**Trello-SaaS Combined: Manual + Automation Test Plan**

**1️⃣ Project Overview**

* **Project Name:** Trello-SaaS-QA-Hybrid
* **Client:**
* **Document Reference:** FRS
* **Created By:** Nikita Dehariya
* **Creation Date:**
* **Approval Date:**
* **Purpose:** To ensure the core SaaS workflows (Boards, Tasks, Users, RBAC) function as expected, including simulated AI task suggestions.
* **Scope:** Manual and automation testing for web SaaS features.

**2️⃣ Objectives**

* Verify authentication and role-based access (Admin, Member, Observer)
* Test board creation, editing, deletion, and role assignment
* Validate task management including assignment, labeling, due dates, comments, and Kanban flow
* Test simulated AI task suggestions
* Perform regression testing with automation (Playwright + TypeScript)

**3️⃣ Test Scope**

**In-Scope:**

* Authentication & RBAC
* Board Management
* Task Management
* Simulated AI Suggestions
* Notifications, session management, and role-specific restrictions
* Billing

**Out-of-Scope:**

* Mobile apps (web only)
* Non-core features like integrations with third-party tools
* Backend database testing (assume SaaS hosted environment)

**4️⃣ Test Approach**

* **Manual Testing:** Detailed test cases covering positive, negative and RBAC scenarios
* **Automation Testing:** Playwright + TypeScript for regression, RBAC, and task flows
* **Simulated AI:** Use a helper to apply AI task suggestions and validate workflow updates
* **Reporting:**
  + Manual: Bug reports with screenshots in Excel/Markdown
  + Automation: HTML reports from Playwright

**5️⃣ Test Strategy**

| **Scenario** | **Test Types** | **Approach** | **Test Data** | **Roles** |
| --- | --- | --- | --- | --- |
| Authentication & RBAC | Functional, Negative, Security | Manual & Automation | Admin, Member, Observer credentials | All roles |
| Board Management | Functional, RBAC | Manual & Automation | Board names, role assignments | Admin, Member, Observer |
| Task Management | Functional, RBAC, Workflow | Manual & Automation | Task titles, labels, due dates, comments | All roles |
| AI Simulation | Functional, Edge | Manual & Automation | Task titles | Admin, Member, Observer |

**6️⃣ Test Design**

* **Test Scenarios:** Each scenario represents a user action (e.g., “Admin creates board”)
* **Test Cases:** Detailed step-by-step instructions, expected results, and notes
* **Test Data:** Predefined users, boards, and tasks stored in fixtures (automation) or Excel (manual)
* **Mapping:** Each scenario can map to multiple test cases

**7️⃣ Test Execution**

* **Manual Testing Execution:** Use Excel or Markdown files; log bugs with screenshots
* **Automation Execution:** Run Playwright tests for regression and RBAC checks
* **Environment:** Browser: Chrome (latest), Device: Desktop, SaaS URL: [https://trello.com/home]
* **Frequency:**
  + Manual: Initial functional testing
  + Automation: Regression before each release

**8️⃣ Test Reporting**

* **Manual Reports:**
  + Include Test Case ID, Scenario , Steps, Actual vs Expected, Status (Pass/Fail), Notes
* **Automation Reports:**
  + Playwright HTML reports
  + Summary of pass/fail tests per module
* **Defect Reporting:**
  + Use Jira or Excel bug tracker with screenshot attachment

**9️⃣ Risk & Mitigation**

| **Risk** | **Impact** | **Mitigation** |
| --- | --- | --- |
| Feature changes during testing | High | Sync with dev team; re-run regression tests |
| Incomplete test data | Medium | Prepare fixtures and mock data before execution |
| Environment downtime | Medium | Use staging environment; schedule tests during off-hours |
| AI simulation may not cover real scenarios | Low | Focus on representative AI suggestions; manual validation |

**10️⃣ Deliverables**

* Manual Test Plan and Test Cases (Excel/Markdown)
* Automation test scripts (Playwright + TypeScript)
* Bug reports with screenshots
* Playwright HTML reports