

INTISARI

Teknologi informasi memainkan peran krusial dalam transformasi pemerintahan di era globalisasi, terutama dalam layanan publik. Akses mudah ke internet di negara berkembang mempengaruhi interaksi sosial dan pelayanan publik, memicu upaya pemerintah untuk memanfaatkan teknologi informasi. Studi kasus di Kabupaten Jayawijaya menyoroti peran kunci Dinas Kependudukan dan Pencatatan Sipil (Disdukcapil) dalam mengelola proses bisnis Administrasi Kependudukan (Adminduk). Tantangan utama mencakup kurangnya integritas data dan proses bisnis antar unit pemerintah yang beroperasi secara terpisah. Solusi yang muncul adalah penerapan *Enterprise Resource Planning* (ERP) sumber terbuka (*open source* ERP) dengan fokus pada fleksibilitas, efisiensi, dan keamanan. Pentingnya metodologi *Object-Relational Mapping* (ORM) dalam *open source* ERP menjadi solusi integrasi dan manajemen data yang efektif.

Penelitian ini menghasilkan modul ORM untuk mendukung pelayanan publik dan administrasi di Disdukcapil Kabupaten Jayawijaya menggunakan open ERP. Modul mencakup Pengajuan Pelayanan Adminduk, Pengelolaan Administrasi Persuratan, dan Modul e-Kinerja Pegawai. Pengujian fungsionalitas dilakukan dengan metode *blackbox* (BVA dan ECP). Hasilnya, sebagian besar fitur Modul berfungsi baik, dengan 233 dari 256 kasus uji (91,2%) sesuai spesifikasi. Meskipun tanpa kasus uji yang gagal, terdapat 23 kasus (8,98%) dinyatakan cacat. Harapannya, penelitian ini kontributif untuk meningkatkan efektivitas dan efisiensi layanan publik dan administrasi di Kabupaten Jayawijaya.

Kata kunci -- *Open ERP, ORM, Odoo, blackbox testing, Boundary Value Analysis, Equivalence Class Partitioning*

ABSTRACT

Information technology plays a crucial role in the transformation of government in the era of globalization, especially in public services. Easy access to the Internet in developing countries influences social interactions and public services, fueling government efforts to utilize information technology. The case study in Jayawijaya Regency highlights the key role of the Population and Civil Registration Service (Disdukcapil) in managing Population Administration (Adminduk) business processes. Key challenges include a lack of data and business process integrity between government units operating separately. The solution that emerged was the implementation of open source Enterprise Resource Planning (ERP) with a focus on flexibility, efficiency, and security. The Object-Relational Mapping (ORM) methodology is important in open source ERP to become an effective integration and data management solution.

This research uses an ORM module to support public services and administration at the Jayawijaya Regency Dukcapil Office using open ERP. Modules include Submission of Administrative Services, Management of Mail Administration, and Employee e-Performance Module. Functionality testing uses the black box method (BVA and ECP). As a result, most Module features work well, with 233 of 256 test cases (91.2%) meeting specifications. Even though there were no failed test cases, there were 23 cases (8.98%) declared defective. The hope is that this research will contribute to increasing the effectiveness and efficiency of public and administrative services in Jayawijaya Regency.

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