



Sri Lanka Institute of Information Technology

Information Technology Project

Year2, Semester 2 - 2022

Project Charter

Title of the Project:	Factory management system - Lanka MountCastle (Pvt) Ltd	
Batch:	Batch 2.2	Group No: WD_B02_ITP_14
Development Technology:	MERN stack (MongoDB, Express, React, NodeJS)	
Client:	Lanka MountCastle (Pvt) Ltd, No.124, Hendala, Wattala	

Description of the Project:

Lanka MountCastle (Pvt) Ltd. is a company that specializes in providing a wide range of embroidery and garments embellishment services to the Sri Lankan apparel industry. They provide both customized and non-customized garments to their customers. The client has requested a web application, which uses an internet platform that will provide an integrated and automated system with easy accessibility that aids in regulating the business operations with minimum complications. This web application contains eight main business functions namely Stock management, Sales management, Employee and Salary management, Production management, Machinery and maintenance management, Supplier management, Transport management, and Financial management.

The stock management system manages all the inventories in the business such as raw materials provided by suppliers or customers for orders, work in progress, and finished goods. Production management acts as a work in progress between stock management and sales management. The primary role of machinery management is the machinery utilization for optimum output while maintenance management ensures the maintenance of the company's assets. Financial Management is a report generation tool to find the profits, losses, capital values, debts, or credits of the company. The system's primary deliverables would be summarized management reports, stock utilization and current stocks reports, Raw material purchase reports, maintenance records, performance reports, and record monitoring from various user views and a secure system.

The client is currently using a segregated manual system that provides little to no automation in the business processes which has resulted in inefficient and ineffective business practices within the company ultimately leading to a negative effect on the finances of the business. The client is hoping to increase the business productivity and improve the company's financial status by using the proposed new system. The proposed system will help to improve the efficiency of the factory, by simplifying the workload and minimizing losses and disruption to the production process. This system will allow the smooth management of the core business aspects by allowing easy administering and monitoring of tasks. This system can ensure the efficient management of the business while achieving its financial goals and future success.

Details of the Group Members: *(Provide the details of the group leader in the first row)*

	Surname with initials	Registration Number	Contact Phone Number	Email
1.	Perera M.D.M.R	IT21003028	0770080945	it21003028@my.sliit.lk
2.	Samarasinghe D.S	IT21003332	0767192683	it21003332@my.sliit.lk



Sri Lanka Institute of Information Technology
Information Technology Project
Year2, Semester 2 - 2022

3.	Bishirhafi F.S.M.T	IT21006166	0741312573	it21006166@my.sliit.lk
4.	Serasinghe C.M	IT21004322	0765505582	it21004322@my.sliit.lk
5.	Weerawarna N.V	IT21110948	0764441458	it21110948@my.sliit.lk
6.	Vidanage D.S.D	IT21128868	0704068024	it21128868@my.sliit.lk
7.	Dissanayake D.M.J.C.B	IT21151392	0769392692	it21151392@my.sliit.lk
8.	Lekamge L.R.S.T	IT20159030	0717757504	it20159030@my.sliit.lk

List of Functions Developed by the Group Members:

	Name with Initials	Brief Description of the Function
1.	Perera M.D.M.R	Financial Management - The primary role of financial management is to manage money and risk in a way that helps to achieve financial goals. The function includes all the Staff Salary, Supplier payments, Income from Customers, Government Tax, and keeping digital ledgers and other digital documents up to date. Financial Dept will be the final destination of all functions, where any flow of money within the company is concerned. This includes providing financial reports and interpreting financial data to advise the management staff on taking future action, with multiple graphs and tables as required.
2.	Samarasinghe D.S	Production Management - Production Management takes reports from Sales and Stock Management to determine the timeframe and production quantity according to the demand set from previous sales records. In addition, production could occur daily, or all at once, which is determined by the concurrent sales demand. The system works by reporting the efficiency and effectiveness of the allocation and output of the resources, which are ultimately documented as reports for the optimization track. The system keeps track of ongoing production quantities and passes details about finished goods and received materials from the sales department and purchasing department, respectively.
3.	Bishirhafi F.S.M.T	Stock Management - This system tracks the movement of inventories such as raw materials, work in progress, and finished goods. It records materials provided by customers for orders and materials purchased, date, quantity, reorder level, damaged stock, and stock valuation method. Stock levels are updated when inventories are received or utilized in production. Inventory planning can become more efficient by comparing the available stock with the reorder level to identify if there is sufficient stock for production and to ensure there is no disruption in production, and if stock levels are identified to be low, the purchases department can be notified. The system also generates reports on stock utilization, current stocks, completed products, and reorder level, which can be shown as tables or charts.



Sri Lanka Institute of Information Technology
Information Technology Project
Year2, Semester 2 - 2022

4.	Serasinghe C.M	Machinery and Maintenance management - This system allows the Administrative to manage the machine details on repairs and replacements, ownerships, renewal dates and schedules, depreciation, and new purchases. It should maintain a net book value for the depreciation and maintenance costs and should be able to update the costs, dates, and schedules when needed. The records in the database can be deleted when machines are damaged or disposed of. It will feature a fault index with typical breakdowns and steps that should be taken to fix the problems to keep track of all maintenance activities including building, vehicles, machinery, AC, generators, and compressors. Should be able to generate monthly reports on the updates and search for the machine details.
5.	Weerawarna N.V	Transport Management - All of the staff, workers, and goods transportation is managed here. The system works closely with Production management to schedule dispatches of finished products. Transportation is based on details such as destination address, date, time of dispatch, and estimated time of transport. The system checks the status of the finished products and updates the transport details. The system assigns drivers to vehicles and notifies delivery staff about transportation details. System documents reports including transport details and overall cost for the transportation, delivery time reports, and expense reports for vehicle services and repairs.
6.	Vidanage D.S.D	Supplier Management - The supplier management system maintains a database that includes supplier information, their products, lead times, and order capacity. The system takes details of the required stock from the stock management system and decides the suitable supplier by a supplier selection algorithm. For new products, the system can add new suppliers to the database by taking material requirements from the production management system. The system generates the purchase order and sends it to the selected supplier. The system directs the proforma invoice received from the supplier to the financial management system for payment. The system sends AOD received from the supplier to the stock management system.
7.	Dissanayake D.M.J.C.B	Sales Management - Manages all the orders coming to the business. The system allows to place orders and calculate the feasibility of the order. The system notifies the production management about the new orders and notifies customers about the finished production. The system generates monthly sales forecasts for each type of product which helps to guide and grow sales in the future and generates reports to keep track of the loyal customers.
8.	Lekamge L.R.S.T	Employee and Salary Management - All of the employee details are managed using this sub-system. This includes managing employees' details, attendance and leaves, medical insurance information, and other facilities. Employee salaries, OT rates, salary deductions, advance payments, and loans obtained by employees are also managed using this system. The system generates reports based on the employees' performance and attendance. The reports generated by this system can be used by production management, transport management, and finance management.



Sri Lanka Institute of Information Technology
Information Technology Project
Year2, Semester 2 - 2022
