

# Software Test Plan (STP) - Social Media Management System

**Project:** Social Media Management System (SMMS)

**Version:** 1.0

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**Date:** 11-09-2025

**Status:** Draft / For Review

## 1. Introduction

Purpose:

Define the overall testing approach for the Social Media Management System (SMMS).

Scope:

Covers verification of functional requirements (authentication, role management, post creation, scheduling, admin controls) and non-functional aspects (performance, security, usability).

References:

- SRS v1.0 (31-08-2025)
- Design specifications (Auth, Post, Scheduler modules)
- OWASP Web Security Guidelines

## Definitions

- **SMMS:** Social Media Management System, the web app under test.
- **Scheduled Post:** A post stored with a future date/time for auto-publishing.
- **Published Post:** A post successfully released by the scheduler.
- **Admin:** User role with privileges to manage other users and system settings.
- **User:** Role that can create, schedule, and view posts and analytics.
- **OWASP:** Open Web Application Security Project.

## 2. Test Items

- Authentication & Registration Module
- Role-based Access Control (Admin/User)
- Post Management (create, edit, draft, delete)
- Scheduler (schedule & auto-publish posts)
- Analytics Dashboard
- Admin User Management
- Notifications

### 3. Features to be Tested

Req ID	Feature	Test Cases
SMMS-F-001	User registration	TC-Auth-01
SMMS-F-002	User login	TC-Auth-02
SMMS-F-003	Password hashing	TC-Sec-01
SMMS-F-004	Role-based access	TC-RBAC-01
SMMS-F-005/6	Create post / Upload image	TC-Post-01/02
SMMS-F-007	Save drafts	TC-Post-03
SMMS-F-008	Schedule posts	TC-Sched-01
SMMS-F-009	Auto-publish	TC-Sched-02
SMMS-F-010/11	View scheduled/published	TC-View-01/02
SMMS-F-012	Edit/delete scheduled	TC-Post-04
SMMS-F-013	Analytics counts	TC-Analy-01
SMMS-F-014	Admin manage users	TC-Admin-01
SMMS-F-015	Notifications	TC-Notif-01
SMMS-NF-001..005	Performance, reliability, UI, storage, backup	TC-Perf-01, TC-Load-01, TC-UI-01, TC-DB-01, TC-Backup-01

SMMS-SR-001..005	Security (hashing, session timeout, input validation, access control, TLS)	TC-Sec-01...05
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#### 4. Features Not to be Tested

- Integration with real social media APIs (beyond scope).
- Third-party hosting reliability.
- Advanced analytics (engagement/likes).

#### 5. Test Approach / Strategy

- **Levels:** Unit → Integration → System → Acceptance (UAT).
- **Types:** Functional, regression, performance, security (SQLi/XSS, brute force), usability (UI responsiveness).
- **Entry Criteria:** Stable build, test data prepared, environment configured.
- **Exit Criteria:** All high-priority tests executed with 0 open critical defects; ≥95% pass for major tests.

##### 5.1 Security Validation

- Verify secure handling of **user credentials** (password hashing, no plain-text storage, masking on input).
- Confirm **HTTPS/TLS 1.2+** is enforced for all client-server communication.
- Validate **role-based access controls** (Admin vs User) – unauthorized actions must be blocked.
- Perform **input validation & fuzz testing** on all fields (login, post text, image uploads, schedule date/time) to prevent SQL injection, XSS, and file-upload abuse.
- Conduct **penetration testing** of authentication, session management, and post-management flows (including session timeout and brute-force login prevention).
- Review **secure session handling** (timeout after 15 minutes, proper cookie flags).
- Check compliance with **OWASP Top 10** web security recommendations.

#### 6. Test Environment

Aspect	Details
Hardware	PC/Laptop (4GB+ RAM), browser-enabled device
Software	SMMS web app (Node), MySQL/SQLite, XAMPP/WAMP

Tools            Selenium (UI), Postman (API), JMeter (performance), OWASP ZAP (security), Jira/TestRail

Test Data        Dummy users, posts, schedules

## 7. Test Schedule

Milestone	Date
Test case design	05-Sep-2025
Environment setup	07-Sep-2025
Test execution	08-Sep-2025 → 18-Sep-2025
UAT	20-22-Sep-2025
Summary & sign-off	25-Sep-2025

## 8. Test Deliverables

- Test Plan (this document)
- Test Cases & RTM
- Automation scripts (if any)
- Test data files
- Defect reports & logs
- Final Test Summary Report

## 9. Roles and Responsibilities

Role	Name	Responsibility
QA Lead	Mevin Jose	Prepare plan, coordinate execution
Test Engineer	K Abhiram	Design & execute test cases, log defects
Developer	Prateek Meher K	Support defect fixes and triage

Product Owner	K Rajeev	Approve test results, sign-off readiness
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## 10. Risks and Mitigation

Risk	Mitigation
Late build delivery	Request early smoke builds
DB connection issues	Keep backup scripts
Scheduler instability	Add mock scheduler for testing
Security flaws found late	Run penetration tests early

## 11. Assumptions & Dependencies

- Dummy DB and accounts will be pre-loaded.
- Browser versions used in testing will match target environment.
- Background scheduler (cron/service) available.

## 12. Suspension & Resumption Criteria

Suspend if:

- environment down >4h or >30% test cases blocked.

Resume if:

- after fixes or stability restoration.

## 13. Test Case Management & Traceability

RTM ensures mapping of SRS requirements to test cases.

**Examples:**

- SMMS-F-001 (*User Registration*) → TC-Auth-01
- SMMS-F-005 (*Create Post*) → TC-Post-01
- SMMS-F-008 (*Schedule Post*) → TC-Sched-01
- SMMS-F-013 (*Analytics – post counts*) → TC-Analy-01
- SMMS-NF-001 (*Response time  $\leq 2s$* ) → TC-Perf-01
- SMMS-SR-001 (*Password hashing & storage*) → TC-Sec-01

## 14. Test Metrics & Reporting

Metrics collected:

- % test cases executed
- % passed/failed

- Defect density
- Defect aging
- Requirement coverage

Reports:

- Daily execution status
- Final Test Summary Report

## 15. Approvals

Role	Name	Signature / Date
QA Lead	Mevin Jose	Mevin Jose 11/9
Dev Lead	Prateek Meher	K Abhiram 11/9
Product Owner	K Rajeev	K Rajeev 11/9