

Maryam Hidayati 2024. Pengembangan *Geographic Information System* (Gis) Pada Lokasi Praktek Kerja Industri (Prakerin) Di SMK Bahrul Ulum Surabaya Skripsi, Program Studi Pendidikan Informatika, Fakultas Ilmu Pendidikan, Universitas Trunojoyo Madur Pembimbing : Muhlis Tahir, S.Pd., M.Tr. Kom.

ABSTRAK

Pengembangan *Geographic Information System* Pada Lokasi Praktek Kerja Industri di SMK Bahrul Ulum Surabaya diupayakan untuk mempermudah dalam pencarian lokasi prakerin yang selama ini masih dilakukan secara manual, sehingga membuat pencarian lokasi prakerin tidak efektif dan efisien ketika dihadapkan terhadap kebutuhan informasi dengan cepat. Metode pengumpulan data yang digunakan adalah wawancara, observasi. Model pengembangan perangkat lunak yaitu model Waterfall yang terdiri dari tahap analisis, desain, implementasi, pengujian dan perawatan. Berdasarkan tinjauan toeri, analisis dan implementasi pemrograman yang digunakan mencakup basis data, *mockup*, *use case*, dan *sequence diagram*. Implementasi dilakukan dengan menggunakan bahasa pemrograman PHP, *framework Laravel 8*, *Bootstrap*, dan *DBever* untuk pengelolaan basis data Pengujian sistem menggunakan model standar internasional ISO/IEC 25010 yang mencakup lima aspek: *functional suitability*, *usability*, *performance efficiency*, *maintainability*, dan *reliability*. Hasil pengujian menunjukkan bahwa aspek *functional suitability* mencapai 100%, aspek *usability* mencapai 86,26% dan dianggap “layak”, aspek *performance efficiency* memenuhi standar dengan waktu muat 1,8 detik, aspek *maintainability* mencapai 100% dan dinilai sangat mudah dirawat, serta aspek *reliability* mencapai 100% yang menandakan sistem ini sangat andal. Berdasarkan hasil pengujian, *Gisbu* terbukti sangat membantu pihak sekolah dan memenuhi standar kualitas ISO/IEC 25010.

Kata Kunci: GIS, ISO 25010, Prakerin.

Maryam Hidayati 2024. *Development of a Geographic Information System (GIS) at the Industrial Work Practice (Prakerin) Location of Bahrul Ulum Vocational School, Surabaya Thesis, Informatics Education Study Program, Faculty of Education, Trunojoyo University, Madur Advisor: Muhlis Tahir, S.Pd., M.Tr.Kom*

ABSTRACT

The development of a Geographic Information System at Industrial Work Practicum Locations at Bahrul Ulum Vocational School in Surabaya has been attempted to make it easier to search for internship locations which have so far been carried out manually, thus making the search for internship locations ineffective and inefficient when faced with the need for information quickly. The data collection method used is interviews, observation. The software development model is the Waterfall model which consists of analysis, design, implementation, testing and maintenance stages. Based on the theoretical review, analysis and programming implementation used include databases, mockups, use cases, and sequence diagrams. Implementation is carried out using the PHP programming language, Laravel 8 framework, Bootstrap, and DBever for database management. System testing uses the international standard model ISO/IEC 25010 which covers five aspects: functional suitability, usability, performance efficiency, maintainability, and reliability. The test results show that the functional suitability aspect reaches 100%, the usability aspect reaches 86.26% and is considered "decent", the performance efficiency aspect meets standards with a loading time of 1.8 seconds, the maintainability aspect reaches 100% and is considered very easy to maintain, as well as the reliability reaches 100% which indicates this system is very reliable. Based on test results, Gisbu is proven to be very helpful to schools and meets ISO/IEC 25010 quality standards.

Keyword: *GIS, ISO 25010, field Industrial practice.*