

Computer Networks

REPORT



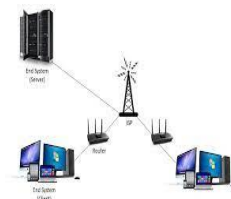
Assignment# 02

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Agenda

The main purpose behind the assignment is to deal with multiple client using fork and to handle the inter client dependency. Means one client goal depends upon the results of other client. Like card reading & pin verification are dependent on each other.

Scenario

There are 3 clients and each client need to achieve different goal. The goal of clients are inter dependent like one client do the task until the pre-requisite task has also been done. Server has to initiate the process of Atm transaction. When server started it assign three random numbers to three clients. The three numbers are 1 for card reading, 2 enter pin and 3 for transaction. Once the tasks are assigned to all the three clients. The server will ask user to enter the choice base on the menu items, and server receive the signal and need to accomplish that task and response back to him. After, that the server will ask the required information from client to accomplish the task.

Solution & Strategies

In this section we will describe the technical aspects that how we have achieve this solution. It includes the following:

- **Random Number Generation & Assignment**

On server side we are generating the 3 random number to achieve 3 different tasks as per requirement.

Like 1 for card reading, 2 for pin versification. etc.

These numbers are then assigned to clients randomly.

- **Menu**

Server makes a menu for the requied tasks and show it to the user when receive the request.

Task Inter-dependency

- **User input**

User input the number based on menu and send it to the client.

- **Server input working**

Server checks that what client wants to achieve according to menu and view the numbers on the assignment i-e section above.

- **Task Inter-dependency**

This is the main issue to be handled that one client goal depends upon the other goal and vice versa. As there is inter task dependency so client check that if required goal need the other goal

to achieve first so it call the appropriate client for example for pin verification card should be read first.

- **Card Reading**

User by entering 1 ,card reading client will be called and client will take user name and password from the user and write it to a file named as Account.txt.

- **Pin Verification**

In order to verify the pin server allow the user to enter the password & then read it from the file to match if the given password is correct or not. There is actually a file which contains the passwords for user.

Incase the password does not match then client sends the message to server that the password is invalid and allow the client to re-enter it & there are fixed numbers to allow re-enter if the client enter wrong all the time then server stops the receiving that client and then send proper message to the client who want to read the card.

- **Transaction**

When the user enter 3,then server send the message to the client who is responsible for transactions.Client will first check if task 2 has completed or not.if task 2 is not completed it show the error and send 0 to the server. If task 2 is completed then it allow user to enter the amount to withdraw.It will show error if the entered amount is greater than 25000 or current balance.Otherwise transaction succeeded.
