Task No:- 1 Conceptual design using ER Model.
Date:- 29/7/25

Aim:- To design an Entity - Relationship Diagram for a Banking management system.

Steps to draw E-R Diagram:

Step 1:- Identifying the main Entities

1. customer
2. Account
3. Branch
4. Loan
5. Credit-card
6. Banker-info

Step 2:- Defining Attributes for each Entity

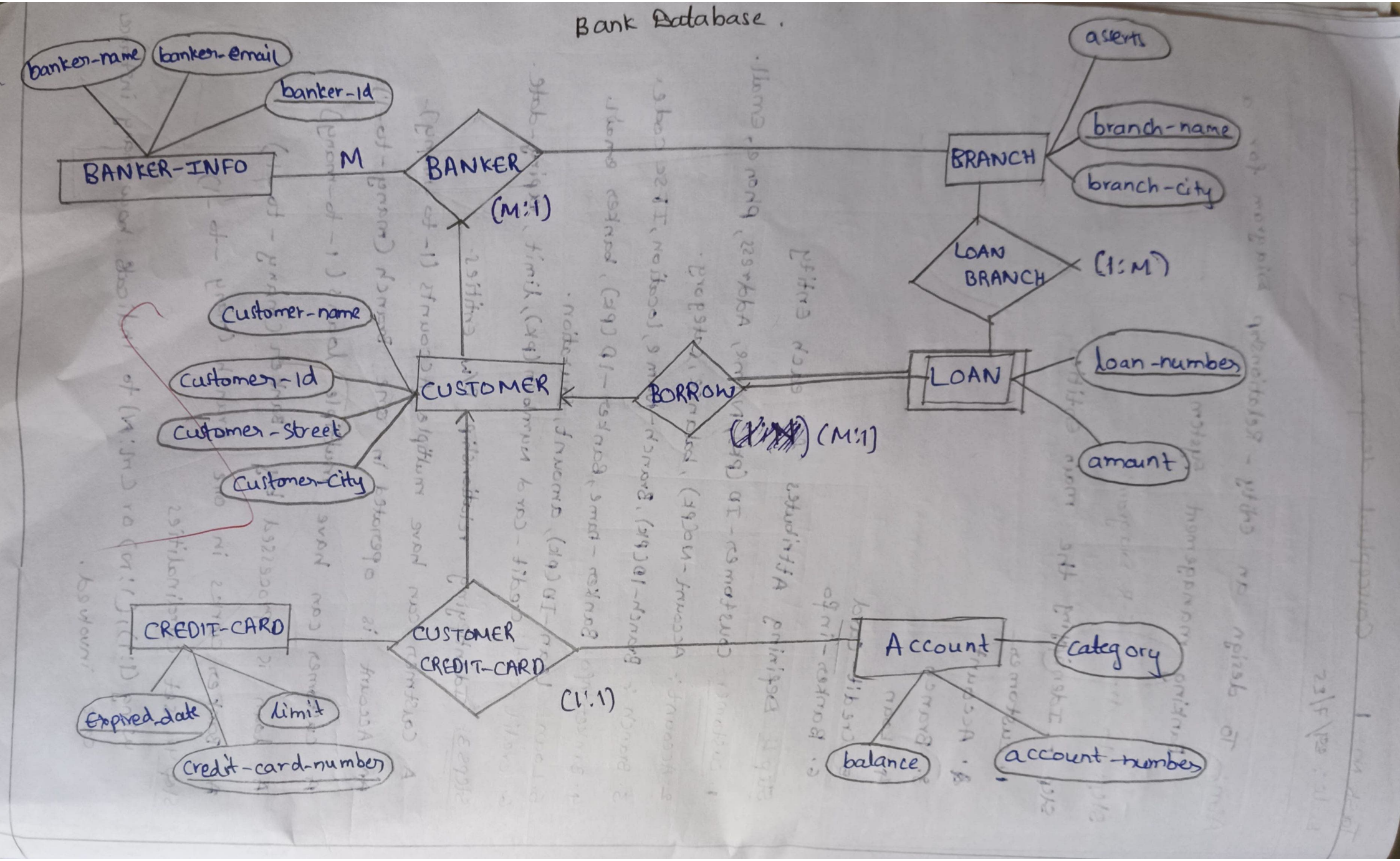
1. customer:- Coustomer-ID (PK), Name, Address, Phone, Email.
2. Account:- Account-No(PK), balance, category.
3. Branch :- Branch-ID(PK), Branch-Name, Location, IFSC code
4. Banker info:- Banker-name, Banker-ID (PK), banker email
5. Loan:- Loan-ID(PK), amount, Duration.
6. credit-card:- Credit-card Number (PK), limit, expiry-date.

Steps 3:- Identifying relationship B/W Entities.

A Custmer can have multiple Accounts (1-to-many).
An Account is operated in one Branch (many-to-1)
A customer can have multiple loans (1-to-many)
A loan is processed by Banker (many-to-1)
A Banker works in one Branch (many-to-1).

Step 4:- set cardinalities

using (1:1), (1:N) or (M:N) to indicate how many instance care involved.


Bank Database.
banker-name
banker-email
banker-id
BANKER-INFO
M
BANKER
(M:1)
asserts
branch-name
branch-city
BRANCH
LOAN BRANCH
(1:M)
Customer-name
Customer-id
Customer-street
Customer-City
CUSTOMER
BORROW
(M:1)
LOAN
loan-numbers
amount
CREDIT-CARD
CUSTOMER CREDIT-CARD
(1:1)
Account
category
Expired_date
limit
Credit-card-number
balance
account-numbers

Step 5:- Draw the ER diagram

open drawio website.

Rectangles for entities

Ellipse for attributes

Diamonds for relationships

lines to connect them.

Underline the primary keys.

Input:-

Bank managment system.

Output:-

Entity relationship Diagram (ERD) that clearly All intdenti fied entities with attributes.

All relationships with Approriate cardinalities.

Foreign keys and keys marked appropriately.

VEL TECH	
EX NO.	1
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
ECORD (5)	
OTAL (20)	15

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Result: Hence the Entity – Relationship diagram of Banking management system was successfully drawn using drawio

Task No: 1.2

Date :- 29/07/25

TASK NAME:- Convert ER Diagram into relational Model.

Aim: To convert the ER Diagram of a banking management system in to Relational Model.

Steps for converting the ER Diagram to the table.

- Entity type becomes a table.
- All single-valued attribute becomes a column of the table.
- A key attribute of the entity is represented by the primary key.
- the multivalued attribute is represented by a separate table.
- Composite attribute represented by components.
- Derived attributes are not considered in the table.

VEL TECH	
EX NO.	1b
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	
TOTAL (20)	15
VIVA DATE	

Result: Hence the convertion of ER diagram into relational model of Banking management system using ER model was successfully drawn.

Relational model:-