Step 1: Amazon Database Requirements:

User Accounts, and Sessions

- There should be user roles where a user can be either a customer or a seller. Each user role should have a login ID, password, name, location, phone number, credit card data, and history (this can be total number of purchases, total number of returns, etc.).
- A user can be both a customer or a seller (overlapping user superclass)
- Sellers can sell the same item but they will have different unique IDs for their items
- Each user has an order history. Each order history has a auto-generated order number, the amount of the order, the time of the order, and order details
- Amazon Seller Account has Business Information, Email address, Credit card, Phone number, Tax ID, State Tax ID
- The user session should keep the state of the session when the user logs out or exits. It should have a unique session number, the IP address of the session, the number of clicks, the date, and time the user left.

Business Information

- Has legal business name, address, and contact information

Customer Service and Feedback

- Customer feedback should contain item number, rating out of 5, and comment.
- Customer feedback also includes the date and user ID.

Inventory

- A department is made up of the different categories. It should have a unique department number, and unique department name
- A category has a list of similar items (men, women, kids, etc.). It should have a unique category number, category department number, category name.

Item

- An item has a unique item id, item category number, item department number, item price, item name, quantity, seller id, item condition [1].

Item Condition

- An item condition is categorized by its condition (Used - Like New, Used - Very Good, etc..). It should contain the item number, its condition, and a description of its condition [2].

Warehouse

- Each warehouse is identified by a unique warehouse ID, name, location, quantity, product ID, seller ID [1].

Delivery

- Delivery includes departure time, arrival time, current location, current time, shipping address, shipping methods, charges [3].

Order, Invoice, and Payments

- Order has order number (orderID), date of when the order was placed, Invoice of order, order details. It should also check if the order is cancelled [1].
- Order details have Shipping address, Payment method, Order Summary, Grand Total, and Tracking number [1].
- Order Summary has item(s) subtotal, cost of shipping and handling, Total before tax, Estimated tax to be collected. These add up to the Grand total [1].
- Invoice has order number, date of when the order was placed, Order total. Data of which the order was shipped, items ordered, shipping address, shipping speed(I.E.One-Day shipping) [1].
- Assume that an order can be shipped from several warehouses.
- Shipping should have a shipping number, the shipping method, the shipping total, and the shipping date. The shipping methods include 2-day shipping, same day delivery, normal, etc [3].
- Wallet has a list of credit and debit card information. Each wallet has a unique id. It should have the credit card number, credit card type, credit card security code, credit card expiration date, name on card, and the billing address. It should also see if the credit card is the default payment method.
- The credit card type is made up of the different types of credit cards (visa, mastercard, american express, etc.). It should have a type id, type name, and wallet id.

Payment Method

- Each payment method is identified by a unique payment id, name of payment.

Shopping Cart

- A shopping cart would contain credit card payments, processing, total price, inventory items.
- Inventory items may or may not be ordered, therefore item states should also be kept track of.
- Each shopping cart is identified by a unique cart ID.

Vendor-Specific Products

- Each vendor is identified by a vendor ID.
- Vendor-Specific Products holds the vendor data (name, etc…) and their products.
- Different vendors can have different terminologies for the same product.

Catalog

- The catalog acts as a buffer between the Inventory and Vendor-Specific Products [1].
- A single catalog item is used to track information about a single item from different vendors.
- For example, for an iPhone 5 product catalog item, you can create separate vendor catalog items from Apple and from Amazon.