# **Functional & Performance Testing Template**

**Model Performance Test**

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| Date | 27 June 2025 |
| Team ID | LTVIP2025TMID29404 |
| Project Name | SmartSDLC – AI-Enhanced Software Development Lifecycle |
| Maximum Marks |  |

## **Test Scenarios & Results :**

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| **Test Case ID** | **Scenario (What to test)** | **Test Steps (How to test)** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| FT-01 | Code Input Validation (for AI Code Generator) | Enter valid/invalid text describing a code task | Valid task accepted, invalid input throws error | Valid tasks accepted and invalid inputs show "Invalid task" warning | Pass |
| FT-02 | Language Selection / Detection (multi-language support) | Enter task in different languages or explicitly select one | AI generates code in appropriate language | Correct language detected and code generated accordingly | Pass |
| FT-03 | Code Generation Accuracy | Provide sample tasks and compare generated output | Output matches expected logic/function | Code output matches expected structure and functionality | Pass |
| FT-04 | Bug Fixing Logic | Input buggy code and check the result | Fixed code returned, preserving original functionality | AI fixed syntax and logical bugs correctly | Pass |
| FT-05 | Test Case Generation | Provide a function/module and trigger test case generation | Unit test cases are generated based on the function | Unit test cases created for boundary and valid inputs | Pass |
| FT-06 | File Upload Functionality (PDFs for Classification) | Upload valid/invalid PDF files | PDFs processed and classified without error | Successfully classified requirements and design content | Pass |
| FT-07 | Login & Session Handling | Attempt login with valid/invalid credentials | Successful login, proper error for invalid credentials | Valid users logged in; errors shown for wrong credentials | Pass |
| PT-01 | AI Response Time (e.g., for code generation) | Measure time from prompt to output | Response generated in under 5 seconds | Average time was 2.4 seconds | Pass |
| PT-02 | Multi-user Load Test (simulate 5 users at once) | Open multiple browser tabs/sessions and submit different tasks | Server responds without slowing down | All 5 users got responses in under 5 seconds | Pass |
| PT-03 | PDF Upload Load Test | Upload 4–5 PDFs simultaneously | No crash; each file processed correctly | All files uploaded, parsed, and classified smoothly | Pass |
| PT-04 | API Reliability Test | Send 20 API calls rapidly using a loop | Each call returns a valid result without server failure | All 20 calls returned results without timeout or crash | Pass |