

ABSTRAK

Administrasi pembayaran tagihan dan keuangan siswa di SMK TRI ARGA 2 Jakarta Barat masih dilakukan secara manual menggunakan buku besar, arsip fisik, dan Microsoft Excel. Kondisi tersebut menyebabkan pencatatan transaksi belum optimal, meningkatkan risiko kehilangan data, kesalahan pencatatan nominal maupun status pembayaran, serta memperlambat penyusunan laporan keuangan. Penelitian ini bertujuan merancang Sistem Informasi Pembayaran Tagihan dan Administrasi Keuangan Siswa berbasis web untuk meningkatkan efektivitas pengelolaan data, ketepatan pencatatan, transparansi informasi, dan kemudahan akses bagi siswa, Tata Usaha, dan Kepala Sekolah. Pengembangan sistem menerapkan metode Waterfall yang meliputi pengumpulan data, analisis bisnis, analisis kebutuhan, perancangan, implementasi, pengujian, dan dokumentasi. Data diperoleh melalui observasi dan wawancara. Analisis bisnis dilakukan menggunakan Business Model Canvas, Customer Profile, Value Proposition, Customer Journey Map, dan Service Blueprint, sedangkan identifikasi permasalahan menggunakan metode PIECES. Sistem dimodelkan dengan Unified Modeling Language (UML), dibangun menggunakan PHP dan MySQL, serta diuji melalui Black Box Testing. Hasil penelitian menunjukkan bahwa sistem mampu mengintegrasikan pengelolaan pembayaran dan administrasi keuangan, mempercepat proses transaksi, mempermudah penyusunan laporan, serta meningkatkan ketepatan dan keamanan data.

Kata Kunci: Sistem Informasi Pembayaran Tagihan, Administrasi Keuangan Siswa, Analisis Bisnis, Waterfall, Black Box Testing, Air Terjun, Pengujian Kotak Hitam.

ABSTRACT

The student billing payment and financial administration process at SMK TRI ARGA 2 West Jakarta is still managed manually using ledgers, physical archives, and Microsoft Excel. This practice leads to inefficient transaction management, increases the risk of data loss, causes errors in recording payment amounts and payment status, and delays financial report preparation. This study aims to design a web-based Student Billing Payment and Financial Administration Information System to improve data management efficiency, recording accuracy, information transparency, and accessibility for students, administrative staff, and the school principal. The system was developed using the Waterfall method, consisting of data collection, business analysis, requirements analysis, system design, implementation, testing, and documentation. Data were collected through observation and interviews. Business analysis employed the Business Model Canvas, Customer Profile, Value Proposition, Customer Journey Map, and Service Blueprint, while problem identification was conducted using the PIECES framework. The system was modeled using Unified Modeling Language (UML), developed with PHP and MySQL, and evaluated through Black Box Testing. The results indicate that the proposed system integrates payment and financial administration processes, accelerates transaction management, simplifies financial reporting, and improves data accuracy and security.

Keywords: Student Billing Payment Information System, Student Financial Administration, Business Analysis, Waterfall, Black Box Testing.