

QA/ALM Traceability & Test Design – Final Submission

Part A: RTM Skeleton

Req ID	Requirement	Priority	Risk
RQ-01	Work Order creation with mandatory fields + unique ID	High	High
RQ-02	SLA calculation based on priority	High	High
RQ-03	Dashboard: backlog, SLA breach, downtime	Medium	Medium

Coverage Rules:

- Each requirement must have ≥ 1 happy path and ≥ 1 negative test.
- High-risk requirements must include ≥ 1 edge case.
- All test cases must be linked to a requirement ID.

Part B: AI-Generated Test Cases

TC ID	Req	Type	Status
TC-01	RQ-01	Happy	Pass
TC-02	RQ-01	Negative	Pass
TC-03	RQ-01	Edge	Pass
TC-04	RQ-02	Happy	Pass
TC-05	RQ-02	Negative	Pass
TC-06	RQ-02	Edge	Fail
TC-07	RQ-03	Happy	Pass
TC-08	RQ-03	Negative	Pass
TC-09	RQ-03	Edge (Performance)	Fail

Part C: Coverage & Readiness

Requirement Coverage: $(3/3) \times 100 = 100\%$
Total Tests: 9 | Passed: 7 | Failed: 2

UAT Readiness Snapshot:

- Coverage: 100%

- Status: Conditional GO
- Top Risks: SLA boundary defect (RQ-02), Dashboard performance issue (RQ-03)

Stretch Tasks (Optional)

Simulated Defect:

DEF-01 linked to TC-06 and RQ-02 – Incorrect SLA calculation at boundary value.

Automation Candidates:

- TC-01 (WO creation happy path)
- TC-04 (SLA calculation)
- TC-07 (Dashboard load validation)

Test Data Table:

Asset	Priority	Expected SLA
Pump-01	High	4 hrs
Motor-22	Medium	8 hrs
Valve-10	Low	24 hrs

Traceability Flow Diagram:

Requirements → Test Cases → Execution Status → UAT Decision