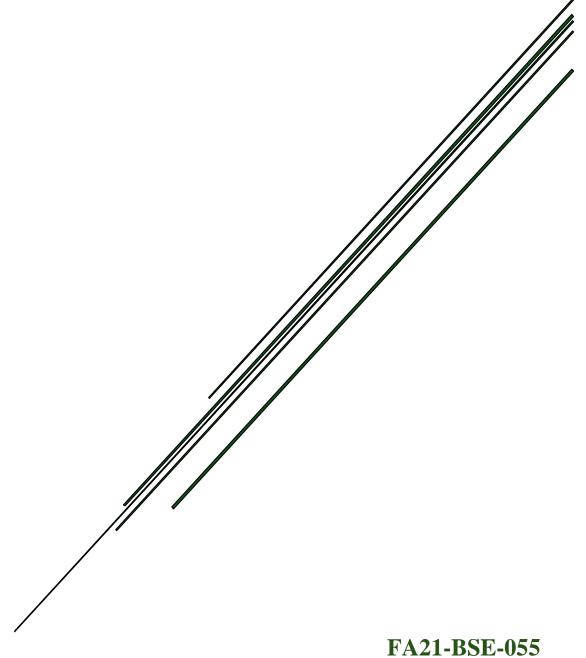# SOFTWARE TESTING

Assignment 1

**FA21-BSE-055**
**HAMZA BADAR**

# *TEST PLAN TEMPLATE*

**Q.** Prepare and present in video form a report on the evolution of software test plans. The heart of every test plan is a set of effective test cases that determines its quality. During the evolution discuss the templates year wise and how its quality was improved. For every template you need to provide a proof of some test plan which was used in a company for a specific software/project?

**Answer**

**Test Plan:**

A test plan is like a roadmap for testing software. It lays out what needs to be tested, how it will be tested, and who will do the testing. It helps ensure that the testing process is organized and thorough, which is important for making sure the software works well.

1. **Basic Template (1980s – Early 1990s)**:

   ➢ **Structure**: Very basic, resembling a checklist with minimal organization.

     ↓ Introduction.
     ↓ Features to Test.
     ↓ Test Results.

   ➢ **Focus**: Primarily aimed at verifying the presence of features and basic functionality.

   ➢ **Quality Considerations**: Addressed the fundamental need for a plan but lacked detail for comprehensive testing.

   ➢ **Templates:**

     ↓ Basic Test Plan Template.

   ➢ **Example**: A word processing software test plan with sections for Introduction, Features to Test, and Test Results.

2. **Structured Template (Mid 1990s – 2000s)**:

   ➢ **Structure**: Gained organization and formality, often driven by the rise of structured development methodologies.

     ↓ Introduction,
     ↓ Objectives.
     ↓ Scope.
     ↓ References.
     ↓ Test Cases.
     ↓ Environment.
   ➢ **Focus**: Ensuring alignment with requirements and having a clear purpose.

   ➢ **Quality Considerations**: Improved communication and clearer expectations, with testers thinking more deeply about the purpose of testing.

   ➢ **Templates:**

     ↓ Formal Test Plan Template

- Waterfall Test Plan Template

> **Example**: A CRM system test plan with sections for Introduction, Objectives, Scope, References, Test Cases, and Environment.

3. **Process-centric Template (2000s – 2010s)**:

> **Structure**: Reflects Agile and iterative development trends, with flexibility built in.
- Introduction.
- Objectives.
- Scope.
- Test Approach.
- Roles & Responsibilities.
- Risks.

> **Focus**: Adapting testing to the pace of development, outlining types of tests used at different stages.

> **Quality Considerations**: Ensured a targeted and efficient approach aligned with the project's development strategy, explicitly considering testing methodology.

> **Templates:**
- Agile Test Plan Template
- Iterative Test Plan Template

> **Example**: An e-commerce platform test plan following Agile methodology with sections for Introduction, Objectives, Scope, Test Approach, Roles & Responsibilities, and Risks.

4. **Comprehensive & Metrics-Focused Template (2010s – Till Now)**:

> **Structure**: Emphasizes automation, continuous testing, and data-driven insights.

- Introduction.

- Objectives.

- Scope.

- Test Approach.

- Test Cases.

- Tool Integrations.

- Metrics & Reporting.

> **Focus**: Maximizing feedback loops, measuring effectiveness, treating testing as integral to software quality assurance.

> **Quality Considerations**: Drives a proactive approach to quality, measures progress, enables informed decision-making about test strategy adjustments.

> **Templates:**
- Agile Test Plan Template
- Iterative Test Plan Template

> ➢ **Example**: A ridesharing app test plan with sections for Introduction, Objectives, Scope, Test Approach, Test Cases, Tool Integrations, and Metrics & Reporting.

**Differences:**

| Quality Improvement Basis | Early Template | Structured Template | Methodology-Driven Template | Comprehensive & Metrics-Focused Template |
|---|---|---|---|---|
| Structure | Basic checklist-like structure | Gained formality and organization | Reflects Agile trends, flexible | Emphasizes automation and data-driven insights |
| Focus | Verify feature presence | Alignment with requirements | Adapting testing to development pace | Maximizing feedback loops, proactive quality assurance |
| Quality Considerations | Address fundamental needs, lack detail for comprehensive testing | Improved communication, clearer expectations | Efficient approach, aligns with development strategy | Proactive quality assurance, informed decision-making |

**Conclusion:**

In conclusion, the evolution of software test plan templates has shown big improvements in how they're structured, what they focus on, and how quality is considered. Over time, we've moved from simple checklists to more detailed, data-driven methods. These changes help us test software better, making sure it fits the project's goals and is of higher quality.

**References:**

- ISTQB (International Software Testing Qualifications Board).
- IEEE standards.
- SEI (Software Engineering Institute).
- Agile Alliance.
- Software Testing Help.
- "Software Testing: An ISTQB-BCS Certified Tester Foundation Guide 4th edition" by Brian Hambling.
- "Foundations of Software Testing: ISTQB Certification 4th edition" by Dorothy Graham.
- Chat gpt.
- Gemini.

**Video Link:**

Testing templates.mp4