Use Case Model

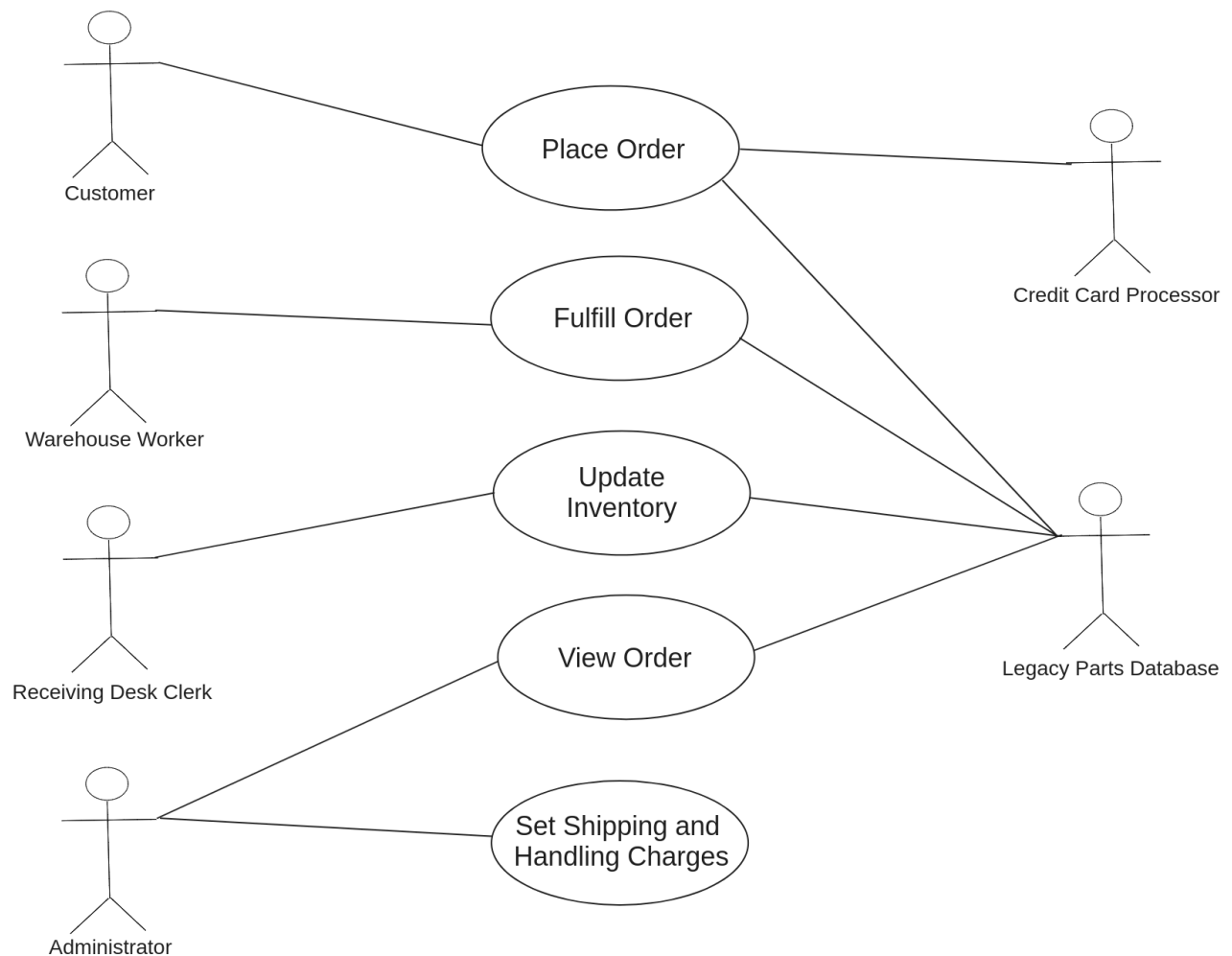**Group 3A:**
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Diagram

Actor Descriptions

Actor	Description	Use Cases
Customer	A person who visits the online ecommerce store. They presumably have the intention of making a purchase.	Place Order
Warehouse Worker	An employee who works at the warehouse that holds the stock of the ecommerce store. They are responsible for packing and shipping customers' orders.	Fulfill Order
Receiving Desk Clerk	An employee at the warehouse who is responsible for processing any new shipments of parts that arrive.	Update Inventory
Administrator	An employee with a higher level of authority at the ecommerce store. They can set customized shipping and handling fees based on the weight of orders. They can also view any of the orders that customers have placed.	View Order, Set Shipping and Handling Charges
Credit Card Processor	An external piece of software that charges customers for their order. Our server will submit a request to this processor when the customer wishes to finalize their purchase.	Place Order
Legacy Parts Database	An external database which describes the parts that the ecommerce store sells. Each part is associated with a part number, a description, its weight, a link to a picture of the part, and a price.	Place Order, Fulfill Order, Update Inventory, View Order

Use Case Descriptions

Place Order

Actors	Customer, Credit Card Processor, Legacy Parts Database
Description	A customer visiting the ecommerce store makes a purchase of parts. The process consists of the following steps: 1. The customer searches the current stock for the specific parts that they are interested in. Information about the parts comes from the legacy database. 2. The customer adds their desired parts to their cart. 3. The customer enters their billing information and clicks a button to complete their purchase. 4. Our server will validate the contents of the customer's order. This involves querying the legacy database. 5. Our server sends the customer's billing information to the credit card processor. The credit card processor will send an authorization number back to the server. 6. The server adds the order to our ecommerce store's internal database. 7. Our server sends an email indicating that the order was successful to the client's email address.
Data	● Information about the parts (name, description, etc.) is sent to the client for the customer to browse. ● The customer's billing information is sent to the credit card processor. ● An authorization number from the credit card processor is sent back to our server. ● Information about the customer's order (price paid, quantity of parts, etc.) gets stored in our internal database after the order is authorized.
Stimulus	The customer initiates the process by visiting the website and completing steps 1-3 as described in the "Description" section of this table.
Response	The customer receives an email receipt at the end of the ordering process. This email confirms that their purchase was successful.
Comments	● "Browsing for products" is not considered a distinct use case. It is assumed that a customer browses products for the purpose of placing an

	order.
	● Our internal database will need to have a table to store the orders.

Fulfill Order

Actors	Warehouse Worker, Legacy Parts Database
Description	The process in which a warehouse worker packs and ships a customer's order.
	This process consists of the following steps:
	1. The warehouse worker will select an authorized order from a list shown in their user interface.
	2. The worker will print out a packing list, invoice, and shipping label for their selected order. Some of the information on the packing list (such as the names and weights of the parts) will come from the legacy database.
	3. The worker will retrieve the necessary parts for the order and package them. They will also add the packing list, invoice, and shipping label to the package. This step does not necessarily require any interaction with our application.
	4. The worker will update the status of the order to "completed" and ship it.
Data	Information about the order and the parts it includes is sent to the worker's UI so that they can print the packing list and retrieve the correct items from the warehouse. The information about the order comes from our internal database, and the information about the parts comes from the legacy database.
Stimulus	The warehouse worker's job is to initiate this process for authorized but unfulfilled orders. They do so by going through the steps listed in the "description" box.
Response	The warehouse worker will receive confirmation that the order's status has been updated to "completed" in our internal database. The order will no longer be visible in the warehouse worker's user interface.
Comments	Upon updating the status of an order to "completed", the inventory of the warehouse as represented in our internal database will decrease. This accounts for the fact that the parts that were just shipped are no longer in the warehouse.

Update Inventory

Actors	Receiving Desk Clerk, Legacy Parts Database
Description	The process in which a clerk at the front desk of the warehouse changes the quantity of parts (as represented in the internal database) whenever the warehouse receives a new shipment of parts. For each type of part in the shipment, the receiving desk clerk goes through the following steps: 1. They will find that type of part in their user interface. The clerk will have access to a list of all of the parts in the legacy database, and they can choose any part in this list. 2. The clerk will type the quantity of the part received into an input field associated with that part. 3. The clerk will click an "Add Inventory" button. Upon clicking it, the quantity of that part held "in stock" (tracked in our database) will increase by the amount that the clerk specified.
Data	• Information about each of the parts is provided by the legacy parts database. This allows the clerk to easily determine which quantities they need to modify in the database. • Details about the current quantities of each part are also visible from the receiving desk clerk's interface. • The clerk sends a part number and a quantity to the server in order to make an update.
Stimulus	The receiving desk clerk will initiate the process of updating inventory whenever a new shipment arrives.
Response	The receiving desk clerk's user interface will show the updated quantity of the part.
Comments	The clerk can only add items to inventory. They cannot necessarily set the quantity of an item to any arbitrary value. This means that they will have to be somewhat careful when counting the number of parts received, as adding an incorrect quantity may not be easy for them to reverse (without the help of someone capable of accessing the database directly).

View Order

Actors	Administrator, Legacy Parts Database
Description	The administrator may view the details of any order that a customer has placed. When the administrator chooses to do so, the following steps occur: 1. The administrator will search for a particular order. They may search based on date range, status, or price range. 2. The administrator will select a specific order that they wish to view from the results queried. 3. The server will then make a query to the legacy database for additional details (such as the description and picture) about the parts in the order. 4. The user interface will show the details obtained in step #3 to the administrator.
Data	● Search criteria are sent to the server when the administrator makes a search. This might include an ID number, a status, or a range of prices. ● Details about queried orders are returned to the administrator after they make a search. ● Details about a specific order are shown to the administrator when they choose to view that specific order. This will include information about the parts in the order from the legacy database.
Stimulus	The administrator initiates the action of viewing an order when they take the steps listed in the "Description" box. The administrator may do so at any time of their choosing.
Response	The application will show the details about the specific order that the administrator has chosen.
Comments	Whereas the warehouse worker is only able to view orders with the "authorized" status, the administrator is able to view any order regardless of status.

Set Shipping and Handling Charges

Actors	Administrator
Description	The administrator is able to set shipping and handling charges based on the weight of an order. To accomplish this, the administrator will enter the details of a weight bracket (which includes a minimum weight and a price) into a form. Upon submitting the form, the weight bracket will be set. The administrator can also delete weight brackets. The user interface will include a list of existing weight brackets, and the administrator can click a "delete" button next to a specific bracket in order to delete it.
Data	- The minimum weight and the price are both stored in a "Weight Bracket" table in our internal database. All requests to create a weight bracket will include these two pieces of information. - Requests to delete a weight bracket will send to the server a unique identifier for that weight bracket.
Stimulus	The administrator initiates a change to shipping and handling prices by taking one of two actions: - Filling out a form to create a new weight bracket. - Clicking the "delete" button next to a weight bracket to remove it.
Response	The newly created weight bracket will appear in a list of weight brackets that is visible to the administrator. Likewise, deleted weight brackets will no longer appear in the list.
Comments	- Weight brackets get used for the price calculation in the "Place Order" use case. - A change made to the weight brackets cannot affect the price paid for previously authorized or completed orders.