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ECON 485 Homework-1

High-Level Requirement

A user will add products to their cart on an e-commerce website. The user will then enter their card details on the site and confirm the order by entering the confirmation code sent via message by the bank associated with their card.

Who: The user who is shopping on the e-commerce website.

What: The user adds products to their cart, enters their card details, and confirms the order by entering the bank's confirmation code.

Where: The e-commerce website where the user adds products to their cart and confirms the purchase.

How: The user enters their card details on the website, then inputs the confirmation code sent by the bank via SMS to complete the order.

Low-Level Requirement

Pre-condition:

1) Registration of the user: the user must be logged in to the shopping site, if not a member, the user must register and become a member.

2) Number of items in the cart: the user must have at least one item in the cart for the purchase to take place.

3) Current card details: the user's credit or debit card details must be up to date, not expired, i.e. the customer must be using a valid card.

4) Safe infrastructure: When making a payment, the shopping site must have a secure infrastructure so that third parties cannot access and modify the data while it is being transferred.

5) Bank message system: whichever bank the user's credit card or debit card belongs to, that bank should have an infrastructure that allows the user to send a confirmation code to the user's phone.

process steps:

Filling products in the cart: The user adds the selected products to the cart. The number of products, their prices and the total price of the products appear in the user's cart.

Entering card information: The customer enters the card number, the name and surname of the cardholder, the cvv number of the card, the expiration date of the card on the payment page.

Confirmation code from the bank: The bank sends a confirmation code to the customer using its own infrastructure, the customer must enter this confirmation code on the bank's page.

Order acceptance: When the customer enters the confirmation code correctly, the customer's order is confirmed by the system.

Post-condition:

finished payment: The customer's card is charged in full for the order. The order record for the customer is added to the database.

information message: The shopping site sends a notification message to the customer that the customer's order has been received.

order information message: The shopping site sends a message or e-mail to the customer with the customer's order information.

order monitoring: The buyer is redirected by the shopping site to a screen where the shipment details and order status are displayed.

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| DATA | DESCRIPTION (data dictionary for humans) | INCOMING FORMAT | RECORDING FORMAT |
| Customer (user) ID | The user's personal ID within the system. | numeric | numeric |
| Item ID | product IDs that are specific to each item added to the cart. | numeric | numeric |
| Cart products | Products in the user's cart, along with a list of their amounts. | in the form of a processable data format. This format is also suitable for data exchange. (for example, java) | in the form of a processable data format. This format is also suitable for data exchange. (for example, java) |
| The overall amount | The entire amount spent on every item in the user's the basket. | in the format of currencies | in the format of currencies |
| Card information | card details, including the number, expiration date, and CVV, that the user inputs throughout the payment process. | in written form | in written form |
| Verification code | code of confirmation that the bank sent. | numeric | numeric |
| Status of the order | Order status as of right now | in text form | in text form |
| Date and time | The time and date of the order's placement. | The date can be in day-month-year format and the time can be in hour: minute format. | The date can be in day-month-year format and the time can be in hour: minute format. |