**Functional & Performance Testing Template**

**Model Performance Test**

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| Date | 26June 2025 |
| Team ID | LTVIP2025TMID32004 |
| Project Name | SmartSDLC: AI-Enhanced Software Development Lifecycle |
| Maximum Marks | 2 |

**Test Scenarios & Results**

| **Test Case ID** | **Scenario (What to test)** | **Test Steps (How to test)** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| --- | --- | --- | --- | --- | --- |
| FT-01 | Requirement Document Upload | Upload correct and corrupted requirement PDFs | Valid PDFs parsed; errors shown for invalid files | System extracted text from valid PDFs and rejected unreadable files | Pass |
| FT-02 | Requirement Classification | Upload requirements and trigger classification | Requirements grouped under SDLC phases accurately | Text successfully classified into SDLC phases using Watsonx | Pass |
| FT-03 | AI Code Generation | Enter prompt for Python function logic | Returns working code without markdown or irrelevant content | Returned valid Python code as per input prompt | Pass |
| FT-04 | Watsonx Model API Connection | Use credentials to call Watsonx model | Valid response from model using Granite-3-3-8b-instruct | API connected and generated AI output | Pass |
| PT-01 | Code Generation Response Time | Record time from prompt to code output | Response generated within 4 seconds | Avg. time observed ~2.7 seconds | Pass |
| PT-02 | Concurrent Users Test | Multiple users upload and process SDLC tasks simultaneously | Application handles requests without crashing or delay | Handled load efficiently; no crashes | Pass |
| PT-03 | Session State Handling | Switch modules while preserving session inputs | Inputs retained when navigating modules | Maintained chat and text input history | Pass |