

This is a server-client based project where the server is Admin and the user is the client. There communication between the user and admin should happen using socket programming.

The code should be done in the C programming language.

**Menu:**

1. Admin
2. User

**Admin:**

1. Add/Del a product
  2. Update the quantity/price of an existing product
- When the update is finished and the admin exits, generate a log file which contains all the details about the stock levels, products available etc.

**User:**

- Display all the products in the format: P\_ID, P\_Name, Cost
- Also display the Cart.
- Ask the user to Choose a product and quantity to add into the cart.
- Also give the user the option to edit the cart.

**Note:** Each user should be able to buy multiple products.

- After the user finishes adding all the required items into the cart, he/she should be navigated to the payment menu with all the products in the cart and the total amount payable.
  - You can just ask the user to enter the amount into the terminal as payment.
  - When the payment is done, generate a log file(receipt).
- Locks should be implemented when the user enters the payment gateway or the admin is accessing a product.
- Lock should be implemented on the products in the cart and the product updated by the admin.

**You need to submit a report with a detailed explanation.**

**Note: These are the minimum functionalities we expect. You are more than welcome to include more cases and functionalities.**