ABSTRACT

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This study aims to develop a Cloud-Based Inventory Management System with QR Code integration for the Supplies Office at Cavite State University-Imus, focusing on enhancing efficiency and accessibility. The current manual inventory management system faces significant challenges, including inefficiencies in tracking supplies, lack of accessibility to real-time inventory data, absence of standardised tracking methods, and security concerns. By implementing a cloud-based system with QR code technology, the study seeks to streamline inventory management processes, provide real-time access to inventory data, standardise tracking methods, and enhance data security.

The proposed system includes modules for account management, inventory tracking, borrowing, and returning processes, facilities reservation, reporting, and notifications. These modules aim to automate processes, provide real-time information, and simplify administrative tasks for both staff and borrowers. The development process follows an iterative approach, ensuring that the system meets functional requirements and effectively addresses operational challenges.

To support the system's implementation, comprehensive user training is provided, encompassing workshops, hands-on sessions, and various training materials to ensure users are proficient in utilising the system. This study highlights the potential of cloud-based technology and QR code integration to significantly improve inventory management in educational institutions, thereby enhancing operational efficiency and data accessibility.

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CLOUD-BASED INVENTORY MANAGEMENT SYSTEM WITH QR CODE FOR SUPPLIES OFFICE IN CAVITE STATE UNIVERSITY- IMUS: ENHANCING EFFICIENCY AND ACCESSIBILITY

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INTRODUCTION

Cloud-based inventory management systems integrated with QR code technology have revolutionised the way businesses handle their inventory. These systems allow real-time tracking of stock levels and streamline operations by providing instant access to inventory data from anywhere. According to a study by Veeqo, implementing QR codes in inventory management not only enhances accuracy but also boosts efficiency significantly (Veeqo, n.d.). By scanning QR codes, personnel can update inventory statuses, track items through the supply chain, and manage stock levels seamlessly. This integration not only reduces human error but also improves overall inventory visibility, empowering businesses to make informed decisions swiftly and optimise their supply chain management processes.

In today's digital age, efficient management of resources and assets is crucial for educational institutions to streamline operations and enhance productivity. Cavite State, particularly its Department of Computer Studies, faces challenges in managing its inventory of supplies effectively. The current manual inventory management system relies on traditional methods, such as log sheets for borrowing equipment,

which are prone to inefficiencies and inaccuracies. These challenges include delays in tracking and managing supplies, difficulty in accessing real-time inventory data, and inconsistencies in inventory records due to the absence of standardized tracking methods

By implementing a Cloud-Based Inventory Management System with QR Code for Supplies Office in Cavite State University-Imus aims to enhance efficiency and accessibility in managing its inventory of supplies. This system will automate inventory processes, simplify assigning and requesting procedures, improve transparency in supply chain operations, and enhance security measures to safeguard inventory data. Moreover, it will empower stakeholders within the Department of Computer Studies with tools to make informed decisions, allocate resources effectively, and ensure a conducive learning environment.

Overall, this study seeks to contribute to the advancement of inventory management practices within educational institutions by leveraging cloud computing and QR code technology. The insights gained from this implementation will not only benefit Cavite State University-Imus but also serve as a benchmark for other academic institutions looking to enhance their operational efficiency and resource management capabilities.