

problem:
For an e-commerce solution, build the data model that allows us to store/capture the data of a customer and the products he buys in the RDBMS tables.

At first it looks like customer and the products he bought seems to be related data, so we can store them together to indicate which customer has bought which product in one single table “customer_products”

customer_product										
customer_no	customer_nm	gender	age	mobile_nbr	email_address	product_no	product_nm	quantity	unit_price	total_amount
c1	shawn	male	24	93939494	shawn@gmail.com	p1	Sony 32 LED	1	32000	32000
c2	sheril	female	26	93943944	sheril@gmail.com	p2	iphone 15pro	1	155000	155000

as we are storing the data in one table in a linear model, we can easily identify which customer has bought which product by looking at the data inside the customer_product table.

Here we are storing #2 different entities of data in one single table which are

- 1. customer
 - 2. product
- even though these 2 are related with each other, it is not adviced store them in one single table, as we run into data anamolies as below.

#1. Insertion anamoly/problem
Let us say we have a customer who has not bought any products in our store/e-commerce site, but we would wanted to catpure the data of the customer and store it. How can we have the customer data persisted without any product being purchased?

asper the database model or table we designed, our assumption is always we have a customer purchase a product in the system. So there is no way to have an customer being persisted without a product. The only way to have this is persisting the product information for that customer as NULL which is not adviced.

#2. Deletion Anamoly/problem
There is a product that is being stopped by the manufacturer/supplier and we wanted to remove the product from our system as we no more sell the product. For eg.. here if Sony 32 LED should be removed as it has been stopped by the manufacturer.

if we delete the Sony 32 LED product information along with that customer data also would be lost.

#3 Updation Anamoly/problem