



ABSTRAK

Perkembangan teknologi informasi mendorong instansi pemerintah untuk meningkatkan kualitas pelayanan melalui pemanfaatan aplikasi berbasis website. Dinas Kearsipan dan Perpustakaan Kota Palembang masih menghadapi kendala dalam pengolahan data buku, seperti pencatatan, pencarian data, transaksi peminjaman dan pengembalian, serta penyusunan laporan yang masih dilakukan secara kurang efektif. Penelitian ini bertujuan untuk merancang aplikasi pengolahan data buku berbasis website yang mampu membantu proses pengelolaan data secara lebih efektif, efisien, dan terkomputerisasi. Metode pengumpulan data yang digunakan meliputi observasi, wawancara, dan studi pustaka. Perancangan sistem dilakukan menggunakan Unified Modeling Language (UML), yang terdiri dari Use Case Diagram, Activity Diagram, Sequence Diagram, dan Class Diagram. Aplikasi dikembangkan menggunakan bahasa pemrograman PHP dengan database MySQL. Hasil penelitian menunjukkan bahwa aplikasi yang dirancang mampu membantu admin dalam mengelola data buku, data anggota, transaksi peminjaman, transaksi pengembalian, serta pembuatan laporan secara lebih cepat dan terintegrasi. Berdasarkan pengujian menggunakan metode Black Box Testing, seluruh fungsi aplikasi berjalan sesuai dengan kebutuhan. Dengan demikian, aplikasi ini diharapkan dapat meningkatkan efektivitas pengolahan data buku dan mendukung pelayanan pada Dinas Kearsipan dan Perpustakaan Kota Palembang.

Kata Kunci: Perancangan, Aplikasi Berbasis Website, Pengolahan Data Buku, Perpustakaan, UML.



ABSTRACT

The development of information technology has encouraged government institutions to improve the quality of public services through the implementation of website-based applications. The Department of Archives and Library of Palembang City still encounters several challenges in book data management, including data recording, data retrieval, borrowing and returning transactions, and report generation, which are not yet carried out efficiently. This study aims to design a website-based book data processing application that can support data management in a more effective, efficient, and computerized manner. The data collection methods employed in this study include observation, interviews, and literature review. The system was designed using the Unified Modeling Language (UML), consisting of Use Case Diagrams, Activity Diagrams, Sequence Diagrams, and Class Diagrams. The application was developed using the PHP programming language with MySQL as the database management system. The results indicate that the proposed application is capable of assisting administrators in managing book data, member data, borrowing transactions, returning transactions, and generating reports more quickly and in an integrated manner. Based on Black Box Testing, all application functions performed according to the specified requirements. Therefore, the application is expected to improve the effectiveness of book data management and support library services at the Department of Archives and Library of Palembang City.

Keywords: Design, Website-Based Application, Book Data Processing, Library, UML.