

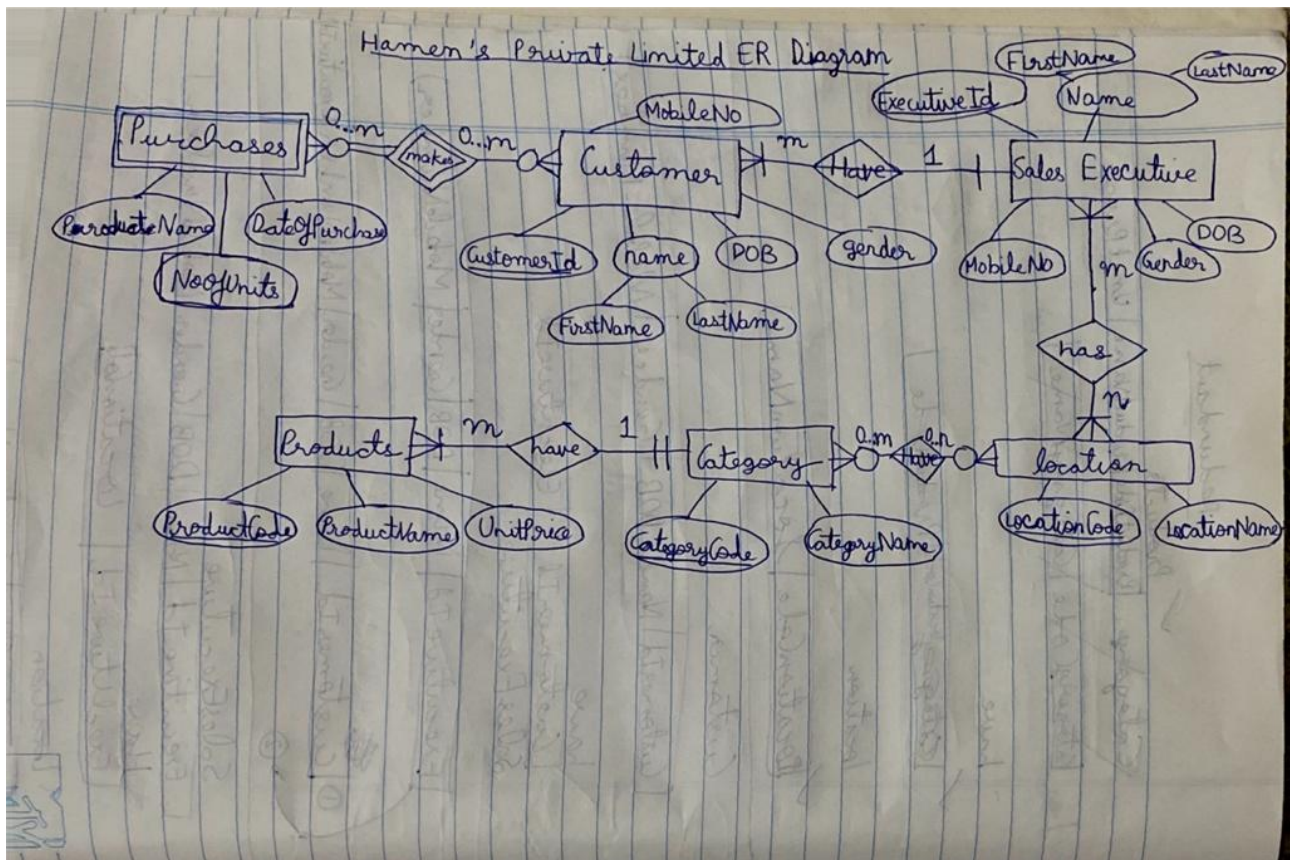
# RDBMS CONCEPTS

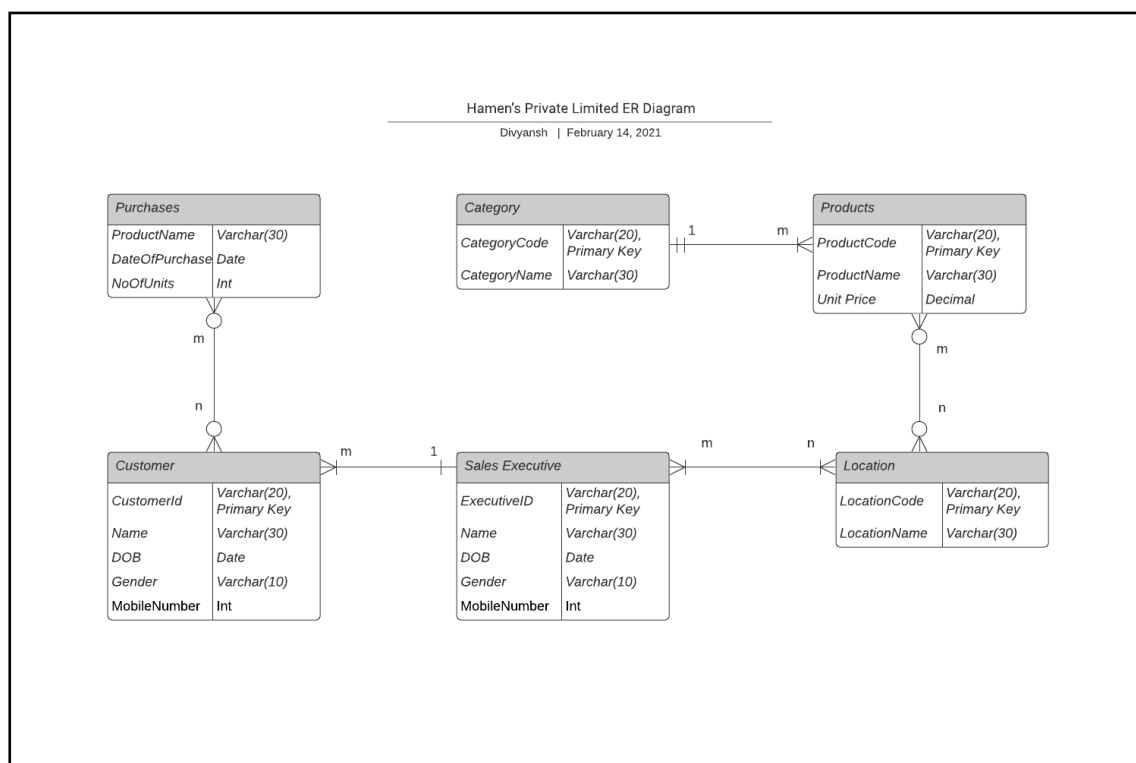
Divyansh khatri

Hamen's private limited markets and sells different products. The attributes of the product include produce code, product name, and unit price. Products are grouped into categories. A product belongs to one category. A category can have many products. The attributes of category include category code and category name. Sales executives in the company are responsible for marketing and selling products to customers residing in different locations. The attributes of sales executives include sales executive id, name, date born, gender and mobile number. The attributes of the customer include customer id, name, date born, gender, and mobile number. The attributes of location include location code and location name. A location can have many sales executive marketing and selling different categories of products. The products purchased by the customers, date of purchase and number of units purchased have to be kept track.

Q1. Model an ER diagram for above scenarios.

A. Screenshots Of ER diagram -





**ER diagram**

## Q2. Transform the ER diagram to relations (tables)

A.

Considers Table Purchases and Customer (1:m-1 cardinality)

Customer Table:

✓ CustomerId	FirstName	LastName	DOB	Gender	MobileNo
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Purchases Table (It has no primary key as it is a weak entity)

✓ <del>Release</del> <sup>Product</sup> Name	PurchaseDate	No of Units
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So, final tables will be:

- ① Customer Table itself.
- ②

✓ CustomerId	<del>Purchase</del> <sup>Product</sup> Name	Date of Purchase	No of Units
x	x	x	x

Considers Table Product and Category (1:m-1 cardinality)

Product Table:

ProductId	ProductName	UnitPrice
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Category Table:

CategoryCode	CategoryName
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So, final tables will be:

- ✓ ① ProductId | ProductName | CategoryCode | UnitPrice
- ✓ ② CategoryCode | CategoryName

Consider the tables Products and Location (m-n cardinality)

Products Table:

ProductCode	ProductName	Unit Price
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Location Table:

Location-Code	LocationName
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So, the final tables will be:

✓ ① Products Table ② Location Table

③

ProductCode	LocationCode
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Consider tables Customers and Sales Executive:

As they are in many to 1 cardinality,

the final tables will be,

✓ ①

CustomerId	Name	DOB	Gender	MobileNumber	ExecutiveId
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② Executive table itself

Consider tables Sales Executive and Location

As they are in many-to-many cardinality,

the final tables will be,



✓ ① Executive Table Itself

✓ ② Location Table Itself

③ 

ExecutiveId	LocationCode
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So, the final tables are :-

① 

CustomerID	FirstName	LastName	DOB	Gender	MobileNo	ExecutiveId
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② 

<del>Purchase</del> <sup>Product</sup> Name	PurchaseDate	No. of - Units	CustomerId
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③ 

ProductId	ProductName	UnitPrice	CategoryCode
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④ 

CategoryCode	CategoryName
--------------	--------------

⑤ 

LocationCode	LocationName
--------------	--------------

⑥ 

ProductCode	LocationCode
-------------	--------------

⑦ 

ExecutiveId	FirstName	LastName	DOB	Gender	MobileNo
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⑧ 

ExecutiveId	LocationCode
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