**Functional & Performance Testing Template**

**Model Performance Test**

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| Date | 27 june2025 |
| Team ID | LTVIP2025TMID59171 |
| Project Name | HealthAI: Intelligent Healthcare Assistant Using IBM Granite |
| 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** | Text Input Validation (e.g., symptoms, name) | Enter valid and invalid symptoms or text in input fields (e.g., “fever”, “@@##123”) | Valid inputs accepted, errors for invalid ones |  |  |
| **FT-02** | Number Input Validation (e.g., age, heart rate) | Enter realistic and extreme values (e.g., age 25 vs -5, BP 120 vs 500) | Accepts valid values, shows error for out-of-range |  |  |
| **FT-03** | Disease Prediction Output | Enter symptoms and click “Predict” | Returns relevant diseases or “No disease detected” |  |  |
| **FT-04** | AI Chat System | Ask a health-related question (e.g., “What to do for cold?”) | AI responds accurately with health suggestions |  |  |
| **FT-05** | Vitals Graph Rendering | View vitals dashboard with heart rate, BP, glucose trends | Graphs display correctly with labeled axes |  |  |
| **FT-06** | API Key Authentication | Check with valid/invalid API keys | Valid key connects; invalid key gives error message |  |  |
| **FT-07** | Email/OTP Confirmation | Try confirming a new account with email and OTP | Email/OTP sent and account verified |  |  |

**Performance Testing Scenarios**

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| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Test Case ID** | **Scenario (What to test)** | **Test Steps (How to test)** | **Expected Result** | **Actual Result** | **Pass/Fail** | | **PT-01** | Disease Prediction Response Time | Use a stopwatch or log time taken for prediction after symptom input | Should respond in **under 3 seconds** |  |  | | **PT-02** | Chat API Load Test | Simulate 10+ users chatting with AI simultaneously | Chatbot remains responsive with no timeouts |  |  | | **PT-03** | Vitals Data Upload Load Test | Upload multiple vital logs (e.g., 50 records from Excel or sensors) | Upload and visualization should work without lag |  |  | | **PT-04** | Dashboard Load Performance | Open dashboard with multiple charts and recent health records | Loads within 2–3 seconds on stable network |  |  | | **PT-05** | Backend Model Throughput | Send 100 requests per minute to disease predictor API | No crashes, responses maintained under 5s |  |  | | **PT-06** | File Upload Resilience | Upload multiple reports (PDF, images) at once | All uploads complete without crashing the application |  |  | |