

Non-Functional Requirements

ANF1. User info like personal contact, and payment methods must be protected and should not be accessible to unauthorized persons.

ANF2. The website must have an SSL certificate.

ANF3. When the app data increases, the app must be capable of handling it without delay by optimizing the way storage is done and accessed.

ANF4. All data must be displayed with pagination controls.

ANF5. It should not take more than 5 seconds to load the initial screen.

ANF6. The website must be usable on Apple iPads 3rd and 4th generation, Air & Air 2, and Pro 9.7-inch.

ANF7. The website must be optimized for desktop computers and laptops

ANF8. The following list of browsers must be supported: Chrome, Safari, Firefox (latest official versions).

ANF9. The following screen resolutions must be supported: 1366×768, 1920×1080, 1440×900, and 1536×864.

Portability

The system must be compatible with Windows, MacOSX, and Linux operating systems

The web application must function correctly on the latest two versions of Chrome, Firefox, Safari, Brave, and Edge

Performance

10,000 users should be able to use the system at the same time.

The system's response time should be 2 seconds at most unless the endpoint is for reports.

The system's APIs must respond within 500ms for 95% of calls.

The System must be able to handle a 200% increase in concurrent user requests without performance degradation

Security

All sensitive user data must be encrypted using AES-256 or Better encryption at rest and in transit.

Only authenticated and authorized users should access sensitive data, enforced through role-based access control (RBAC).

Maintainability

SonarQube issues should be 0, excluding accepted exceptions

Endpoints should be covered with testing

Key logical functions should be covered with testing

Integration

The system must be able to integrate with external systems

Reliability

The system must have a maximum error rate of 0.01% for processed transactions.

Availability

The system must be available 99.9% of the time, excluding scheduled maintenance.

Auditability

Every change to data must be logged with a timestamp and user ID.

Design Constraints

JavaScript must be used as a primary programming language.