

Agile Development Plan (Week-Wise)

Project: Automated Regression Test Suite Framework with Parallel Execution and Spring Boot REST APIs

Start Date: 12 November 2025

End Date: 12 January 2026

Sprint 1 (Week 1): 12 Nov 2025 – 18 Nov 2025

Objective: Infrastructure setup and requirement analysis.

Activities: Install JDK, IntelliJ IDEA, configure Maven, database setup, Spring Boot basics, requirement gathering.

Deliverables: Environment ready, project skeleton created.

Sprint 2 (Week 2): 19 Nov 2025 – 25 Nov 2025

Objective: Technical foundation and design.

Activities: OOP concepts, JDBC basics, Selenium & REST-Assured introduction, parallel execution concepts, entity design.

Deliverables: Entity models and architecture draft.

Sprint 3 (Week 3): 26 Nov 2025 – 02 Dec 2025

Objective: Test integration engine.

Activities: Selenium integration, REST-Assured setup, TestNG configuration.

Deliverables: Integrated UI and API test engine.

Sprint 4 (Week 4): 03 Dec 2025 – 09 Dec 2025

Objective: REST APIs and JDBC integration.

Activities: Implement repositories, develop test management APIs, API validation using Postman.

Deliverables: Working test management APIs.

Sprint 5 (Week 5): 10 Dec 2025 – 16 Dec 2025

Objective: Scheduling and execution system.

Activities: Multithreaded execution, Spring scheduler, execution trigger APIs.

Deliverables: Parallel execution and scheduling module.

Sprint 6 (Week 6): 17 Dec 2025 – 23 Dec 2025

Objective: Reporting hub.

Activities: HTML, CSV, JUnit report generation, screenshot and log capture.

Deliverables: Reporting module completed.

Sprint 7 (Week 7): 24 Dec 2025 – 30 Dec 2025

Objective: Result analytics tracker.

Activities: Store execution metrics, analytics APIs, result summary implementation.

Deliverables: Analytics module and APIs.

Sprint 8 (Week 8): 31 Dec 2025 – 12 Jan 2026

Objective: Deployment and validation.

Activities: End-to-end testing, bug fixes, deployment, documentation.

Deliverables: Fully deployed and validated framework.

Final Outcome

A scalable, reliable automated regression testing framework with parallel execution, REST-based management, and comprehensive reporting support.