

Online Purchase System

Introduction:

In this assignment ,our task is to design an online music cd purchase store consisting of online cd store and a bank system. A user can browse the site using appropriate format of url using any regular browser.Then user can see the current price and others information of the store ,and using the form below this ,user can request for a specific item with items details and his credit card number.Then this page will act differently according to the verdict of his purchase request.

Program Design:

1. We used java to design the store and bank .
2. We have a local server for this system.At first the store server is started in a specific port(store.java) .If user want to browse,he must use this specific port,otherwise he can't access the online store.
3. After entering the correct url a TCP connection is created between the server and the client browser.
4. An HTTP get request is sent to the store server from the browser.In response the server sends an html page with a form and information of CDs.
5. In order to purchase a CD/CDs, a user must fill up the given form,where one needs to provide necessary personal information along with the desired CD information.
6. These info are sent to the store server using POST method.
7. This request in the store server initiates a new TCP connection with the Bank server. All user provided informations are now passed down to the bank server over this connection.
8. Bank server now first check the validity of user .For invalid user Bank server will send an error message to the Store server mentioning that the user is invalid.
9. If the user is valid,Bank server now checks the available credit of the user in his account.
10. If the account credit is sufficient enough to complete this purchase , then Bank server will deduct the amount from his account and update his account credit to complete payment .

11. If the available credit is not enough ,then error message will be sent to the store server.
12. Store server will then show the verdict to the browser with appropriate format of the response message .
13. When a response is sent to the server from the bank, the TCP is closed.
14. After getting response from the store server, the TCP connection between the store and the client browser is closed

Message Format:

1.Store To Bank:

FirstName LastName Postcode quantity Item_no Credit-Card-Number

2.Bank To Store

- ❑ **For Successful Transaction:** *"Transaction Successful"*
- ❑ **For Insufficient Credit:** *"Your account does not have sufficient credit for the requested transaction"*
- ❑ **For invalid user:** *"The user information entered is invalid."*

Handling GET method:

When user enters the url ,browser will sent a get message. Then we just checked that this this is GET method or not and sent the html file in reply.

Handling and implementing Post method:

The Post method is used when a user wants to purchase from the store. The user fills up the provided form and clicks purchase. The browser then uses Post method to send all the information to the store server. The message format that the post method uses has two parts: Header and Body. All the data are written inside the body and sent. What the header holds is the Content length. Content length is the length of the data sent inside the Body. First the store server extract the info from the header, which is the content length. Using this info the server then extract information from the body part(up to the content length).

When user submit data through form which used post method to send data to Bank server,where data is formatted like `""fname=x&lname=y&postcode.....""`

we use **String.split("\\W+")** to split .It is a regular expression which will split the data based upon non-word character.Extracting info from here ,this are sent to Bank server to continue the rest.

