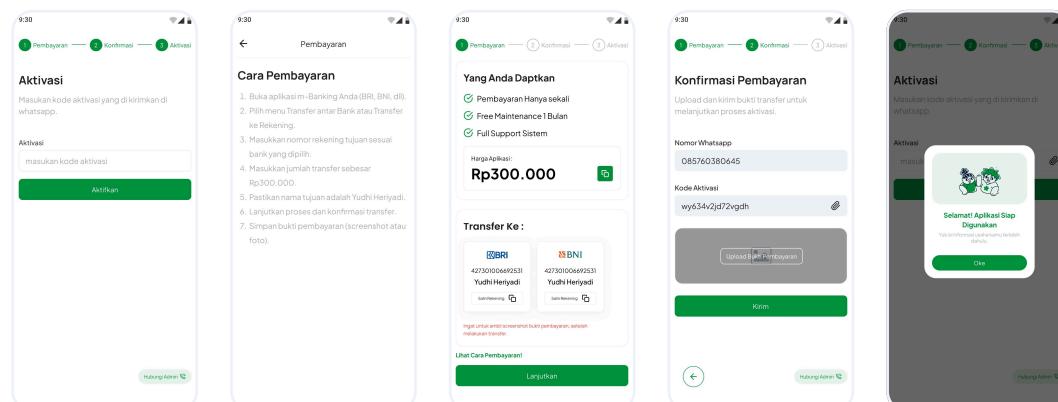
- Activation: Users are required to make a payment through a virtual account.
- Upload Transaction Proof: After payment, users upload proof of transaction for verification.
- Activation Code: The system sends an activation code that users must enter.
- Code Validation: If the code fails, users will be directed to contact the admin.
- Business Information: Once successful, users fill in business details such as store name, address, and type of business.

This process focuses on secure access and semi-automated manual validation to minimize misuse while allowing users the flexibility to complete the process independently or with admin assistance.

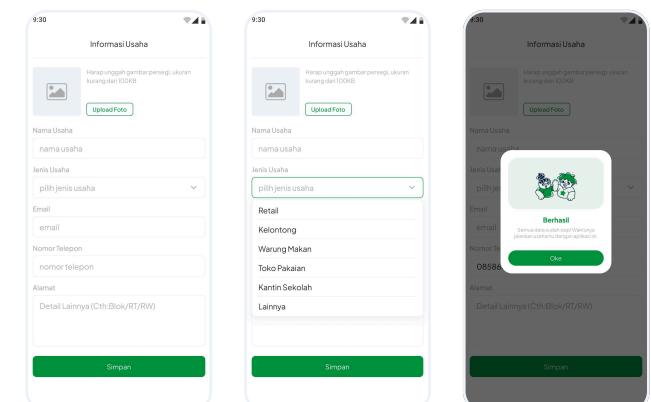
User Flow



Hi-fi design (Activation)



Hi-fi design (Business Information)



Result UI

Sales

In the sales process within this system, the transaction flow is designed to handle two types of payments: cash and credit.

Transaction Flow:

1. Start Transaction

The user initiates the process from the Sales page by selecting the Add Transaction option.

2. Select Customer & Product

- The user selects the customer who will make the purchase.
- Next, the products to be purchased are chosen according to needs.

3. Payment

- The system provides two payment options: Cash or Credit.
- If payment is made in cash, the process is completed immediately.
- If using credit, the transaction is recorded as the customer's debt.

3. Managing Receivables

- If the customer wishes to pay their debt, the system offers a Pay Receivables menu.
- Once the debt payment is made, a payment timeline will be available to record and monitor the repayment history.

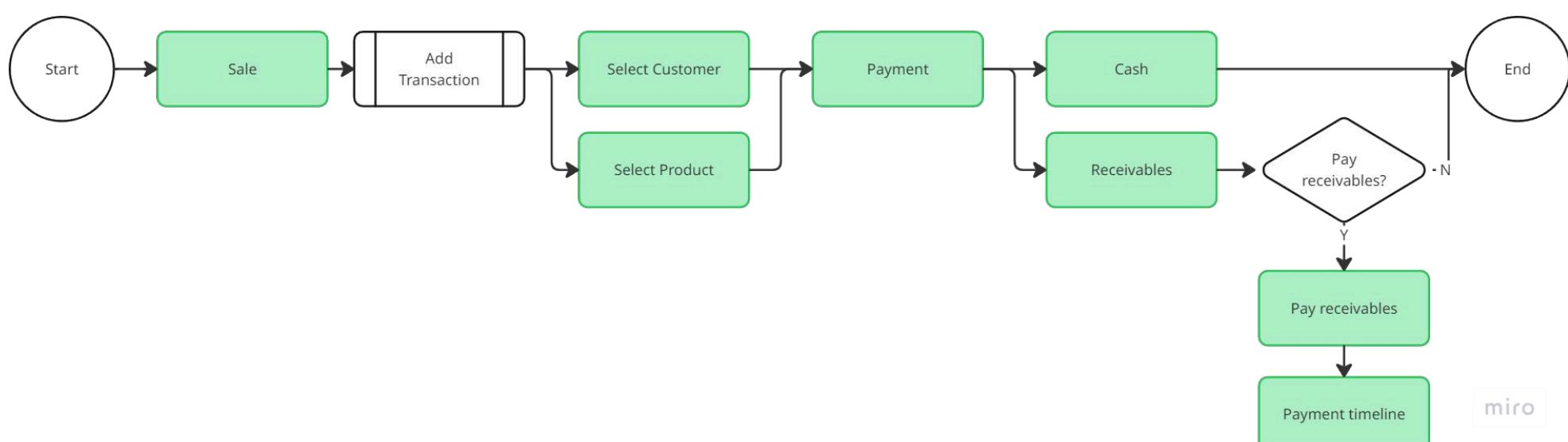
Purpose:

- To facilitate the sales process both directly and on credit.
- To record receivables for future collection and monitoring of payments.

To provide transparency in payment history and debt repayment.

Benefits:

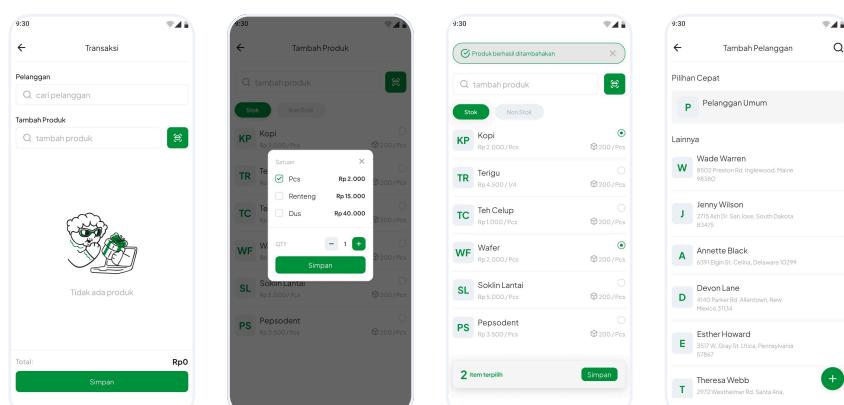
- To speed up the transaction process at the cashier.
- To reduce the risk of manual receivable recording.
- To simplify the monitoring of customer debt payments digitally.



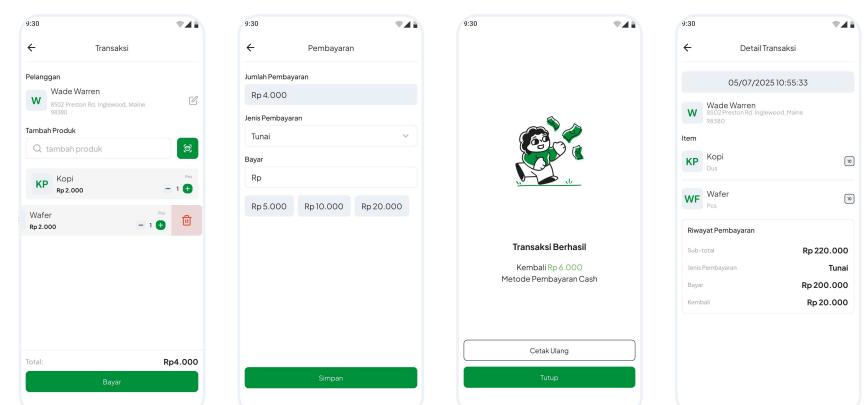
Hi-fi design (Sale)



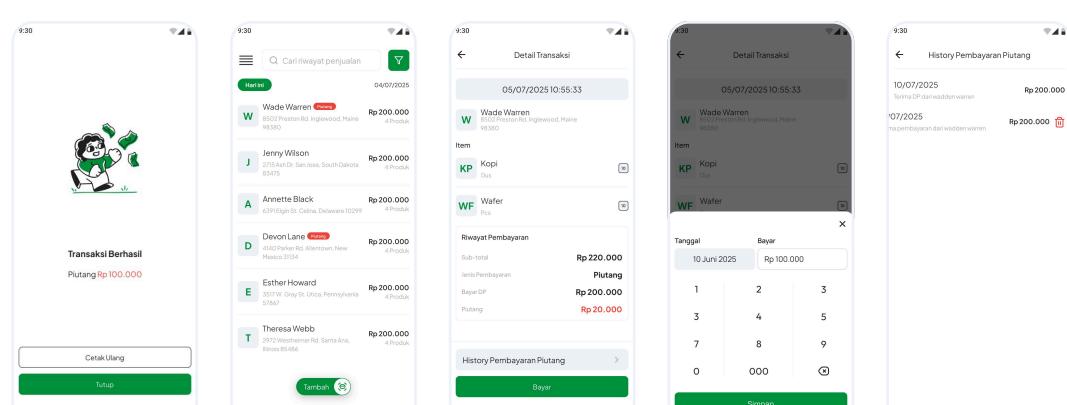
Hi-fi design (add product & add Customer)



Hi-fi design (transaction cash)



Hi-fi design (Accounts receivable & accounts receivable transactions)



Other UI Results

The image displays a grid of 20 screenshots from a mobile application interface, likely for a small business or household财务管理 (Financial Management). The screens are arranged in a 5x4 grid.

- Row 1:**
 - Pantau Stok Secara Otomatis (Automatic Stock Monitoring) - Shows a cartoon character at a desk with a computer monitor displaying a bar chart.
 - Pembelian (Purchase) - Shows a list of items with categories like Kopi, Terigu, Teh Celup, etc., and a search bar.
 - 2 Item terpilih (2 items selected) - Shows a confirmation screen with a green 'Simpan' button.
 - Kategori Pemasukan (Income Category) - Shows a dropdown menu for selecting categories like Jumlah, Rp, Keterangan, and keterangan.
- Row 2:**
 - Pembelian - Shows a list of items with categories like Kopi, Terigu, Teh Celup, etc., and a search bar.
 - Pembelian - Shows a list of items with categories like Kopi, Terigu, Teh Celup, etc., and a search bar.
 - Pengeluaran (Expense) - Shows a list of expenses with categories like Gaji Karyawan, Rentang, etc., and a green 'Simpan' button.
 - Laba Rugi (Profit/Loss) - Shows a summary screen with a total profit of Rp 13,000,000.
- Row 3:**
 - Pembelian - Shows a list of items with categories like Kopi, Terigu, Teh Celup, etc., and a search bar.
 - Pemasukan (Income) - Shows a summary screen with a total income of Rp 20,000,000.
 - Pengeluaran (Expense) - Shows a list of expenses with categories like Gaji Karyawan, Rentang, etc., and a green 'Simpan' button.
 - Laba Rugi (Profit/Loss) - Shows a summary screen with a total profit of Rp 100,000.
- Row 4:**
 - Tambah Stok (Add Stock) - Shows a form to add stock for item 'Kopi' with quantity 40.
 - Pemasukan (Income) - Shows a summary screen with a total income of Rp 20,000,000.
 - Kategori Pengeluaran (Expense Category) - Shows a list of expense categories with a green 'Tambah Satuan' button.
 - Laba Rugi (Profit/Loss) - Shows a summary screen with a total profit of Rp 300,000.
- Row 5:**
 - Laporan & Analisis Instant (Instant Report & Analysis) - Shows a summary screen with a total profit of Rp 13,000,000.
 - Scan Produk (Scan Product) - Shows a QR code scanner.
 - Pemasukan (Income) - Shows a summary screen with a total income of Rp 20,000,000.
 - Arus Kas (Cash Flow) - Shows a summary screen with a total cash flow of Rp 850,000.
- Row 6:**
 - Pemasukan (Income) - Shows a summary screen with a total income of Rp 20,000,000.
 - Pemasukan (Income) - Shows a summary screen with a total income of Rp 20,000,000.
 - Pemasukan (Income) - Shows a summary screen with a total income of Rp 20,000,000.
 - Arus Kas (Cash Flow) - Shows a summary screen with a total cash flow of Rp 850,000.

Icons and Illustrations: The application features several cartoon illustrations throughout the interface, including a character working at a desk, a piggy bank, coins, a QR code, and a person holding a document. There are also icons for search, add, and save operations.

Thank you for your time

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