

# **Functional Requirements Document**

## **Loan Management System (Waterfall)**

**Version: 1.0**

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**Prepared By: QA Analyst**

**Reviewed By: Product Owner**

**Approval Status: Approved for Demonstration**

## Revision History

Version	Date	Author	Description
1.0	2026-02-18	Sanyogita Herwathe (QA Owner)	Initial Agile Enterprise Release Version

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### Approval & Sign-Off

<b>Prepared By:</b> QA Lead – Sanyogita Herwathe
<b>Reviewed By:</b> Product Owner
<b>Approved By:</b> Engineering Manager
<b>Approval Status:</b> Approved for Release Governance

## 1. Introduction

### 1.1 Purpose

The Loan Management System (LMS) is a web-based application designed to centralize customer loan processing and improve operational efficiency at branch level.

This document defines the functional design and user interface behavior of the system.

### 1.2 Scope

This document describes:

- User authentication
- Role-based access
- User management
- Customer management
- Loan processing
- Prequalification letter generation
- External integrations (payment gateway, credit bureau APIs) are not included in this release.

## 2. System Overview

The LMS supports multiple users operating within a shared branch environment.

Each user has a unique login and role-based permissions.

## 3. Page Design & Functional Specifications

### 3.1 Login Page

#### 3.1.1 Description

Allows authorized users to access the system securely.

#### 3.1.2 Data Fields

Field	Type	Mandatory	Description
Branch	Text	Yes	Branch identifier
Username	Text	Yes	Unique user login
Password	Password	Yes	User credential
Remember Me	Checkbox	No	Stores login preference

#### 3.1.3 Validations

Validation	Message
Branch empty	Please fill out this field
Username empty	Please fill out this field
Password empty	Please fill out this field
Invalid branch	Branch does not exist
Invalid credentials	Invalid username or password

### 3.1.4 Behavior

- Successful login redirects to Dashboard
- Session created upon login
- Logout destroys session
- Direct URL access blocked without authentication

## 3.2 Dashboard Page

### Description

Displays key loan metrics and navigation access.

### Display Elements

- Total Loans Requested
- Total Approved
- Total Rejected
- Navigation Bar

## 3.3 Navigation Bar

Accessible from all pages.

### Menu Options

- Dashboard
- Users
- Customers
- Loans
- Events
- Policies
- Help

## 3.4 Users Module

### 3.4.1 Users List Page

Displays branch users in grid format.

### Search Capability

- Username
- First Name
- Last Name
- Company
- Phone
- Email

### 3.4.2 Add User Page

**Mandatory Fields:**

- Username (unique)
- Password (minimum 8 characters)
- Role (Branch Admin, Loan Manager, Loan Officer)

**Validations:**

- Username required
- Password required
- Role required
- Username must be unique
- Password must be at least 8 characters

### 3.4.3 Role Permissions

Role	Permissions
Branch Admin	Full system access
Loan Manager	Cannot add new users
Loan Officer	Cannot add users, cannot view events

## 3.5 Customers Module

### 3.5.1 Add Customer Page

**Mandatory Fields:**

- Account # (7 digits, numeric, unique)
- First Name
- Last Name

**Optional Fields:**

- Address
- City
- Province
- Postal Code
- Phone
- Email

**Validations:**

- Account must be numeric
- Account must be 7 digits
- Account must be unique
- Email must follow valid format
- Phone must follow (999)999-9999 format

### 3.6 Loans Module

#### 3.6.1 Add Loan Page

**Fields:**

- Customer (mandatory)
- Monthly Income
- Monthly Debt
- Loan Term (2, 3, 5, 10, 15 years)
- Returned Customer (checkbox)

**Calculated Fields:**

- Monthly Payment
- Principal
- Customer Interest Rate
- Central Bank Rate

#### 3.6.2 Loan Decision Logic

Condition	Result
Income > Debt	Generate Approval Letter
Income ≤ Debt	Generate Rejection Letter

If Returned Customer = Yes

→ Reduce interest rate by 0.5%

#### 3.7 Prequalification Letter

**Features:**

- Auto-generated based on decision logic
- Editable content
- Save option
- Cancel option
- Export to PDF

### 4. Security Controls

- Role-based route protection
- Session timeout enforcement
- No unauthorized URL access
- Secure credential validation

## **5. Non-Functional Requirements**

### **Performance**

- Dashboard load < 3 seconds
- Search results < 2 seconds

### **Usability**

- Clear validation messages
- Consistent navigation across pages

## **6. Release Criteria**

- All test cases executed
- No Critical defects open
- All High severity defects resolved
- Full regression testing completed