

Assignment

Course: GenAI Core Essentials for QA Engineers [AI-Powered Testing Mastery]

Topic: Get Started with Prompt Engineering

Live Session Date: 14th Feb 2026

"Chain of Thoughts": Taking input from the user(prompter) one by one and producing the result/answer.

Assignment:

- Take any document preparation about software Testing
 - by using any LLM tool, try to generate it with "Chain of Thoughts" method (step-by-step prompting).
-

My Prompt:

Context

- As a Test Manager, create an Enterprise grade Test Strategy Document for an EdTech platform

Instructions:

- [MANDATORY] Generate only 2 Pages
- [CRITICAL] Ask me 5 MCQ'S for creating Test Strategy Document One by One
- [CRITICAL] Generate the next question Once I Answer for the previous question

ChatGPT's Response:

Understood.

We will first finalize key strategic decisions via **5 MCQs (one by one)** before generating the **2-page Enterprise Test Strategy Document**.

MCQ 1 – Testing Engagement Model

For an Enterprise-grade **EdTech platform**, what engagement model should the Test Strategy follow?

- A. Pure Waterfall Testing Model
- B. Agile Scrum with Continuous Testing (Shift-Left + CI/CD)
- C. Hybrid (Agile for Product, Waterfall for Compliance Modules)
- D. DevOps with Full Test Automation & Continuous Deployment

👉 Please select A / B / C / D

(Once you answer, I will generate MCQ 2.)

My Response: B

ChatGPT's Response:

Selected: Agile Scrum with Continuous Testing (Shift-Left + CI/CD)

MCQ 2 – Test Automation Strategy

For an Enterprise EdTech platform (Web + Mobile + APIs), what automation approach should be adopted?

- A. UI Automation Only (Selenium / Playwright)
- B. API + UI Automation with BDD Framework
- C. Test Pyramid Approach (Unit > API > UI with CI Integration)
- D. 100% Codeless Automation Tool

👉 Please select A / B / C / D

(Once you answer, I will generate MCQ 3.)

My Response: C

ChatGPT's Response:

- Selected: **Test Pyramid Approach (Unit > API > UI with CI Integration)**
-

MCQ 3 – Non-Functional Testing Prioritization

For an enterprise-scale **EdTech platform** (handling students, instructors, live classes, payments), which non-functional areas should be prioritized?

- A. Performance & Load Testing Only
- B. Security & Compliance (Data Privacy, OWASP) Only
- C. Performance + Security + Scalability + Accessibility (WCAG)
- D. Usability Testing Only

👉 Please select A / B / C / D

(Once you answer, I will generate MCQ 4.)

My Response: C

ChatGPT's Response:

- Selected: **Performance + Security + Scalability + Accessibility (WCAG)**
-

MCQ 4 – Test Environment Strategy

For an Enterprise EdTech platform deployed on cloud (AWS/Azure/GCP), what environment strategy should be defined?

- A. Single Shared QA Environment
- B. Dedicated SIT + UAT + Performance + Pre-Prod Environments
- C. Production Testing Only
- D. Local Developer Testing Only

👉 Please select A / B / C / D

(Once you answer, I will generate MCQ 5.)

My Response: B

ChatGPT's Response:

- Selected: **Dedicated SIT + UAT + Performance + Pre-Prod Environments**
-

MCQ 5 – Test Governance & Metrics

For enterprise-level governance of the EdTech platform, which metrics model should be adopted?

- A. Only Defect Count Tracking
- B. Test Case Execution % Only
- C. Quality KPIs (Defect Leakage, DRE, Automation Coverage, MTTR, Velocity, Release Readiness Index)
- D. No formal metrics, only stakeholder feedback

👉 Please select A / B / C / D

(Once you answer, I will generate the final 2-page Enterprise Test Strategy Document.)

My Response: C

ChatGPT's Response:

- All strategic decisions finalized.

Selections:

- Engagement Model → Agile Scrum with Continuous Testing
- Automation Strategy → Test Pyramid with CI Integration
- Non-Functional Focus → Performance + Security + Scalability + Accessibility
- Environment Strategy → Dedicated SIT, UAT, Performance, Pre-Prod
- Governance → Quality KPIs (DRE, Leakage, Automation %, MTTR, etc.)

ENTERPRISE TEST STRATEGY DOCUMENT

Project: Enterprise EdTech Platform

Role: Test Manager

Version: 1.0

PAGE 1

1. Introduction

This Test Strategy defines the quality engineering approach for the Enterprise EdTech Platform delivering:

- Student Learning Management System (LMS)
- Live Virtual Classrooms
- Assessment & Certification Engine
- Payment & Subscription Module
- Instructor & Admin Portal
- Mobile & Web Applications

The platform follows **Agile Scrum with Continuous Testing** aligned to DevOps and CI/CD pipelines.

2. Test Objectives

- Ensure functional correctness across Web, Mobile & API layers
- Validate performance under peak concurrent student loads
- Ensure data privacy & security compliance
- Guarantee accessibility compliance (WCAG 2.1 AA)
- Reduce defect leakage to production below 3%
- Achieve ≥ 80% automation coverage for regression

3. Scope of Testing

In-Scope

- Functional Testing (UI, API, DB validation)
- Integration Testing
- Regression Testing
- Performance & Load Testing
- Security Testing
- Accessibility Testing
- Cross-browser & Cross-device testing
- UAT Support

Out-of-Scope

- Third-party vendor internal testing
- Hardware certification

4. Test Approach

4.1 Agile Continuous Testing Model

- Testing starts from requirement grooming (Shift-Left)
- QA participates in Sprint Planning
- Definition of Done includes:
 - Unit test coverage \geq 80%
 - API automation complete
 - No Critical/High open defects

4.2 Test Pyramid Implementation

Level 1 – Unit Testing

- Developer-owned
- Automated in CI

Level 2 – API Automation

- REST API validation
- Contract & Integration Testing

Level 3 – UI Automation

- Critical user journeys automated
- Smoke + Regression suites

Manual testing will focus on exploratory & usability scenarios.

5. Test Types

5.1 Functional Testing

- Login & Authentication
- Course Enrollment
- Payment Processing
- Live Class Join/Exit
- Assignment Submission
- Result Publishing

5.2 Performance Testing

Load, stress & endurance testing using industry tools to simulate:

- Peak enrollment periods
- Live session concurrency
- Payment spikes

KPIs:

- Response Time $<$ 2 sec (95th percentile)
- Zero system crash under peak load

5.3 Security Testing

Aligned with OWASP guidelines:

- Vulnerability Assessment
- Penetration Testing
- SQL Injection
- XSS
- Authentication bypass

Compliance with:

- GDPR
- PCI-DSS (for payments)

5.4 Accessibility Testing

Compliance with World Wide Web Consortium WCAG 2.1 AA:

- Screen reader compatibility
- Keyboard navigation
- Color contrast validation

PAGE 2

6. Test Environment Strategy

Dedicated environments:

Environment Purpose

SIT System Integration Testing

UAT Business validation

Performance Load & stress testing

Pre-Prod Production-like validation

All environments hosted on scalable cloud infrastructure.

CI/CD pipeline ensures:

- Automated build validation
 - Smoke automation on deployment
 - Regression before release
-

7. Test Data Management

- Masked production-like datasets
 - Synthetic data generation
 - Secure storage & access control
 - Data refresh per sprint
-

8. Defect Management Process

- Defect lifecycle tracked in centralized tool
- Severity classification:
 - Critical
 - High
 - Medium
 - Low

SLA:

- Critical → Fix within 24 hrs
- High → Fix within 48 hrs

Root Cause Analysis mandatory for production defects.

9. Test Metrics & Governance

Enterprise KPIs:

- Defect Density
- Defect Leakage %
- Defect Removal Efficiency (DRE)
- Automation Coverage %
- Sprint Test Completion Rate
- Mean Time To Repair (MTTR)
- Release Readiness Index

Weekly Quality Dashboard shared with stakeholders.

10. Risk Management

Risk	Mitigation
High concurrent users	Early performance testing
Security breach	Continuous security scans
Late requirement changes	Agile backlog grooming

Risk	Mitigation
Environment instability	Dedicated DevOps support

11. Entry & Exit Criteria

Entry Criteria

- Approved user stories
- Test cases reviewed
- Environment ready

Exit Criteria

- 100% planned tests executed
- No open Critical/High defects
- Automation regression passed
- Stakeholder sign-off

12. Conclusion

This Test Strategy ensures:

- Scalable, secure, high-performing EdTech platform
- Continuous quality validation across sprints
- Enterprise-grade governance & KPI-driven decision making
- Reduced production defects and improved user satisfaction

If you would like, I can next:

1. Convert this into a Word-ready document
2. Convert into a PowerPoint (Executive Presentation)
3. Add Test Strategy diagrams (Test Pyramid, CI/CD Flow, Environment Architecture)
4. Tailor it specifically for NAAC/NIRF compliance use case

Please specify your next requirement.