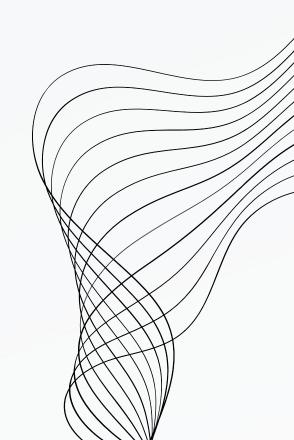




INVENTORY MANAGEMENT SYSTEM

PRESENTED BY GROUP NOTHING



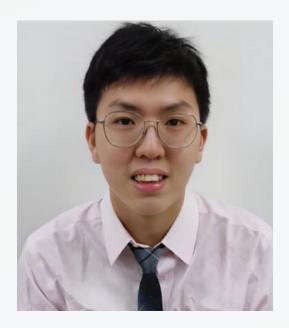
ABOUT US



GOH JING YANG



LOO JIA CHANG



LOW JIE SHENG

OBJECTIVES

The objective of this project is to develop a Warehouse Inventory Management System using the different concepts of data structure algorithms in C++. The system is designed to efficiently manage and perform operations on a collection of goods/items within the warehouse. The program employs a queueing algorithm to store and manipulate the data related to goods, providing functionalities such as importing items from a file, adding new items, removing items, displaying the inventory, and a stack algorithm for printing a history of actions.

- 1. FIFO inventory storing algorithm
- 2. Neat and Creative Output:
- 3. Data Hiding and Encapsulation:
- 4. History Tracking:
- 5.User Interaction:
- 6. File Operations:

This project aims to demonstrate effective implementation of linked lists, encapsulation, user interface design, and file operations in a practical application of Warehouse Inventory Management.

SYNOPSIS

The Inventory Management System efficiently handles the tracking and operations of a warehouse's product collection. It enables users to manage inventory items from import to distribution, utilizing an intuitive interface. The system employs a queue for item management and a stack for transaction history. Each item is represented as an object with distinct properties, ensuring clear identification. The transaction history feature allows for easy auditing and reporting of stock changes. Overall, the system aims to streamline warehouse operations, minimize inventory errors, and provide quick access to item and transaction data, making it a valuable tool for inventory-dependent businesses.



historyStack

- top : historyNodeStack*
- bottom : historyNodeStack*
- int : size
- + createStack(): void
- + isEmpty(): bool
- + push(goods item, char action): void
- + pop(): void
- + getAction() : char
- + getItem(): goods

goods : item

+ action : char

historyNodeStack

+ next : historyNodeStack*

goods

- id: int
- name : string
- price : double
- itemLocation : string
- + goods (id : int, name : string, price : double, itemLocation : string)
- + getId(): int
- + getName() : string
- + getPrice() : double
- + getItemLocation() : string

itemNodeQueue

- + goods : item
- + next : itemNodeQueue*
- + prev : itemNodeQueue*

itemQueue

- front : itemNodeQueue*
- rear : itemNodeQueue*
- size : int
- + createQueue() : void
- + isEmpty() : bool
- + enqueue(goods item) : void
- + dequeue(): void
- + getItem(): goods
- + display(): void



DESIGN DESCRIPTION

Data Structure used : Stack:

Application: The Stack is used to store the history tracks of the action. The first in last out (FILO) concept allows easy access to the most recent action, hence the data of actions printed in the history.txt files will be sorted from the most recent actions to the oldest actions

Queue:

Application: The queue is used to store the goods in the system. The first in first out (FIFO) concept ensures that the oldest items in the inventory are the first to be used or shipped. This helps in rotating stock efficiently, preventing perishable goods from expiring or becoming obsolete. It's particularly important for industries where products have a limited shelf life.

In the main function, a while loop is used to run the system the user can quit the system by exit, when the user exits the system the data of the system will be stored inside the output file "output.csv" and "history,txt"

CODE SHARING SESSION



THANK'S FOR WATCHING

