

# Task NO :- 1 Conceptual Design using ER model

Date :- 29-01-25

- Banking management sys

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 :-

1. customer : customer-ID (PK), Name, Address, phone, E-mail.
2. Account : Account-ID (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.

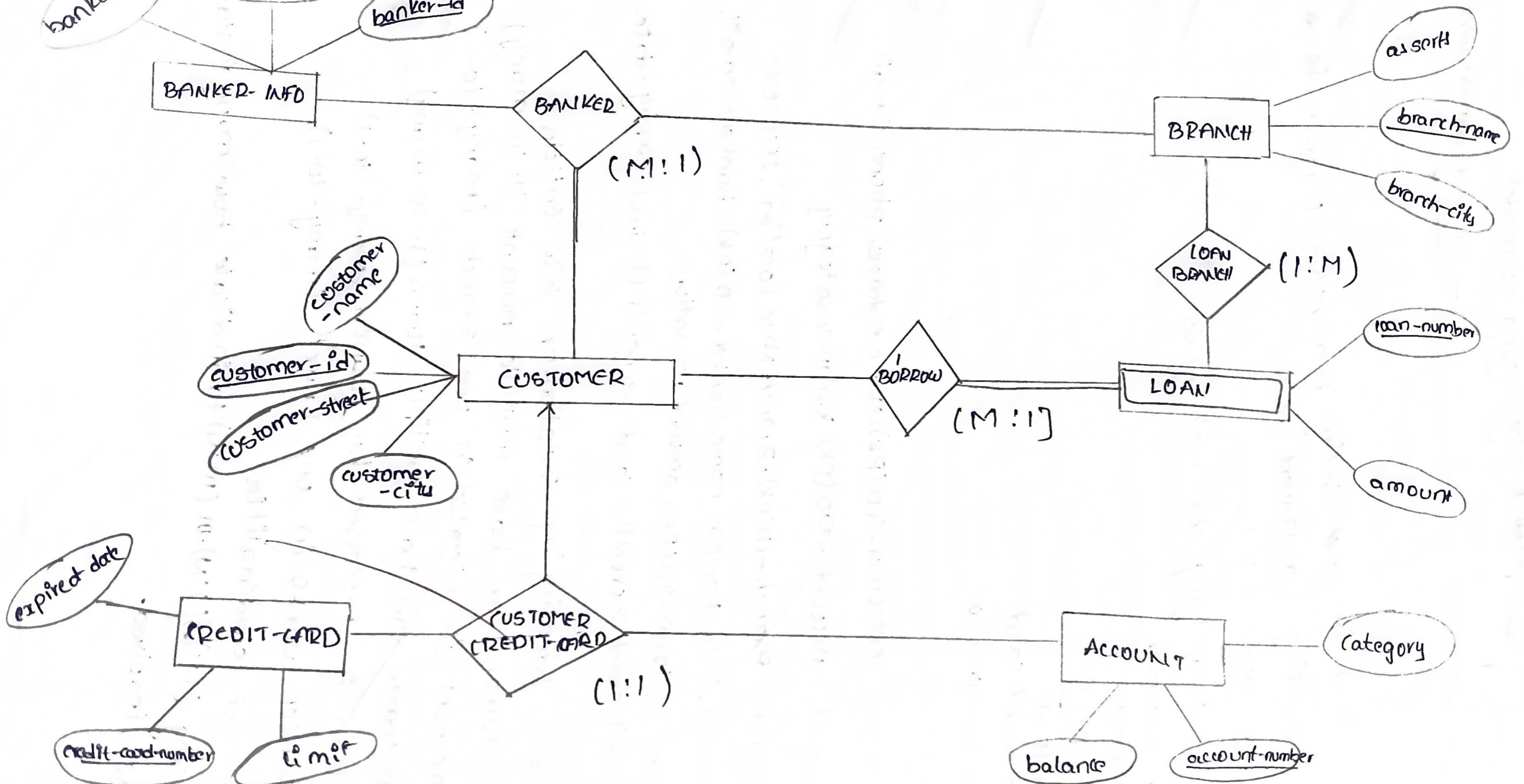
Step 3 :- Identifying Relationship B/w Entities

- A customer 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 instances are involved.

# Bank Data Base



Draw the ER diagram  
open <sup>draw</sup> draw.io website.

Draw diagram using:

Rectangles - for entities

ellipse for attributes

diamonds for relationships

lines to connect them

underline the primary keys.

Input :-

Banking management system.

Output :-

entity relationship Diagram that clearly shows

All identified entities with attributes

All relationships with appropriate cardinalities

Foreign keys and keys marked appropriately.

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

VEL TECH	
EX NO.	
PERFORMANCE (5)	
RESULT AND ANALYSIS (5)	
VIVA VOCE (5)	
RECORD (5)	
TOTAL (20)	
SIGN WITH DATE	

Result:- Hence, the entity-Relationship diagram of Banking management system was successfully drawn using draw.io.

## ER Diagram into Relational Model

Task 1.1 :-

Date: 29-07

Aim :- Convert ER diagram into Banking management system into relational model.

Steps for converting the ER diagram to the table.

- Entity type becomes a table.
- All single-valued attribute becomes a column for the table.
- A key attribute of the entity type 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.

using these rules, you can convert the ER diagram to tables and columns and assign the mapping between the tables.

<u>customer</u>	
PK	customer name
FK	customer id
	customer street
	customer city

<u>Banker Info</u>	
PK	banker name
	banker email
	banker id

<u>Branch</u>	
PK	branch name
	branch city

<u>credit card</u>	
PK	expire date
	credit card number
	limit

<u>Account</u>	
PK	category
FK	account number
	balance

<u>Loan</u>	
PK	loan number
	amount



VEL TECH	
EX NO.	1
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	5
TOTAL (20)	15
SIGN WITH DATE	28/7/22

Result:- The conversion of ER diagram into Banking management system into relational model is successfully drawn.