

Functional Requirements Document (FRD)

Project Title: WhatsApp Pay

Client: WhatsApp (Meta)

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1. Introduction

The Functional Requirements Document (FRD) outlines the detailed functional specifications for WhatsApp Pay, a peer-to-peer (P2P) payment feature integrated within WhatsApp. This document will guide the development and deployment of the system, ensuring all functionalities align with WhatsApp's vision for a seamless, secure, and efficient payment experience for users.

2. Purpose

The purpose of this document is to provide a clear and detailed description of how WhatsApp Pay will function. This includes user interactions, system responses, data handling, and business rules to ensure all stakeholders understand the intended behavior of the system.

3. Scope

The scope of this FRD includes:

- Peer-to-peer money transfers within WhatsApp.
- Integration with bank accounts for sending/receiving funds.
- Transaction history and tracking.
- Payment request feature.
- Integration with WhatsApp contact list for sending money.
- Fraud detection and security features.
- User registration and authentication.

4. Functional Overview (High-Level)

Module	Functionality Summary
User Registration	Users register their mobile number and link a bank account.
Money Transfer	Send and receive money between WhatsApp contacts.
Transaction History	View past transactions, including sent and received money.
Payment Request	Request money from a contact.
Security	Verify user identity using two-factor authentication.
Fraud Detection	Identify and block suspicious or fraudulent transactions.

5. Detailed Functional Requirements

5.1 User Registration

Requirement ID	Description
FRD-001	Users must register by verifying their mobile number via OTP (One-Time Password).
FRD-002	Users must link a valid bank account to send/receive money.
FRD-003	Users must have an active WhatsApp account to use WhatsApp Pay.

5.2 Money Transfer

Requirement ID	Description
FRD-004	Users can send money to any WhatsApp contact who has WhatsApp Pay activated.

Requirement ID	Description
FRD-005	Money transfers must be completed in real-time, with both users receiving notifications.
FRD-006	Users can enter the amount and an optional message for the transaction.

5.3 Transaction History

Requirement ID	Description
FRD-007	Users can view their transaction history for sent and received payments.
FRD-008	Transaction history should include date, amount, and status (e.g., completed, pending).

5.4 Payment Request

Requirement ID	Description
FRD-009	Users can send a payment request to any WhatsApp contact.
FRD-010	The recipient receives a notification and can choose to accept or decline the request.

5.5 Security Features

Requirement ID	Description
FRD-011	Two-factor authentication (2FA) must be implemented for every login.
FRD-012	Payment transactions must require PIN/biometric verification for authorization.
FRD-013	Fraud detection algorithms must flag suspicious transactions and alert the user.

5.6 Fraud Detection and Blockage

Requirement ID	Description
FRD-014	Automatic detection of suspicious patterns (e.g., high frequency, large amounts).
FRD-015	Fraudulent transactions must be blocked, and users notified of suspicious activity.

6. User Roles and Permissions

User Role	Permissions
End User	Register, send/receive payments, view transaction history, request payments.
Admin	Monitor transactions, fraud detection, view user reports, manage payments.
Payment Processor	Handle the backend transaction processing and bank account integrations.
Security Team	Manage and implement fraud detection algorithms, security checks.

7. Data Flow Diagrams (High-Level View)

User Flow:

- Login → Register Bank Account → Send/Receive Payment → View Transaction History → Logout

Admin Flow:

- Login → Monitor Transactions → View Fraud Alerts → Manage Payments → Logout

8. Assumptions

- Users must have an active internet connection to perform transactions.

- All WhatsApp users are required to enable WhatsApp Pay to send and receive money.
- Fraud detection will continuously improve based on transaction data.

9. Constraints

- Transaction limits per user may apply.
- Payments can only be made to users who have WhatsApp Pay enabled.
- System downtime for maintenance will be announced 24 hours in advance.

10. Acceptance Criteria

User Story ID	Acceptance Criteria
FRD-001	Users must be able to successfully register via OTP and link a bank account.
FRD-004	Money must be transferred instantly to the recipient's WhatsApp account.
FRD-007	Transaction history must display all past transactions, with accurate status.
FRD-009	Payment request should be received and can be accepted or rejected by the recipient.