

Informal Description of the Stock Control System

Overview

The Stock Control System is designed to let a retailer in a small retail unit track his/her stock as it is sold and restocked. It tracks the retail price of each stock item, together with the count of each item held. As items are sold, it automatically decrements the stock item count. When the retailer requests, the system can list those items that are below their threshold stock levels, together with the supplier details for each stock item that needs reordering. The system comprises a single checkout/till with a bar code reader build into it in the shop and a computer system with a console that is kept in a secure part of the retail unit.

Information held

The system should keep track of the following information for each item of stock: the item's name, its bar code number, the current stock levels, the threshold number below which re-ordering is suggested, and its retail price. Each item has the details of one preferred supplier held: the supplier's phone number, name, address, and ZIP code. The system is also responsible for keeping track of items scanned at the checkout as part of a customer's sale or return of goods.

Item and supplier details should be remembered even when the system is turned off. By contrast, the details of a particular set of items being tallied at the till are captured during the scanning and sale of those items to a customer but only remembered until a checkout balancing operation takes place at the end of the working day.

System check out functionality

When a customer wishes to purchase some items, they are bar code scanned at the till by the checkout operator. As each stock item is recognized from its bar code, the till (beeps and) displays the item's name and price. As a customer's goods are tallied up at the till, the system remembers the items purchased and uses this record to print the detailed till receipt when the <Total> key is pressed at the check out. (Pressing this key also causes the till drawer to open so that cash can change hands.) (The decrement of stock levels of each item does not take place until the checkout operator has completed the sale at the till by closing the till drawer -- in this project, the decrement of stock levels take place when the <Total> key is pressed)

At the end of a working day or shift, the checkout operator can balance the till. The <Balance> key is press to begin this operation. The till drawer is opened by the key press, and the complete list of detailed till receipts for the transactions since the <Clear> key was

pressed last time is printed at the till. This is followed by the total amount by which the money in the till should have changed.

System stock-tracking function

Stock levels of items will drop below the retailer-specified thresholds for items as they are sold. When requested by the retailer in the system's main display on the console, the system can display these items' details, together with their current supplier details. The retailer can select an item from the list of items in the reordering display and request that an order be generated. The retailer is prompted for the number/amount of that item; then, the system displays an order to the current preferred supplier. The retailer is responsible for mailing the printed order.

Periodically the retailer may need to see a full inventory of stock. Requesting a display of a complete list of the stock item details does this. The retailer can also display a list of outstanding orders.

When replacement stock arrives from a supplier, the retailer needs to update the system with the new stock levels of the items that have arrived. If these items were on order, the outstanding order record is deleted.

Notes:

This problem is from an exercise problem for Learning Tree International course 323. The goal program was designed and implemented by Masaaki Mizuno