# Departmental Store Management System

The Departmental Store Management System is a program designed to manage the inventory of a departmental store. It allows users to perform various operations such as inserting items, displaying items, removing items, updating items, and checking the status of shelves.

# Features

- **Inserting an Item**: Users can insert items into specific shelves and positions within those shelves.

- **Displaying All Items:** Users can view all the items present on a particular shelf.

- **Removing an Item:** Users can remove a specific item from a particular shelf and position.

- **Removing All Items:** Users can remove all the items from all shelves.

- **Total Number of Items in a Shelf:** Users can find out the total number of items present on a specific shelf.

- **Total Number of Items in All Shelves:** Users can find out the total number of items present across all shelves.

- **Finding an Item:** Users can search for a specific item across all shelves.

- **Updating an Item:** Users can update the details of a specific item present on a particular shelf and position.

- **Checking if Shelf is Empty:** Users can check whether a particular shelf is empty.

- **Checking if Shelf is Full:** Users can check whether a particular shelf is full.

# Functions

- insert_item
- display_item
- remove_item
- remove_allitem
- total_item
- total_allitem
- find_item
- update_item
- empty_shelf
- full_shelf
- compareArrays

# 3D Array (char*** shelves)

Represents the shelves and positions in the departmental store.

Dimensions: k shelves, each with p positions, and each position storing a character array of size c.

Dynamically allocated using new.

# Key Concepts Used

- o Dynamic Memory Allocation
- o 3d Array
- o Array of Pointers
- o Pointer Arithmetic
- o String Manipulation
- o Looping Constructs
- o User Input Handling
- o Conditional Statements

# Instructions for Use

- **Running the Program:** Compile and run the program using a C++ compiler.

- **Menu Navigation:** Follow the menu prompts to choose an operation.

- **Input Instructions:** Provide the necessary input for each operation as prompted.

- **Viewing Results:** Results of operations will be displayed on the console.