

ABSTRAK

PENERAPAN STANDAR ISO/IEC 25010:2023 UNTUK EVALUASI KUALITAS PERANGKAT LUNAK PADA SISTEM INFORMASI MONITORING PEMBESARAN KAMBING (SI MBEK)

Oleh

RIZKI PANGESTU

Sistem Informasi Monitoring Pembesaran Kambing (SI MBEK) dikembangkan untuk membantu peternak memantau pertumbuhan kambing secara digital. Namun, sistem ini belum melalui evaluasi kualitas berbasis standar sehingga diperlukan pengujian untuk memastikan keandalan dan kelayakannya. Penelitian ini bertujuan mengevaluasi SI MBEK menggunakan standar ISO/IEC 25010:2023 dengan pendekatan *Software Testing Life Cycle* (STLC). Pengujian dilakukan pada tujuh karakteristik, yaitu *functional suitability*, *performance efficiency*, *compatibility*, *interaction capability*, *reliability*, *security*, dan *maintainability* menggunakan alat *Katalon Studio*, *GTmetrix*, *VPS*, *PowerMapper*, *Apache JMeter*, *BlazeMeter*, *WAPT*, *UEQ*, *UAT*, *OWASP ZAP*, dan *SonarQube Cloud*. Hasil penelitian menunjukkan SI MBEK memenuhi sebagian besar aspek kualitas. Sistem berfungsi sesuai kebutuhan, memiliki kinerja efisien, kompatibel lintas perangkat, serta mendapat penilaian *excellent* pada UEQ dan skor 89,92% pada UAT. Sistem reliabel hingga 400 pengguna simultan, walaupun masih terdapat kerentanan keamanan tingkat rendah dan beberapa bagian kode yang masih perlu perbaikan. Dengan demikian, penerapan ISO/IEC 25010:2023 terbukti efektif dalam mengevaluasi kualitas SI MBEK, sekaligus memberikan masukan untuk peningkatan keamanan dan pemeliharaan sistem ke depan.

Kata Kunci: ISO/IEC 25010, STLC, SI MBEK, pengujian perangkat lunak.

ABSTRACT

IMPLEMENTATION OF ISO/IEC 25010:2023 STANDARD FOR SOFTWARE QUALITY EVALUATION ON THE SISTEM INFORMASI MONITORING PEMBESARAN KAMBING (SI MBEK)

By

RIZKI PANGESTU

The goat husbandry monitoring information system, known as SI MBEK, was developed to assist farmers in digitally monitoring goat growth. However, the system has not yet undergone a standardized quality evaluation, thus requiring testing to ensure its reliability and feasibility. This study aims to evaluate SI MBEK using the ISO/IEC 25010:2023 standard with the Software Testing Life Cycle (STLC) approach. The evaluation was conducted on seven quality characteristics, namely functional suitability, performance efficiency, compatibility, interaction capability, reliability, security, and maintainability, using tools such as Katalon Studio, GTmetrix, PowerMapper, Apache JMeter, VPS, BlazeMeter, WAPT, UEQ, UAT, OWASP ZAP, and SonarQube Cloud. The results show that SI MBEK meets most of the quality aspects. The system functions as required, demonstrates efficient performance, is compatible across devices, and achieved an excellent rating in the UEQ along with a score of 89.92% in User Acceptance Testing (UAT). The system is reliable for up to 400 simultaneous users, although minor security vulnerabilities and some code issues remain to be improved. In conclusion, the application of ISO/IEC 25010:2023 has proven effective in evaluating the quality of SI MBEK while also providing insights for future improvements in security and system maintainability.

Keywords: ISO/IEC 25010, STLC, SI MBEK, software quality evaluation.