# **Unit 4: Homework**

Design Question:

Building on the ecommerce database design we are working on, the retailer wants to add support for “Gift orders”. The customer will now be able to order gifts for family and friends on a single order and have them shipped to different addresses.

* How would you change your database design to accommodate this requirement?
* Would you create new tables or change existing tables?
* Your ecommercedb now has close to 10k orders already. How will the requirement impact the existing orders in the tables? Are there special design considerations for handling the existing orders?

Turn in:

1. an updated ER model for the Ecommerce DB showing the design changes
2. a Word document addressing the questions above.

Feel free to collaborate with your friends. Mention the names of the people you collaborated with and ensure each of you turn in your submissions individually.

In order to give customers the ability to gift orders, the database would be modified in various ways. A “Gift” table would be created in order to store information of the recipients being gifted. The attributes in this table would be Recipient\_ID (INT), Name (VARCHAR), HouseNumber (INT), StreetName (VARCHAR), City (VARCHAR), State (VARCHAR), Zip (INT), and CustomerTable\_CustomerID (INT). The “Recipient\_ID” would serve as the PRIMARY KEY in the table since it will serve as the unique identifier for the recipient. The “CustomerTable\_CustomerID” serves as the FOREIGN KEY between “Gift” and “CustomerTable.” The “Item” table would have “Gift\_Recipient\_ID” added as a FOREIGN KEY between “Gift” and “Item.”

Establishing the relationship between the “Gift” and “Item” tables allows the items to be given their own shipping address instead of relying solely on the customer’s address. Should the item not be gifted, the original layout would remain and still function. The mandatory requirement of NOT NULL on Recipient\_ID in the “Gift” table wouldn’t affect previous orders since the only interaction with the “Gift” table would be in the event a “Gift\_Recipient\_ID” is provided in the “Item” table. Existing orders would simply have NULL values in the “Gift\_Recipient\_ID” attribute.

