

# **Defect Lifecycle**

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

**Version: 1.0**

**Release Model: Sequential SDLC (Waterfall)**

**Document Type: Defect Lifecycle Document**

**Prepared By: QA Analyst**

**Reviewed By: Product Owner**

**Approval Status: Approved for System Testing**

## Revision History

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

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## Approval & Sign-Off

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

## 1. Purpose

This document defines the structured defect management lifecycle followed during the WebLoan LMS Waterfall release. It outlines defect states, severity and priority classification, ownership model, SLA expectations, and build-based tracking methodology.

## 2. Defect Lifecycle Workflow

The WebLoan LMS project followed a controlled Waterfall defect lifecycle model with structured state transitions.

### Standard Lifecycle Flow

New → Assigned → In Progress → Fixed → Retest → Closed

### Alternate Paths

New → Assigned → Deferred

New → Assigned → Rejected

Retest → Reopened → In Progress

## 3. Defect Status Definitions

Status	Description
New	Defect logged by QA and awaiting triage
Assigned	Defect assigned to developer
In Progress	Developer actively working on fix
Fixed	Code fix completed and deployed to a new build
Retest	QA validating fix in updated build
Closed	Defect validated and confirmed resolved
Reopened	Defect persists after retesting
Deferred	Fix postponed to future release
Rejected	Not a defect / working as designed

## 4. Severity Classification

Severity defines the impact on the system functionality.

Severity	Definition	Example
Critical	System crash, data corruption, security failure	500 Internal Server Error, Duplicate Loan Creation
High	Major functionality broken with no workaround	Login failure for registered users

Severity	Definition	Example
Medium	Functional issue with workaround available	Dashboard totals not updating
Low	Cosmetic, UI, spelling, alignment issues	Label misspellings

## 5. Priority Classification

Priority defines the urgency of fixing the defect.

Priority	Definition
Immediate	Must be fixed before next build
High	Fix required in current release cycle
Medium	Fix if time permits
Low	Can be deferred

Note: Severity and Priority are evaluated independently.

## 6. Defect Logging Standards

Each defect logged in the Waterfall release included:

- Unique Issue ID
- Module name
- Environment details (OS, Browser)
- Build number where defect was found
- Steps to reproduce
- Expected result
- Actual result
- Severity
- Priority
- Error category
- Assigned developer
- Fix build number

This ensured traceability and audit readiness.

## 7. Build-Based Defect Tracking

The WebLoan LMS followed structured release builds:

- 3.1.01
- 3.1.02
- 3.1.03
- 3.1.04
- 3.1.05

- 3.1.06

Each defect was:

1. Logged against a discovery build
2. Fixed in a subsequent build
3. Retested and validated in fix build

Example:

- Found in: 3.1.01
- Fixed in: 3.1.02
- Closed after regression validation

This approach ensured:

- Controlled release governance
- Clear defect-to-build mapping
- Audit traceability

## 8. Retesting & Regression Strategy

After fix deployment:

1. QA retested defect in designated fix build.
2. Related modules were regression tested.
3. Dashboard metrics and dependent workflows were validated.
4. If issue persisted → Status moved to Reopened.

## 9. Deferred Defect Handling

Defects categorized as Deferred were:

- Reviewed in triage meetings
- Assessed for release risk
- Moved to backlog for future enhancement or fix

Common reasons:

- Low business impact
- Scope change
- Resource prioritization

## 10. SLA & Governance Controls

The Waterfall defect process maintained:

- Daily defect triage review
- Severity-based fix prioritization
- Build validation checkpoints
- Closure confirmation by QA only
- Release readiness sign-off

## 11. Defect Governance Model

Ownership Model:

- QA → Log & validate
- Developer → Fix
- QA → Retest & close
- Business Analyst → Review deferred decisions
- Release Manager → Approve build deployment

## 12. Summary

The WebLoan LMS Waterfall defect lifecycle followed a structured enterprise QA governance model ensuring:

- Controlled defect tracking
- Build-level traceability
- Severity-driven prioritization
- Regression validation before closure
- Clear audit trail across releases