Task no: 1 Conceptual Design using ER Model.
Date: 29-07-25

BANKING MANAGEMENT SYSTEM

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: 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: Identify relation 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 1 branch (many to 1)

Step 4: Set cardinalities.

Using (1:1); (1:N) or (M:N) to indicate how many instances are involved.

Steps: Draw the ER Diagram.

Open draw.io website

Draw diagram using:

Rectangle 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:

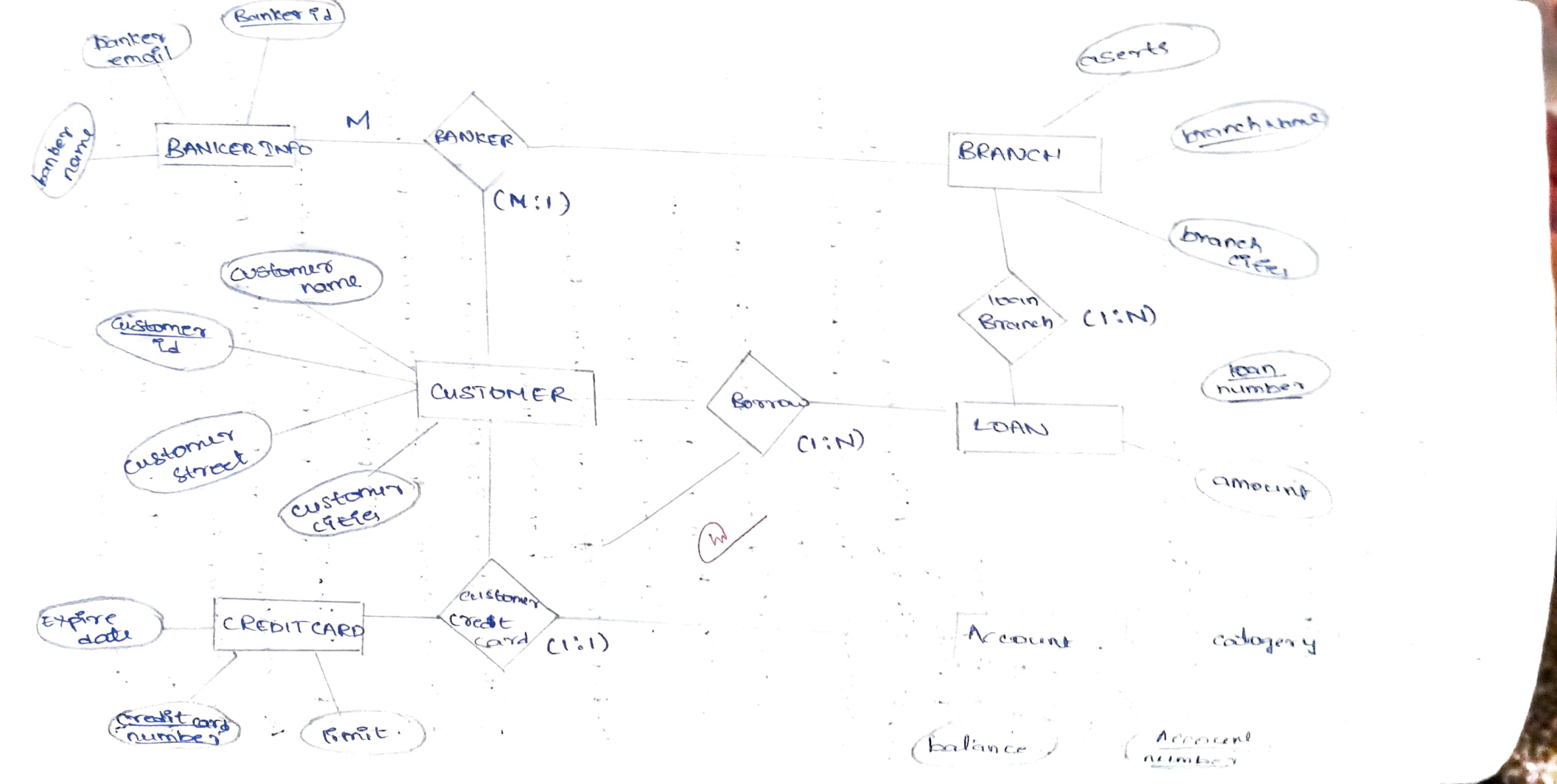
All identified entities with attributes.

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)	
TAL (20)	15

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


Banker email
Banker id
banker name
BANKER INFO
M
BANKER
(N:1)
asserts
BRANCH
branch name
branch city
loan Branch
(1:N)
customer name
customer id
CUSTOMER
customer street
customer city
Borrow
(1:N)
loan number
LOAN
amount
W
expire date
CREDITCARD
customer credit card
(1:1)
Account
catogery
credit card number
limit
balance
Account number

Task: 1. ER Diagram to Relational Model

Date: 29-07-25

Aim: Convert ER Diagram of 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 column for the table.
→ A key attribute of the entity type represented by a separate table Primary key.
→ The multivalued attributes is represented by 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 Column and assign the mapping between the tables.

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

SIGN WITH DATE

Result: Hence the convertion of ER-diagram of banking management System into Relational model was Succesfully drawn

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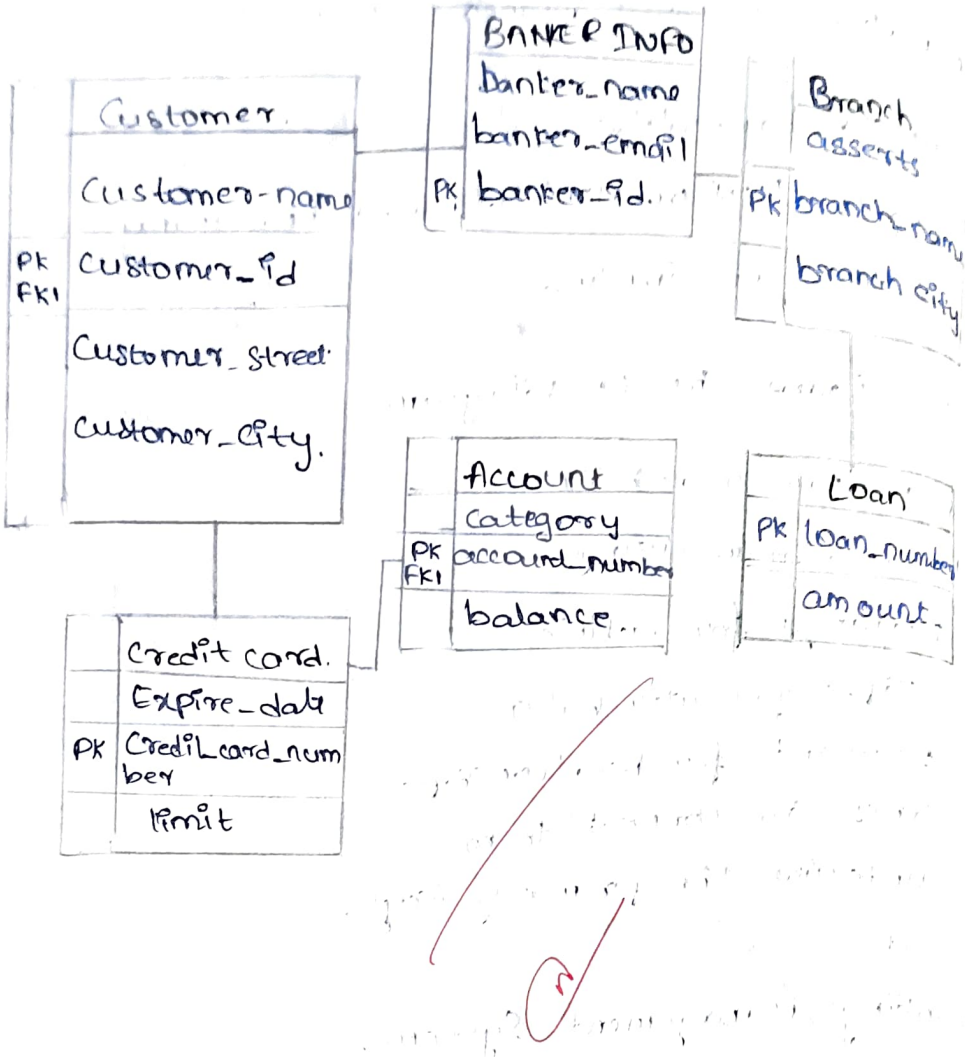
BANKER INFO
banker_name
banker_emgil
PK banker_id.
Customer
Customer-name
PK Customer_id
FK1
Customer_street
Customer_city.
Branch
asserts
PK branch_name
branch city
Account
category
PK FK1 account_number
balance..
Loan
PK loan_number
amount.
Credit card.
Expire_date
PK Credit_card_number
limit