

Project Part 1

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Overview

Our chosen enterprise system is a C2C(consumer to consumer) online shopping system — eBuy. Participants of this system could be “buyers” and “sellers” at the same time. Participants could publish what they want to sell in the system, view products sold by others, search what they want to buy and make a transaction with other participants. Besides, administrators of the system could manage participants and products sold by participants. For instance, administrators could remove blacklisted items, delete participants’ accounts who have the fraud records etc.

This system is a typical enterprise system since it could support multiple users(participants and administrators), supporting the business of the owner of the system and supporting the enterprise goals. For example, creating profit by providing such a trading platform for the owner of the system. It also contains all common properties as other enterprise systems. There is persistent data in the system: participants information, products information supplied by sellers and so on, which needs to be stored in the rational database. Some pictures and videos may also need to be stored in the system. Besides, this system support concurrent access. Multiple participants should be able to access the system concurrently, which may rise some concurrent issues like two buyers buy one product at the same time and others. We may need to solve these problems by using transactions managed by database or specialized transaction management tools. There are also many user interfaces for different users to handle different data. For a transaction between the buyer and seller, even involved products are same for the buyer and the seller, but the transaction information would be displayed in different ways for them. And this system needs to be built on the business logic. For example, the administrators must be able to remove the blacklisted items. Finally, this system could integrate with other enterprise systems. For instance, using pay-pal to facilitate the payment and using one communication tool to allow the interactions between the buyers and sellers (in this project those third party enterprise system will not be embedded into our system due to limited time).

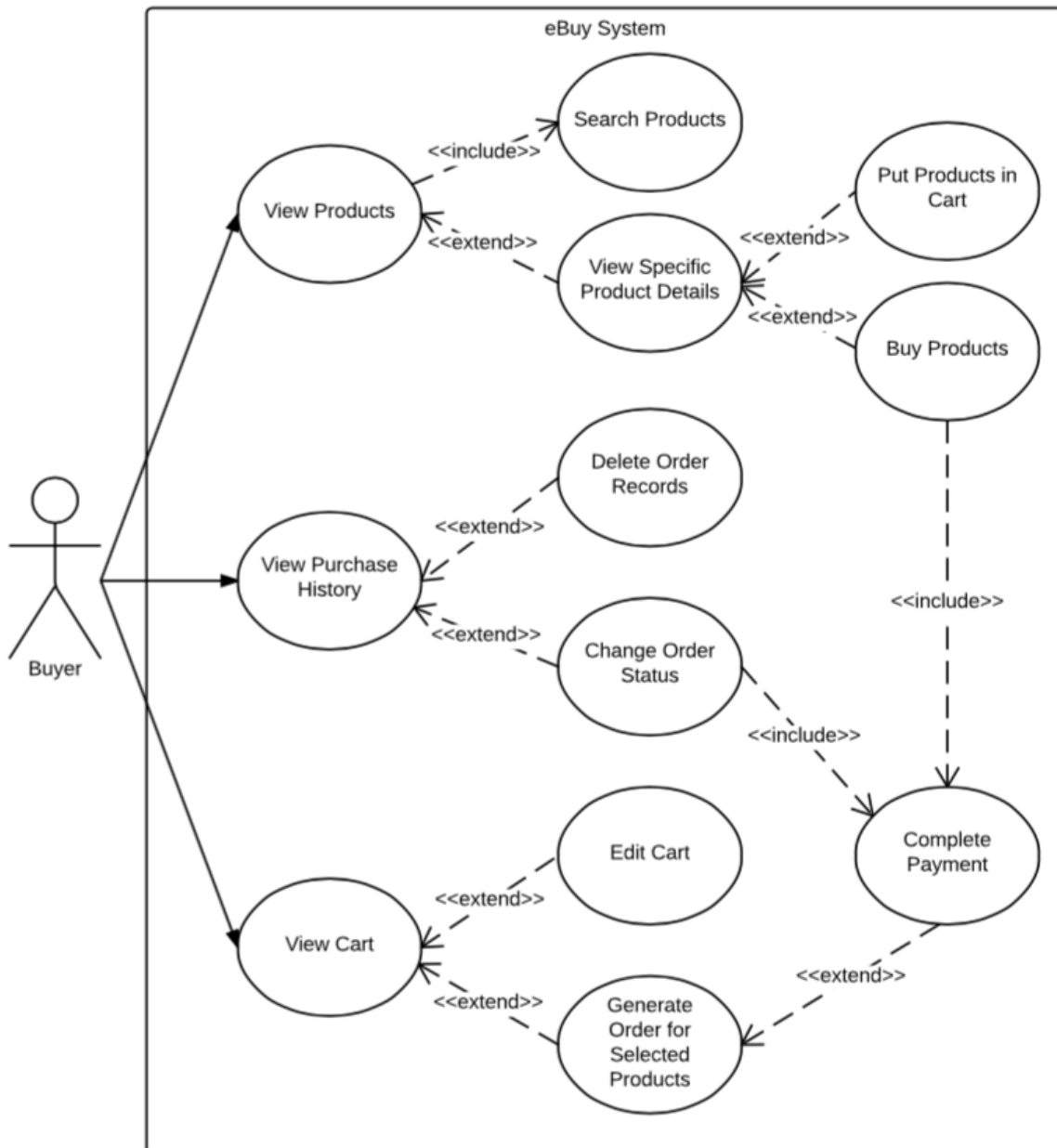
Feature

The feature to be described is purchasing products within the system. This feature involves operations on the product table, shopping cart table and order table in the database.

Firstly, buyers could view products list either by choosing a products’ category provided by system or by searching key words entered by buyers. If they are interested in one product, they could access to the details of that product. These procedures involves reading the information of the products from the product table in the database. If buyers decide to buy this product, after selecting the quantity, they could either put products in the shopping cart which involves creating a new record in the shopping cart table or creating an order immediately which involves creating a new order record in the order table. Buyers could also view the shopping cart which involves reading the records from the shopping cart table, remove products from the cart which involve updating and deleting the records of the shopping cart table since buyers may reduce the number of one product or remove one product from the cart completely, select products to buy and generate an order which involves creating a new order record and deleting records in the shopping cart table. Finally, buyers could view their purchase history which involves reading order information from order table, delete purchase records which involves deleting order records in the order table and change order status

from “unpaid” to “paid” by completing payment or from “delivered” to “received” to confirm receiving products (an order record has four statuses “unpaid”, “paid”, “delivered”, “received”). Changing order status involves updating order records in the order table.

Use case



View Products

Use Case Name	View Products
Primary Actor	Buyer
Predictions	Buyer is in the home page
Trigger	Buyer wants to view products
Basic Path	1. Buyer view products in the home page
Alternative Paths	none
Postconditions	The products page is displayed to the buyer
Exception Paths	1. Error message page may show up as server is inaccessible

Search Products

Use Case Name	Search Products
Primary Actor	Buyer
Predictions	Buyer is in the home page
Trigger	Buyer wants to search a particular type of product
Basic Path	1. Buyer types key words of products in the search box and then triggers the search function 2. The search result is displayed to the buyer 3. Buyer triggers the sort function to sort search result according to the prices, distances and other attributes
Alternative Paths	1a. Buyer chooses one category of products to search products, for example, clothes, electronic products etc.
Postconditions	The result adhere to search and sort criteria is displayed to buyer
Exception Paths	1. Error message page may show up as server is inaccessible

View Specific Product Details

Use Case Name	View Specific Product Details
Primary Actor	Buyer
Predictions	Buyer is in the products list page
Trigger	Buyer wants to get more information about one product
Basic Path	1. Buyer triggers directing to the specific product details page function
Alternative Paths	none
Postconditions	New page about the product detailed information is displayed to the buyer
Exception Paths	1. Error message page may show up as server is inaccessible

Put Products in Cart

Use Case Name	Put Products in Cart
Primary Actor	Buyer
Predictions	Buyer is in the specific product details page
Trigger	Buyer manages to put products in cart
Basic Path	<ol style="list-style-type: none">1. Buyer specifies the quantity of products that he or she wants2. Buyer triggers putting products in cart function3. If buyer has logged in, the operation success message would be returned to buyer
Alternative Paths	<ol style="list-style-type: none">3a. If buyer has not logged in, the login page would be displayed to buyer<ol style="list-style-type: none">3a1. buyer fills in the login information3a2. if the login information is correct, the previous page would be returned. if the login information is incorrect, return to the step 3a1
Postconditions	Product has been added to buyer's cart
Exception Paths	<ol style="list-style-type: none">1. Error message page may show up as server is inaccessible2. Error message page may show up when the product is no longer available

Buy Products

Use Case Name	Buy Products
Primary Actor	Buyer
Predictions	Buyer is in the specific product details page
Trigger	Buyer manages to buy a type of product immediately
Basic Path	<ol style="list-style-type: none">1. Buyer specifies the quantity of products that he or she wants2. Buyer triggers buy immediately function3. If buyer has logged in, a page requesting receiver information would be displayed to the buyer4. Buyer fills in the receiver information and select the link to pay5. If the receiver information is proper, the new order would be generated and the pay page would be displayed to the buyer6. Buyer fills in the payment information7. If the payment is successful, the successful information would be returned to buyer
Alternative Paths	<ol style="list-style-type: none">3a. If buyer has not logged in, the login page would be displayed to buyer.<ol style="list-style-type: none">3a1. buyer fills in the login information3a2. if the login information is correct, the previous page would be returned. if the login information is incorrect, return to the step 3a15a. If the receiver information is improper, go back to step 47a. If the payment is failed, the failed information would be returned to buyer
Postconditions	New order has been generated
Exception Paths	<ol style="list-style-type: none">1. Error message page may show up as server is inaccessible2. Error message page may show up when the product is no longer available

View Purchase History

Use Case Name	View Purchase History
Primary Actor	Buyer
Predictions	Buyer has accessed to the system
Trigger	Buyer wants to view his/her purchase history
Basic Path	<ol style="list-style-type: none">1. Buyer access to "Purchase History"2. If buyer has logged in, the purchase history would be displayed to the buyer
Alternative Paths	<ol style="list-style-type: none">2a. If buyer has not logged in, the login page would be displayed to buyer2a1. buyer fills in the login information2a2. if the login information is correct, the previous page would be returned.if the login information is incorrect, return to the step 2a1
Postconditions	Purchase History is displayed to the buyer
Exception Paths	<ol style="list-style-type: none">1. Error message page may show up as server is inaccessible

Delete Order Records

Use Case Name	Delete Order Records
Primary Actor	Buyer
Predictions	Buyer is in the purchase history page
Trigger	Buyer manages to delete one or more order records
Basic Path	<ol style="list-style-type: none">1. Buyer selects one or more records2. Buyer triggers deleting orders function
Alternative Paths	none
Postconditions	The deleted records will not show up in purchase history any more
Exception Paths	<ol style="list-style-type: none">1. Error message page may show up as server is inaccessible

Change Order Status

Use Case Name	Change Order Status
Primary Actor	Buyer
Predictions	Buyer is in the purchase history page
Trigger	The buyer manages to change the order status
Basic Path	<ol style="list-style-type: none">1. If the payment has been completed, buyer could change the order status to received after receiving products2. The correct status of the order would be displayed to the buyer
Alternative Paths	<ol style="list-style-type: none">1a. If the payment has not been completed, the buyer could change the order status to payed1a1. Buyer triggers the completing payment function1a2. Buyer fills in the payment information1a3. If the payment is successful, the successful information would be returned to buyerIf the payment is failed, the failed information would be returned to buyer
Postconditions	The order status has been changed correctly.

Exception Paths	1. Error message page may show up as server is inaccessible
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View Cart

Use Case Name	View Cart
Primary Actor	Buyer
Predictions	Buyer has accessed to the system
Trigger	Buyer wants to view the content of the cart
Basic Path	<ol style="list-style-type: none"> 1. Buyer select the link to view the cart 2. if the buyer has logged in, the correct content of the cart would be displayed
Alternative Paths	<ol style="list-style-type: none"> 2a. If buyer has not logged in, the login page would be displayed to buyer <ol style="list-style-type: none"> 2a1. buyer fills in the login information 2a2. if the login information is correct, the previous page would be returned. if the login information is incorrect, return to the step 2a1
Postconditions	the correct content of the cart would be displayed to the buyer
Exception Paths	1. Error message page may show up as server is inaccessible

Edit Cart

Use Case Name	Edit cart
Primary Actor	Buyer
Predictions	Buyer is in the cart page
Trigger	Buyer wants to change the items of the cart
Basic Path	<ol style="list-style-type: none"> 1. Buyer change the quantity of the product 2. The correct content of the cart would be displayed to the buyer
Alternative Paths	<ol style="list-style-type: none"> 1a. Buyer trigger the function to delete one or more products from the cart completely <ol style="list-style-type: none"> 1a1. Buyer selects one or more products that he or she wants to delete 1a2. Buyer triggers the delete function 1a3. A dialogue would be displayed to the buyer to ask if the buyer would confirm this operation 1a4. If buyer select Yes, the product would be deleted from the cart completely. If buyer select No, the operation would not be operated
Postconditions	The correct content of the cart would be displayed to the buyer
Exception Paths	1. Error message page may show up as server is inaccessible

Generate Order For Selected Products

Use Case Name	Generate Order for Selected Products
Primary Actor	Buyer
Predictions	Buyer is in the cart page
Trigger	Buyer wants to select and buy some products in the cart
Basic Path	<ol style="list-style-type: none">1. Buyer selects what they want to buy in the cart2. Buyer triggers the checkout function3. Buyer fills in the receiver information and select the link to pay4. If the receiver information is proper, the new order would be generated and the pay page would be displayed to the buyer
Alternative Paths	4a. If the receiver information is improper, go back to step 3
Postconditions	the new order would be generated
Exception Paths	<ol style="list-style-type: none">1. Error message page may show up as server is inaccessible2. Error message page may show up when the product is no longer available

Complete Payment

Use Case Name	Complete Payment
Primary Actor	Buyer
Predictions	The order has been generated
Trigger	The buyer manages to complete the payment
Basic Path	<ol style="list-style-type: none">1. Buyer triggers the completing payment function2. Buyer fills in the payment information3. If the payment is successful, the successful information would be returned to buyer
Alternative Paths	3a. If the payment is failed, the failed information would be returned to buyer
Postconditions	The payment has been completed
Exception Paths	<ol style="list-style-type: none">1. Error message page may show up as server is inaccessible