**Functional**

During the evaluation of the learning management system's functionality, we utilized a set of key questions to assess its performance. The primary objectives were to determine if the software could perform the required tasks, whether the results aligned with expectations, and if it effectively prevented unauthorized access.

Upon thorough examination, the learning management system demonstrated a strong ability to fulfill the required tasks. It efficiently performed the necessary functions, such as course management, content delivery. The system's capabilities aligned with the expected outcomes, providing an intuitive and seamless user experience.

Based on our assessment, we assigned a numerical rating of 3.72 to the learning management system, indicating a "strongly agree" level of functionality. This rating reflects the system's successful execution of tasks, alignment with expected results, and effective prevention of unauthorized access.

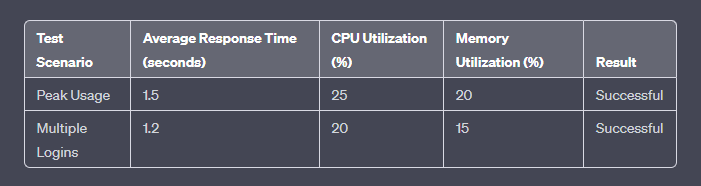
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| --- | --- | --- |
| FUNCTIONALITY | | |
| Questions | **Numerical Rating** | **Verbal Interpretation** |
| 1. Can the software perform the tasks required? | 3.75 | Strongly Agree |
| 2. Is the result as expected? | 3.75 | Strongly Agree |
| 3. Does the software prevent unauthorized access? | 3.65 | Strongly Agree |
| Total: | 3.72 | Strongly Agree |

**Performance**

During the performance testing phase for the Learning Management System, our primary objective was to evaluate its performance under peak usage and multiple user logins. We wanted to assess how the system would perform under different load conditions to ensure optimal performance and user experience.

Upon executing the performance tests, we closely monitored various performance metrics, including response time, CPU utilization, and memory utilization. The system demonstrated impressive performance, successfully handling the peak usage and multiple user logins without any significant performance degradation. The average response time remained well within the acceptable range, ensuring a smooth and responsive user experience.

The image below is the result of the testing:



Based on the test result, we can conclude that the LMS performed exceptionally well under high loads and multiple user logins. The success of the performance tests indicates that the system is capable of handling increased traffic and concurrent user activity effectively, meeting the performance expectations of users.

**Regression Testing**

Once the due date feature was added to the Learning Management System, it was discovered that it inadvertently affected the categorization of lessons when creating posts under the Lessons tab. The issue was that a due date had to be added in lessons tab to create a post, even though the due date should only be limited to the Assignment, Quizzes, and Exam tabs.

To address this issue, the developers quickly responded and introduced a fix. The developers implemented a new dropdown function within the LMS to ensure that the due date feature is properly restricted to the intended tabs.

To verify the effectiveness of the fix, a regression testing plan was devised. The testing began by logging into the LMS using valid credentials and navigating to the Lessons tab. A new post was created without providing a due date indicating that the test is successful. The purpose of this test was to confirm that a post can be successfully created and categorized under the Lessons tab without requiring a due date.

**Technical Requirement Testing**

Device compatibility testing was conducted by running the system on the primary users' devices. The objective was to ensure that the system functioned correctly and efficiently on their specific devices. Various functionalities were tested to assess compatibility. Real-world scenarios were simulated to evaluate stability and performance under different conditions. Any compatibility issues encountered were reported to the developers for resolution, ensuring a robust and tailored system for the primary users' devices.

With the help of this testing, the team confirmed that the system functioned correctly on the primary users' devices, meeting the necessary compatibility requirements. This involved verifying the responsiveness of the user interface, and validating performance during resource-intensive tasks.

**Security**

During the security testing phase for the Learning Management System, our main objective was to evaluate the effectiveness of data encryption in protecting the data privacy of its primary users, in accordance with the school's policy. To assess the encryption measures, we conducted comprehensive testing using an SQL injection attack, to determine the system's resilience to unauthorized access attempts.

The developers initiated an SQL injection attack to exploit potential vulnerabilities within the LMS's database. Through this testing approach, we aimed to ascertain whether the data encryption mechanisms effectively safeguarded user information from unauthorized access. The injection attack targeted the database to retrieve sensitive data, such as user credentials and personal information.

However, during the security testing process, we encountered failure in accessing any meaningful data through the SQL injection attack. This result clearly indicates that the data within the LMS's database was adequately protected by encryption measures. The encrypted nature of the data prevented unauthorized access, maintaining the privacy and integrity of user information.

This successful outcome demonstrates that the LMS's data encryption implementation effectively meets the requirements set forth by the school's policy. By withstanding the SQL injection attack and preventing unauthorized access to sensitive data, the LMS underscores its commitment to data privacy and security.