

PERANCANGAN SISTEM BOOKING DAN BUSSINESS INTELLIGENCE DASHBOARD PADA PIXIE STUDIO BERBASIS WEB DENGAN METODE WATERFALL

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ABSTRAK

Proses pemesanan layanan fotografi, pencatatan transaksi, dan pemantauan progres pengeditan foto di Pixie Studio sebelumnya masih dilakukan secara manual melalui WhatsApp dan Microsoft Excel. Kondisi tersebut berpotensi menimbulkan keterlambatan layanan, inkonsistensi data, serta keterbatasan pemilik dalam mengevaluasi kinerja bisnis secara terukur. Penelitian ini bertujuan merancang dan membangun sistem informasi booking berbasis web yang terintegrasi dengan dashboard Business Intelligence guna mendukung efisiensi operasional dan pengambilan keputusan di Pixie Studio. Pengembangan sistem dilakukan menggunakan metode Waterfall yang meliputi tahapan analisis kebutuhan, perancangan, implementasi, pengujian, dan pemeliharaan. Sistem diimplementasikan menggunakan framework Laravel dan basis data MySQL, dilengkapi fitur pemesanan layanan secara daring, unggah bukti pembayaran, pemantauan progres pengeditan foto, dan pengelolaan jadwal. Sistem ini juga menerapkan proses ETL (Extract, Transform, Load) untuk mengolah data analitik menjadi Key Performance Indicator (KPI) pada dashboard Business Intelligence, yang menyajikan visualisasi tren pendapatan, layanan terlaris, periode operasional tersibuk, dan komposisi paket layanan. Hasil pengujian Black Box Testing menunjukkan bahwa seluruh fungsi sistem berjalan sesuai dengan kebutuhan pengguna. Pengujian User Acceptance Testing (UAT) membuktikan bahwa sistem diterima dengan sangat baik oleh pengguna akhir, dengan tingkat kepuasan Pelanggan sebesar 87,71%, Admin/PIC sebesar 94,00%, dan Owner sebesar 96,00%. Implementasi sistem ini diharapkan mampu meminimalisir kesalahan administrasi, meningkatkan kualitas layanan, serta menyediakan wawasan bisnis yang dinamis bagi manajemen Pixie Studio.

Kata Kunci : Sistem Informasi Booking, Business Intelligence, Performance Indicator, ETL, Waterfall, Laravel.

DESIGN OF A WEB-BASED BOOKING SYSTEM AND BUSINESS INTELLIGENCE DASHBOARD ON PIXIE STUDIO USING THE WATERFALL METHOD

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ABSTRACT

The processes of photography service booking, transaction recording, and photo editing progress monitoring at Pixie Studio were previously conducted manually through WhatsApp and Microsoft Excel. Such practices may lead to service delays, data inconsistencies, and limited managerial insight into evaluating measurable business performance. This study aims to design and develop a web-based booking information system integrated with a Business Intelligence dashboard to enhance operational efficiency and support decision-making at Pixie Studio. The system was developed using the Waterfall methodology, encompassing requirements analysis, system design, implementation, testing, and maintenance. Implemented using the Laravel framework and MySQL database, the system provides functionalities for online service booking, down payment proof submission, photo editing progress tracking, and schedule management. The system also applies the ETL (Extract, Transform, Load) process to transform analytical data into Key Performance Indicators (KPIs) on the Business Intelligence dashboard, presenting visualizations of revenue trends, best-selling services, peak operating periods, and service package composition. Black Box Testing results indicate that all system functions operate according to user requirements. User Acceptance Testing (UAT) proves that the system is exceptionally well-received by end users, achieving satisfaction rates of 87.71% from Customers, 94.00% from Admin/PIC, and 96.00% from the Owner. The implementation of this system is expected to minimize administrative errors, enhance service quality, and provide dynamic business insights for Pixie Studio's management.

Kata Kunci : Booking Information System, Business Intelligence, Key Performance Indicator, ETL, Waterfall, Laravel.