

5. Scope (In Scope / Out of Scope)

| Scope | Details |
|--------------|---------|
| In Scope | |
| Out of Scope | |

6. Assumptions & Constraints

| Category | Description |
|------------|-------------|
| Assumption | |
| Constraint | |

7. Functional Requirements

| Feature ID | Feature Name | Description | Module | Priority | Status | Owner | Notes |
|------------|--------------|-------------|--------|----------|--------|-------|-------|
| FTR-001 | | | | | | | |
| FTR-002 | | | | | | | |
| FTR-003 | | | | | | | |
| FTR-004 | | | | | | | |

9. User Stories / Use Cases

Use Case Template

| | |
|----------------------|--|
| Use Case ID | UC-001 |
| Use Case Name | User Login |
| Actor | User |
| Description | Allows users to log into the application |
| Preconditions | User must have a registered account |
| Main Flow | 1. User opens login page |

| | |
|-----------------------|---|
| | 2. Enters email and password 3. Clicks login |
| Alternate Flow | If credentials are invalid, show error message |
| Postconditions | User successfully logged in |
| Priority | High |

Use Story Template

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|----------------------------|--|
| Story ID | US-001 |
| User Role | Customer |
| User Story | As a customer, I want to create an account, so that I can place orders. |
| Acceptance Criteria | Email must be unique |
| Priority | High |
| Story Points | 5 |
| Status | Ready |
| Notes | Basic onboarding |

10. Business Rules

| Rule ID | Rule Name | Description | Condition | Action / Outcome | Related Feature | Priority | Notes |
|---------|-----------|-------------|-----------|------------------|-----------------|----------|-------|
| BR-001 | | | | | | | |
| BR-002 | | | | | | | |
| BR-003 | | | | | | | |

11. Data Model / Data Fields

| Field ID | Field Name | Description | Data Type | Format / Length | Required | Validation Rules | Example Value | Notes |
|----------|------------|-------------|-----------|-----------------|----------|------------------|---------------|-------|
| DF-001 | | | | | | | | |
| DF-002 | | | | | | | | |

12. Integration & External Systems

| Purpose / Why needed | Direction | Owner / Team | System Name | Data Exchanged |
|--|----------------|-----------------------|----------------------------------|--|
| Process online payments for wallet transactions | Bi-directional | Payments Team | Payment Gateway | Payment authorization requests, transaction status, settlement confirmations |
| Verify customer identity during account creation | Outbound | Compliance Team | KYC Verification Service | Customer identity data, verification results |
| Send transactional notifications to users | Outbound | Messaging Team | Notification Service (Email/SMS) | Email addresses, phone numbers, notification content |
| Sync customer profile data across enterprise systems | Bi-directional | Data Integration Team | Customer CRM System | Customer profile information, account status updates |
| Provide authentication for mobile users | Bi-directional | Security Team | Identity Provider (OAuth/SSO) | Authentication tokens, user identity information |

13. API Specifications

| | |
|-----------------|--|
| API Name | Create Wallet Account |
| Endpoint | /api/v1/wallet/create |
| Method | POST |
| Request | <pre>{ "name": "John Doe", "email": "john@example.com", "phone": "+1234567890" }</pre> |
| Response | <pre>{ "wallet_id": "WLT1001", "status": "created" }</pre> |

14. Non-Functional Requirements

| Category | Details |
|-----------------------------------|--|
| Performance | <ol style="list-style-type: none">1. App startup: cold $\leq 2s$; warm $\leq 500ms$.2. Payment flow P95 $\leq 1.5s$.3. API latency P95 $\leq 300ms$, P99 $\leq 1s$.4. Local wallet ops P95 $\leq 100ms$.5. Throughput 200 RPS sustained. |
| Scalability | <ol style="list-style-type: none">1. Up to 100,000 concurrent active users.2. Horizontal autoscaling for services.3. Storage scales to 100M wallet records.4. Queues scale dynamically for payments. |
| Availability | <ol style="list-style-type: none">1. Uptime $\geq 99.95\%$ monthly.2. Critical payments $\geq 99.9\%$.3. DR RTO $\leq 1h$, RPO $\leq 15m$.4. Graceful degradation keeps core payments running. |
| Security | <ol style="list-style-type: none">1. MFA with biometrics + PIN.2. RBAC for admin access.3. TLS 1.2+ in transit, AES-256 at rest.4. Keys via KMS/HSM with rotation.5. Audit logs retained ≥ 1 year.6. Fraud detection rules for suspicious activity. |
| Usability & UX Quality | <ol style="list-style-type: none">1. Primary payment flow ≤ 3 steps.2. Success/failure feedback $\leq 1s$.3. First-time setup ≤ 5 minutes.4. WCAG 2.1 AA compliance.5. Localization for currency, date, time, languages. |

| | |
|---------------------------|--|
| Other Requirements | <ol style="list-style-type: none"> 1. Push notifications P95 ≤ 5s. 2. Telemetry overhead <1%. 3. PCI-DSS compliance for card transactions. 4. Audit/compliance reports on demand. |
|---------------------------|--|

15. Risks & Mitigation

| # | Risk | Mitigation |
|---|--|---|
| 1 | Payment gateway integration delays due to third-party API issues | Identify backup payment gateway provider and start integration testing early |
| 2 | High transaction volume causing system performance issues | Implement autoscaling infrastructure and conduct load testing before launch |
| 3 | Security vulnerabilities leading to data breaches | Perform security audits, penetration testing, and enforce strong encryption standards |
| 4 | Changes in regulatory requirements affecting compliance | Maintain communication with compliance teams and monitor regulatory updates |
| 5 | Mobile app compatibility issues across devices | Test across multiple OS versions and device types during QA phase |
| 6 | Dependency on external notification service outages | Implement fallback notification provider and retry mechanisms |

16. Test Cases

| Test Case ID | Feature / Module | Test Scenario | Test Steps | Expected Result | Actual Result | Status | Priority | Tester |
|--------------|------------------|-------------------------------------|---|-------------------------------------|---------------|---------|----------|---------|
| TC-001 | User Login | Verify login with valid credentials | 1. Open login page 2. Enter email and password 3. Click Login | User should login successfully | — | Not Run | High | QA Team |
| TC-002 | User Login | Verify login with invalid password | 1. Open login page 2. Enter incorrect password 3. Click Login | Error message displayed | — | Not Run | Medium | QA Team |
| TC-003 | Password Reset | Verify password reset functionality | 1. Click Forgot Password 2. Enter email address 3. Submit request | Reset link sent to registered email | — | Not Run | High | QA Team |

17. Requirement Traceability Matrix

| Rule ID | Rule Name | Description | Condition | Action / Outcome | Related Feature | Priority | Notes |
|---------|-------------------------|---|----------------|-----------------------|-------------------|----------|------------------------|
| BR-001 | Minimum Age Requirement | User must meet minimum age to register. | If age < 18 | Registration rejected | User Registration | High | Regulatory requirement |
| BR- | Payment | Order can only be | Payment status | Confirm | Order | High | Applies to all |

| Rule ID | Rule Name | Description | Condition | Action / Outcome | Related Feature | Priority | Notes |
|---------|---------------------------|--|-----------------------------------|--------------------|------------------|----------|--|
| 002 | Verification | confirmed after successful payment. | = Success | order | Processing | | payment methods |
| BR-003 | Order Cancellation Window | Customer can cancel within 24 hours of purchase. | If time since purchase < 24 hours | Allow cancellation | Order Management | Medium | Exclude shipped orders (if applicable) |

18. Change Request Log

| Change ID | Change Title | Description | Requested By | Request Date | Impact (Scope/ Cost/ Time) | Priority | Status | Owner | Decision |
|-----------|--------------|-------------|--------------|--------------|----------------------------|----------|--------|-------|----------|
| CR-001 | | | | | | | | | |
| CR-002 | | | | | | | | | |
| CR-003 | | | | | | | | | |

Appendix

Additional diagrams, workflows, and reference material can be included here.