# DBMS Report

## User Guide

The program starts asking the user to login either as an administrator or a customer in the Retail Store System. If the user is an Admin, they are authenticated using a username and password. Both the customer and the admin will be able to access the records of the branch they are registered in.

Admin can perform the following functions:
1)View the available products at their branch.
2)Add a product to their branch. It may or may not be available at other branches.
3)Alter the quantity of a product available at the branch warehouse. This may be used when a new stock is brought in or the products are sold from some other outlet as well.
4)Change the password they have to use for authentication.
5)Reward coupons to the customers either randomly or on the basis of the maximum number of orders.
6)Add a new customer to the branch.
7)View the sales performance and statistics of the branch.

Customer can perform the following functions:
1)View the available products at their branch.
2)View the contents of their current cart.
3)Add a product to their cart with the quantity they want to specify.
4)Alter the quantity of or remove the products present in their cart currently.
5)Place their final order. The contents of the entire cart will be ordered on the behalf of the user, but they have been given multiple opportunities to change the contents before that. A warning is displayed before the order is placed as well. The coupon available to them which offers the maximum discount will automatically be applied on the order and a receipt will be generated.
6)View all the coupons available to them.

The tables that have been used in the database are as follows:
**Admin :** Details of admins of various branches (Branch and Admin have a one-one relationship)
User_id
Username
Pass_word
Pincode

**Available :** Available products at a particular branch
Pincode
Product_id
Quantity

**Branch :** Names of branches of a pincode which will be used as a foreign key in other tables
Area
Pincode

**Cart :** Contents of carts of all the customers
User_ID
Product_ID
Quantity

**Coupon :** (Order_id and order_date are set to null until the coupon is availed)
Coupon_ID
Min_Order_Amt
Valid_Until_Date
Discount_Offered
Date_Of_Issue
Order_id
Order_date
user_id

**Customer :** Customers' details
User_ID
Name
Contact_no
Total_no_of_orders
pincode

**Orders :** Description of the orders placed
Order_id
Order_date
Total_price
Delivery_date
Pincode
user_id

**Product :** Description of the products available at all the branches
Product_id
Product_name
Price

**Products_In_Order :** Description of the products in the orders in queue
Order_id
User_id
Product_id
quantity

# Transactions

T1: Admin A changes quantity of available products at a branch

T2: Customer C checks whether products in cart of C are available at the nearest branch and then proceed with the order by making an entry in the order table, emptying cart and deleting items from the available list.

## T1

**Read(Available):** Read quantity from available

**Input:** Take input from user

**Write(Available):** Write new quantity into available

## T2

**Read(Cart):** Read quantity from cart

**Read(Available):** Reads quantity in available

**Check:** Compare quantity in both tables

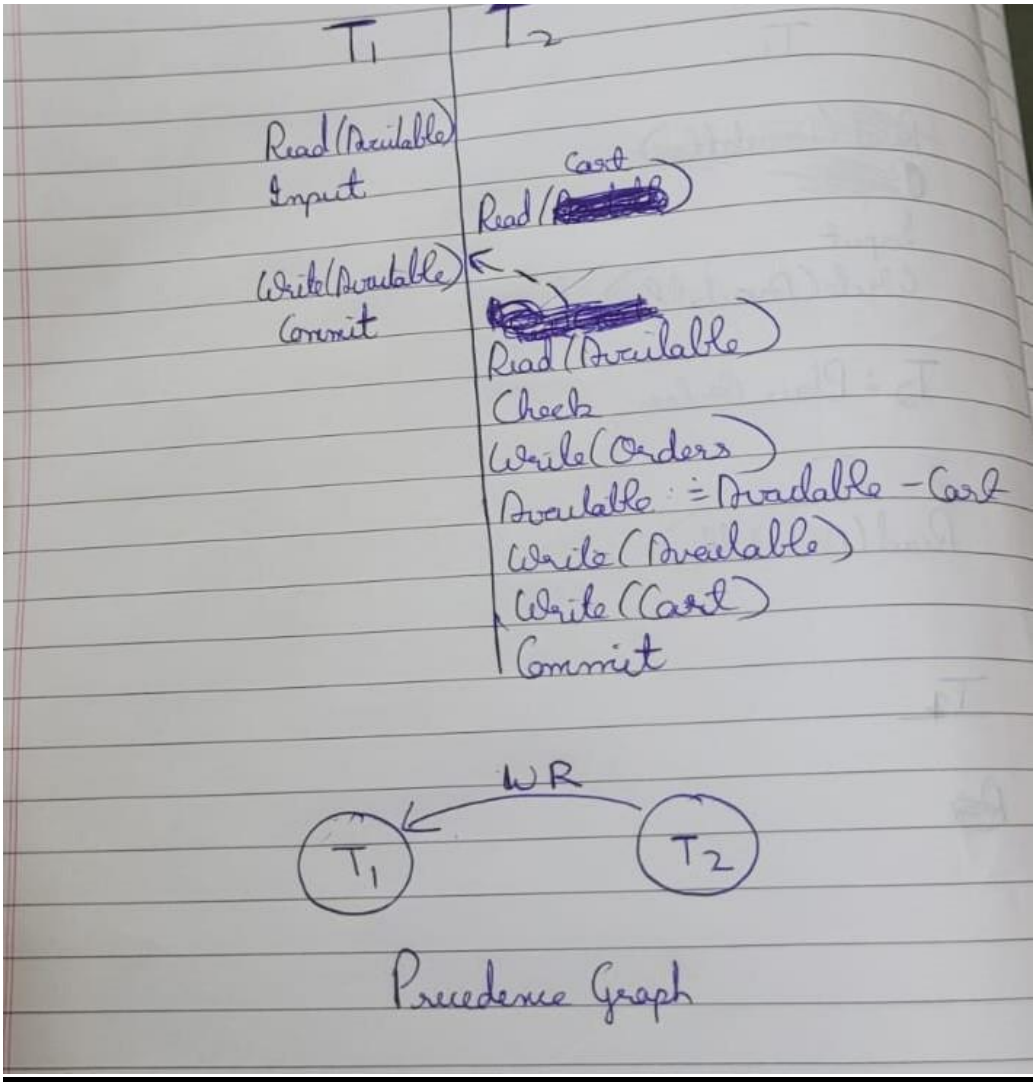
**Write(Orders):** Create new order entry in orders

**Available :**= Available - Cart

**Write(Available):** Updates available table

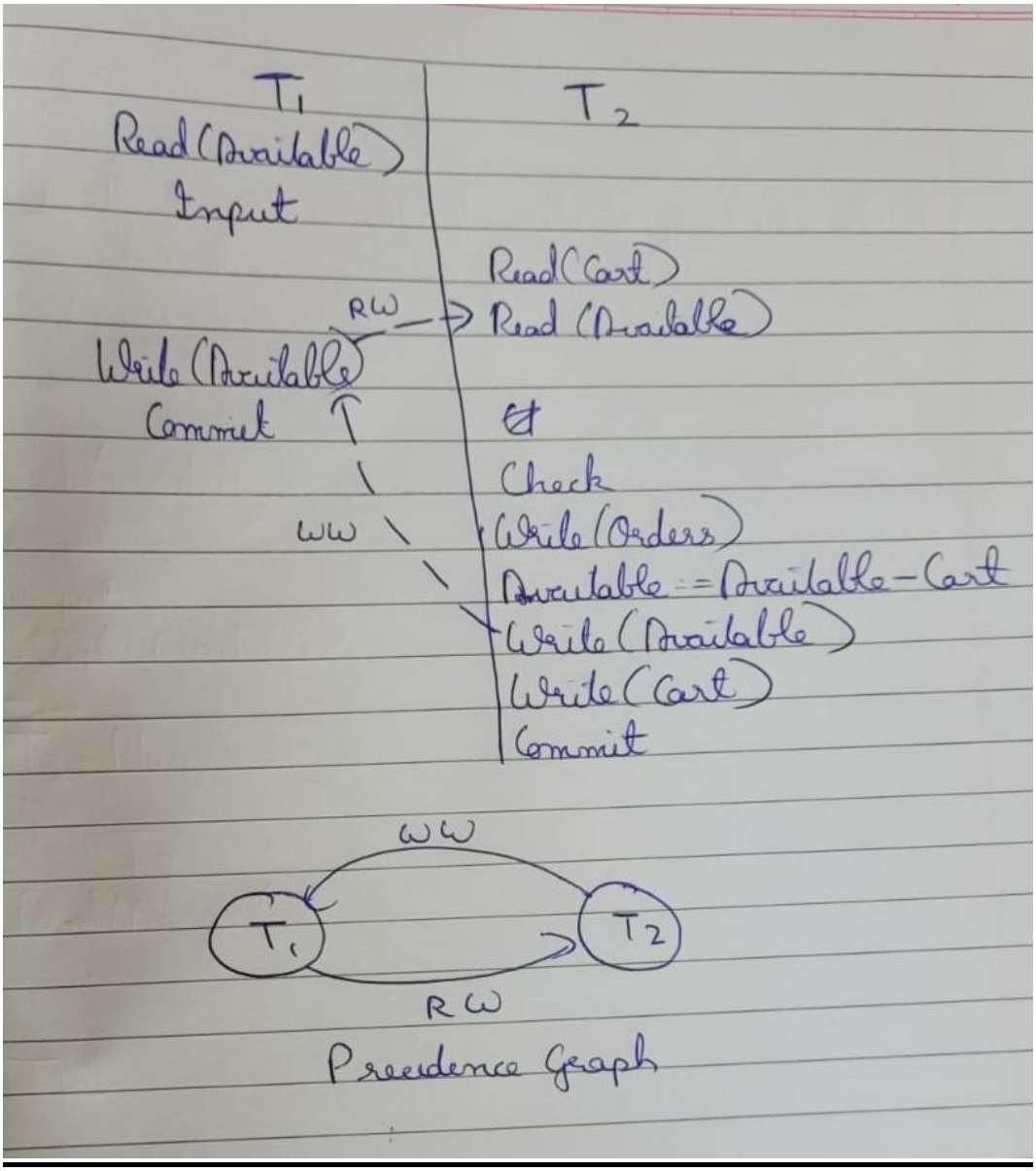
**Write(Cart):** Empties cart

## Conflict Serializable Schedule




Since in the precedence graph, no cycle is formed. Hence, we can say that this schedule is confict serializable.

# Non-Conflict Serializable Transaction




In the precedence graph, cycle is formed. Hence, we can say that this schedule is not-confict serializable.

We can reduce the non-conflicting schedule