

Shop Central – Smart Business Management System

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Abstract: *The rapid expansion of the retail sector necessitates scalable and integrated digital management systems, particularly for small and medium-sized enterprises that often rely on manual processes or fragmented software solutions, leading to inventory inconsistencies, billing inefficiencies, and limited analytical visibility. This paper presents ShopCentral, a smart business management system designed to streamline retail operations through a modular, layered client-server architecture integrating inventory management, point-of-sale processing, customer relationship management, employee access control, and automated reporting within a unified platform. The system employs a normalized relational database structure to ensure data integrity and real-time synchronization between transactional and inventory modules. Experimental evaluation conducted in a simulated retail environment demonstrates improved transaction processing efficiency, enhanced inventory accuracy, reduced data redundancy, and stable multi-user performance under concurrent operations. Comparative analysis with traditional manual systems and standalone POS solutions further validates the operational advantages of the proposed system. The results confirm that ShopCentral provides a cost-effective, scalable, and reliable solution for modern retail management, supporting digital transformation in small and medium-scale retail enterprises.*

Keywords: Retail Management System, Point of Sale (POS), Inventory Management, Web Application, Database System

