

TECH DEBT ASSESSMENT CHECKLIST

A Systematic Approach to Identifying and Prioritizing Technical Debt
For Tech Leads and Senior Engineers

ASSESSMENT AREAS

- Code Quality - smells, complexity, and standards
- Architecture & Dependencies - health and risk
- Testing & Documentation - coverage and gaps
- Infrastructure & Process - CI/CD and workflows
- Scoring & Priority Matrix - quantify your debt

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Code Quality Assessment

Check each item that applies to your codebase. The more items checked, the higher your technical debt.

Code Smells & Complexity

- ☐ Cyclomatic complexity exceeds team threshold in critical paths
- ☐ Duplicated code blocks across 3+ locations
- ☐ Methods/functions exceeding 50 lines regularly
- ☐ God classes or modules with 10+ responsibilities
- ☐ Dead code not removed after feature flags retired

Code Standards

- ☐ Inconsistent naming conventions across modules
- ☐ Missing or outdated type definitions
- ☐ Suppressed linter warnings without justification
- ☐ Hard-coded configuration values in source

Architecture & Dependencies

Architecture Health

- ☐ Circular dependencies between modules
- ☐ Layer violations (UI calling DB directly, etc.)
- ☐ Inconsistent patterns for same concern (3+ ways to do auth, logging, etc.)
- ☐ Missing or outdated architecture decision records (ADRs)
- ☐ Services with unclear ownership boundaries

Dependency Health

- ☐ Dependencies with known CVEs (check npm audit / Snyk)
- ☐ Major version behind on framework (2+ major versions)
- ☐ Abandoned dependencies (no updates in 12+ months)
- ☐ Pinned versions preventing security patches
- ☐ Missing lock file or inconsistent lock file

Testing & Documentation

Test Coverage

- ☐ Unit test coverage below 60% on critical paths
- ☐ No integration tests for API endpoints
- ☐ No E2E tests for critical user flows
- ☐ Tests that are flaky (fail randomly 5%+ of the time)
- ☐ Tests that mock everything (testing mocks, not code)

Documentation

- ☐ Missing README for onboarding new team members
- ☐ API documentation out of sync with implementation
- ☐ Missing runbooks for production incidents
- ☐ No changelog or release notes process
- ☐ Tribal knowledge not captured anywhere

Infrastructure & Process

CI/CD & DevOps

- ☐ Build takes longer than 10 minutes
- ☐ No automated deployment pipeline
- ☐ Manual steps required for releases
- ☐ No rollback procedure documented/tested
- ☐ Missing health checks or monitoring alerts

Process Debt

- ☐ No code review requirements enforced
- ☐ Technical decisions made without documentation
- ☐ No regular dependency update schedule
- ☐ Incident post-mortems not conducted or not actioned
- ☐ No tech debt tracking system (backlog, labels, etc.)

Scoring & Priority Matrix

Score each item: 0 = Not applicable, 1 = Minor, 2 = Moderate, 3 = Critical

Category	Items	Score
Code Quality	9 items	___ / 27
Architecture	5 items	___ / 15
Dependencies	5 items	___ / 15
Testing	5 items	___ / 15
Documentation	5 items	___ / 15
Infrastructure	5 items	___ / 15
Process	5 items	___ / 15
TOTAL	39 items	___ / 117

Scoring Guide

- 0 - 25:** Low debt - Maintain current practices
- 26 - 50:** Moderate debt - Allocate 10% sprint capacity
- 51 - 75:** High debt - Allocate 20% sprint capacity, create remediation plan
- 76+:** Critical debt - Executive escalation needed, dedicate team

Full resources at <https://techdebt.guru/>