

1. The following narrative describes the procedure carried out by the clerical staff in the stock room of an electrical parts distributor.

When an order is received from the sales department, each item on the order is checked to see if it can be met from current inventory. If sufficient inventory is held, the clerk adjusts the stock records and passes the item for picking and dispatch. Each time the stock records are changed, the new inventory level is compared to the safe reorder level which is marked in the stock item card. If the new inventory level is below the safe reorder level, the clerk writes a purchase order form, notes the quantity ordered on the stock item card and passes the purchase order form to the store manager who is the deciding authority, for approval and dispatch to the supplier.

If there is some inventory, but not enough to fill the order, the clerk dispatches the item available, adjusts the stock records and creates a purchase order for the required amount. The purchase order is filed in item code order. If the item has been ordered previously, the clerk sends a notice to the store manager to enquire about the ordered items. If the item is not on order, a purchase order is prepared. If the item is completely out of stock a purchase order is created and filed in item code order and the clerk sends a notice to the store manager, whether or not the item is already on order.

- a) Draw a DFD to show the data flow of this process.
 - b) Perform transform analysis and get a structure chart
2. The business of BM (Books by Mail) corporation is to act as a book jobber. It receives orders for the books to appropriate publishers at a discount; fills the order, on receipt of the books from the publisher. Bills are produced by the computer from the forms filled by BM corporation for payments to publishers and payments received from customers. Since business is running at about 1000 invoices / bills per day, BM requires a new system to upgrade its business.
 - a) Arrive at a logical model of this scenario using DFD.
 - b) Perform transform analysis and get a structure chart