

Database Design Assignment

E-Commerce application offer these features.

1. Buyers can search, add products to cart and buy them.
2. The seller can add products, images, and details of product ex: Price, discount, specification, Product SKUs etc.
3. Buyers can be premium customers and the application can provide additional discounts for premium customers. Ex – product-1 has 3% discount, product-2 has 2.5% discount.
4. Buyer will get notification for product availability if he/she requested same.
5. The buyer will get notification about product orders and when ready for shipped delivered etc.
6. Seller can accept order or reject.
7. At a time, there can be 100K users (active in application) searching for a product.
8. We need to maintain 1 year order history after 1 year we should archive history data. After 3 years we should purge order history data.

Consider above mentioned feature, design physical entity relationship diagram. Use normalization wherever you think needed.

Deliverables

1. Physical ER diagram of database.
2. Mention all the assumptions you are taking for solutions.
3. Mention about searching performance. Where should we keep replication in NO-SQL or SQL for searching & Reporting?
4. Explain what majors are taken for performance, archiving and purging.
5. Explain what Security consideration are taken.