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Group Activity: Analysis and Interpretation of ISO 25010 Criteria Results

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ISO 25010 Characteristic	Sample Mean Score	Notable Comments (Summarized)
Functional Suitability	3.6	"Most features work as intended," "Some functions still missing."
Performance Efficiency	3.1	"Loads fast, but slows during peak usage."
Compatibility	3.4	"Works well across browsers," "Minor layout issues on mobile."
Usability	3.0	"Interface is easy, but some icons are confusing."
Reliability	2.8	"Occasional crashes," "Rare errors but persistent."
Security	3.3	"Secure login," "Password reset process needs improvement."
Maintainability	3.2	"Codebase is modular," "Documentation still incomplete."
Portability	3.5	"Runs well on different OS," "Setup process could be smoother."

- **analysis of each ISO 25010 characteristic (based on sample results).**

1. Functional Suitability (Mean Score: 3.6)

The mean score is 3.6, which indicates that most users find functional suitability highly acceptable. This means that the system's main features are effective and functional, successfully executing their intended purposes. However, it also highlights that some functions are still missing. This suggests that while the system is generally functional, adding more

features could further improve the system and increase overall user satisfaction.

2. Performance Efficiency (Mean Score: 3.1)

The mean score is 3.1, which indicates that most users find Performance Efficiency moderately acceptable. This means that the system's performance is excellent to a degree, but still lacks sufficient response times during maximum usage of the system. This issue is also highlighted by the comments, which say that despite the fast loading of the system, the system slows down during peak usage.

3. Compatibility (Mean Score: 3.4)

The mean score is 3.4, which indicates that most users find Compatibility moderately acceptable. This means that the system generally works well with other components and environments but there may be instances where minor friction, limited data exchange or occasional difficulties in co-existence could be encountered, suggesting room for improvement towards highly acceptable compatibility.

4. Usability (Mean Score: 3.0)

The mean score is 3.0, which indicates that most users find Usability moderately acceptable. This means that users accomplished their task without excessive effort but some interactions took longer than the ideal with instructions that are complex or needed more context. The experience has been smooth and helpful but misunderstandings occurred occasionally. This shows that the system supports a wide range of common user needs, but performance varied when specialized or uncommon contexts were encountered.

5. Reliability (Mean Score: 2.8)

The mean score is 2.8, this reflects that the system is operational but not reliable. The appearance of occasional crashes and recurring errors suggests that the stability improvements, bug fixes, and stronger quality of the system measures needed assurance to reach an acceptable reliability level. It also indicates that users recognize the system's reliability as inconsistent. However the system functions most of the time, users still experiencing interruptions that affect trust and stability.

6. Security (Mean Score: 3.3)

The 3.3 mean score reflects a system that performs reasonably well in security but doesn't fully meet user expectations. Regarding login protection and the reliability of the password. While on the other hand, the system protection of most information is noted for weaknesses in the system's ability to validate users, prevent unauthorized access, and maintain proper control of functions. Furthermore, the system demonstrates basic security measures, it also shows the weaknesses in processes that affect user trust.

7. Maintainability (Mean Score: 3.2)

The mean score of 3.2 indicates that the system is moderately acceptable; the structure of the system makes reasonable updates and modifications possible. Users expressed that the codebase is modular, which positively influences ease of maintenance. On the other hand, incomplete documentation has also been pointed out, which may create difficulties for the developers at the time of troubleshooting or during future enhancements.

8. Portability (Mean Score: 3.5)

The mean score of 3.5, indicates that the system performs well across different operating systems that shows good adaptability once it is running. While on the other hand, it also highlights that the setup process is not as smooth as expected in installability. However, the software functions in various environments in the installation and configuration steps may be confusing or time-consuming. The system is portable and would benefit from a smooth and user-friendly interface experience.

Recommendations for system improvement

Based on the analysis of the given data, we recommend several improvements to the system. The interface icons should be simple yet easy to understand to enhance **usability**, and the program script should be improved to ensure better compatibility between desktop and mobile devices, increasing the system's flexibility. To boost **performance efficiency**, removing unused code and reusing existing functions is advised, as this reduces storage requirements and speeds up execution. Simplifying the script will also make debugging easier, resulting in fewer errors and crashes, which strengthens **reliability**. Additionally, reusing functions and organizing the code more effectively will improve **maintainability**. Finally, to enhance **security**, the password-reset process should include clear and detailed instructions, helping users recover their accounts more efficiently while maintaining strong protection.

Cross-characteristic evaluation summary.

In the overall data, the highest score is Functional Suitability (3.6), indicating that this is the system's most acceptable attribute. This shows that users are satisfied with the program's features, despite some missing functions. However, the lowest score is Reliability (2.8), which indicates that this is the system's least acceptable attribute. It highlights significant issues with crashes and rare persistent errors that occur in the system. The remaining characteristics scored moderately acceptable (2.51–3.50), showing that the system is somewhat acceptable but still needs improvement. Overall, the system is functional, but attention to its reliability is required to enhance the overall performance.

Interpretation Summary

The ISO 25010 results show that the system performs well in its core functions and works smoothly across different devices, but several areas still need attention. Reliability and performance remain the most urgent issues because crashes, slow responses, and errors directly affect user experience. Usability and security also require improvement, especially in clarifying icons and strengthening the account recovery process. Maintainability is affected by incomplete documentation, which limits efficient updates and troubleshooting. These findings help guide future development by showing where improvements should be prioritized, supporting better maintenance planning, and ensuring the system can grow while keeping high quality standards.