

ABSTRAK

Industri manufaktur pakaian memerlukan pengelolaan proses operasional yang terintegrasi karena setiap aktivitas, mulai dari penerimaan pesanan hingga produksi, memiliki keterkaitan satu sama lain. Namun demikian, sebagian perusahaan masih menjalankan proses tersebut secara manual sehingga pencatatan data belum terpusat, kebutuhan bahan baku belum dihitung secara optimal, dan risiko kelebihan pembelian bahan baku (*over-ordering*) masih sering terjadi. Kondisi tersebut dialami oleh CV. Bumiputera Persada Industri. Penelitian ini bertujuan mengidentifikasi kebutuhan sistem sekaligus menyusun rancangan sistem manajemen produksi berbasis website yang mampu mengintegrasikan pengelolaan pesanan, perhitungan kebutuhan bahan baku, persediaan, dan aktivitas produksi. Proses pengembangan sistem menerapkan metode Rapid Application Development (RAD) dengan implementasi menggunakan Laravel 12, PHP, dan MySQL. Kualitas sistem dievaluasi melalui *Black Box Testing* dan *User Acceptance Testing* (UAT). Hasil penelitian menunjukkan bahwa sistem yang dirancang mampu mengintegrasikan proses bisnis perusahaan, menghitung kebutuhan bahan baku berdasarkan Bill of Materials (BOM) dan ketersediaan stok, mengelola persediaan, serta mendukung proses produksi secara terpadu. Penerapan sistem juga membantu perusahaan memperoleh informasi kebutuhan pembelian bahan baku secara lebih akurat, mengurangi potensi *over-ordering*, serta meningkatkan efektivitas pengelolaan data dan penyampaian informasi kepada setiap pengguna sesuai dengan perannya.

Kata Kunci : Manufaktur Pakaian, Manajemen Produksi, Bill of Materials, Rapid Application Development, Website.

ABSTRACT

The garment manufacturing industry requires integrated operational management since every business activity, ranging from order processing to production, is closely interconnected. Nevertheless, many companies continue to manage these activities manually, causing data to remain fragmented, raw material requirements to be calculated less effectively, and the risk of raw material over-ordering to increase. These challenges are encountered by CV. Bumiputera Persada Industri. This study focuses on identifying system requirements and designing a web-based production management system capable of integrating order processing, raw material requirement calculation, inventory management, and production operations. The system was developed following the Rapid Application Development (RAD) methodology and implemented using Laravel 12, PHP, and MySQL. System quality was assessed through Black Box Testing and User Acceptance Testing (UAT). The findings indicate that the developed system successfully integrates the company's operational processes, including order management, raw material requirement calculation based on the Bill of Materials (BOM) and available inventory, inventory management, and production activities. Furthermore, the system enables the company to identify raw material purchasing requirements more precisely, reduce the likelihood of over-ordering, and enhance the efficiency of data management and information delivery for users according to their respective responsibilities.

Keywords : *Garment Manufacturing, Production Management, Bill of Materials, Rapid Application Development, Website.*