

6COSC023C – Final Project Report



**(Web application to keep track of the lorries and individuals
entering warehousing premises)**

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This report is submitted in partial fulfillment of the
requirements for the

BSc (Hons) Business Information Systems

at the University of Westminster

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Date 21/05/2022

Abstract

Most large-scale companies that deal with regular processes of manufacturing, importing and exporting possess warehouse spaces that consist of multiple units per location. The surface area of an average land used for a warehousing complex such as this, usually starts from 2 acres (87120sq) and even on an average day a large number of trucks travel in and out of the premise in order to move goods through the supply chain. This number heavily depends on the demand of the market at the current times, meaning it skyrockets during the special seasons of the respective industry. Depending on the nature of the industry, the frequency and other factors related to the usage of the warehouse facility changes vastly. With the vast number of individuals involved in these operations, the question on the safety and security of both assets that are stocked in the warehouses (large iron pillars, cement bags, sales items etc.) and goods transported by the vehicles arises. As of now, the lack of surveillance at a granular level, weaknesses in manual recording systems such as human errors and human involvement that can be influenced both externally and internally in surveillance are found to be major vulnerabilities that cause theft at these sites. Furthermore, with the rise of the COVID-19 pandemic, all these said locations are pushed to use mechanisms that ensure continuous recordings on the arrivals and departures of the individuals. The aim of this project is to address these issues by finding the gaps and room for improvement in the existing manual system and providing a system that cannot be lied to. Since this was a solution given during the pandemic, and the target market is the warehouse complexes situated in Sri Lanka, it was crucial to find a method to keep track that was cheap, easy to use for even non-tech-savvy users and favorable for target application. To achieve this, in depth research was conducted on the domain to ensure all the requirements and technical know-how were captured and the designed solution was thoroughly tested by technical and domain experts to get valuable insights to redefine and refine the solution further. Through these rounds of development and the utilization of the proper agile methodologies, a solution was provided in which theft could be minimized drastically and a system that keeps records of the external individuals that enter the warehousing premises.

Keywords: QR, Surveillance, Warehousing, Web development, Java, UI/UX