Task No: 1

Date: 29/7/25 . Entity-Relationship Diagram.

Aim: To design an Entity-Relationship Diagram for a Banking Management Design.

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: customer_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.

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.

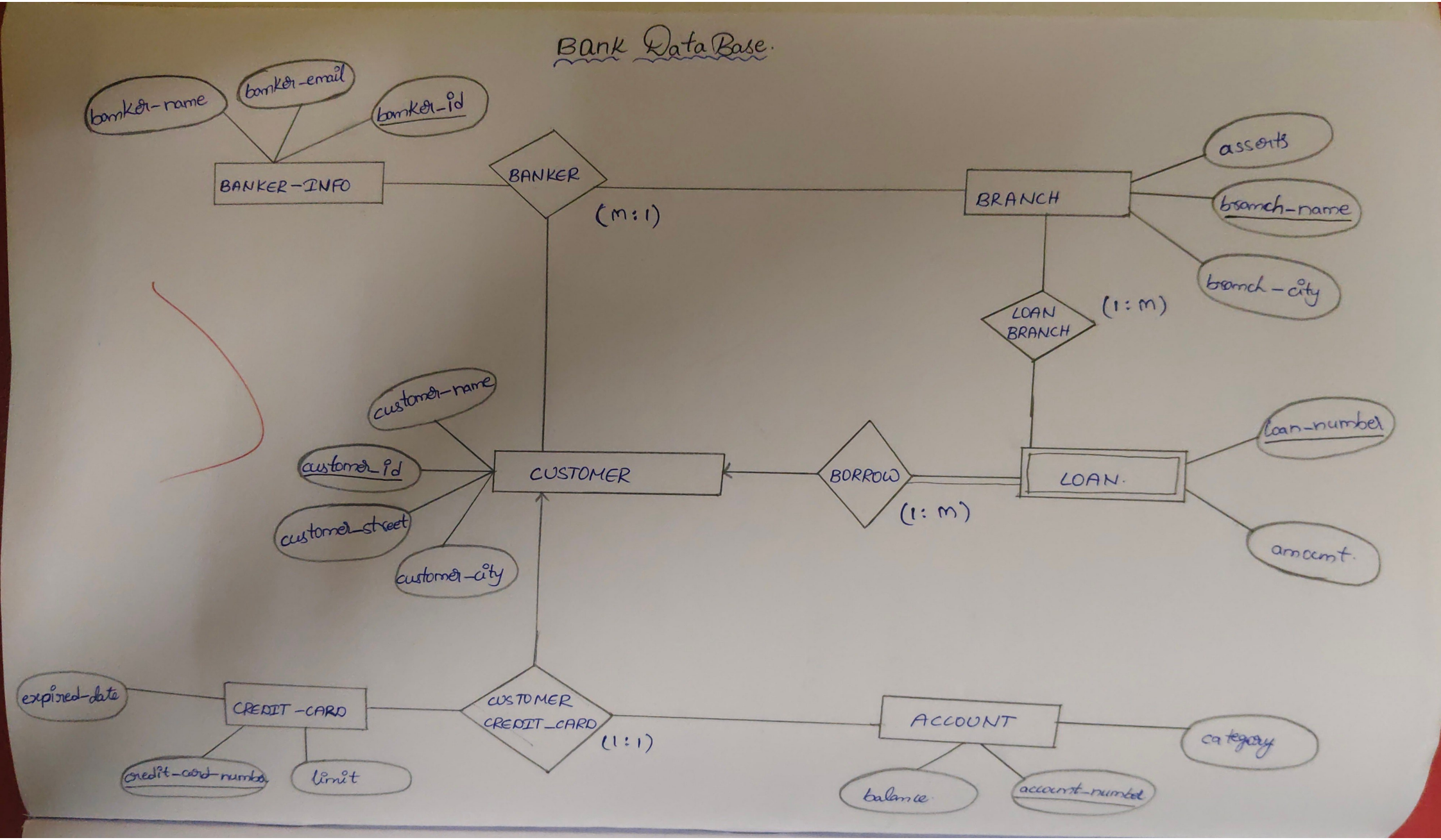
using (1:1), (1:N) or (M:N) to indicates how many instances are involved.

Step-5: Draw the ER diagram.

open draw.io website.

Draw diagram using:

Rectangles for entities


Bank DataBase.
banker-name
banker-email
banker_id
BANKER-INFO
BANKER
(m:1)
BRANCH
assets
branch-name
branch-city
LOAN BRANCH
(1:m)
customer-name
customer_id
customer_street
customer_city
CUSTOMER
BORROW
(1:m)
LOAN.
loan-number
amount.
expired-date
CREDIT-CARD
credit-card-numb
limit
CUSTOMER CREDIT_CARD
(1:1)
ACCOUNT
balance
account-numbel
category

Ellipse for attributes

Diamonds for relationships.

Lines to connect them.

Underline the primary keys.

Input:

Bank Management System.

Output:

Entity Relationship Diagram (ERD) that clearly shows:

All identified entities with attributes.

All relationships with appropriate cardinalities.

Foreign keys and keys marked appropriately.

VEL TECH	
EX NO.	14
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	
TOTAL (20)	15
SIGN WITH DATE	

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

Task No : 11

Date 29/8/25

Convert ER Diagram to Relational Model.

Aim: To Convert Banking Management ER Diagram 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.

VEL TECH	
EX NO.	11
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	
TOTAL (20)	15
SIGN WITH DATE	

Result: Hence, Banking Management ER Diagram into Relational model is converted successfully using draw.io.