ER DIAGRAM OF A BANKING SYSTEM

STEP: 01 DEFINING ENTITY SETS AND THEIR TYPES

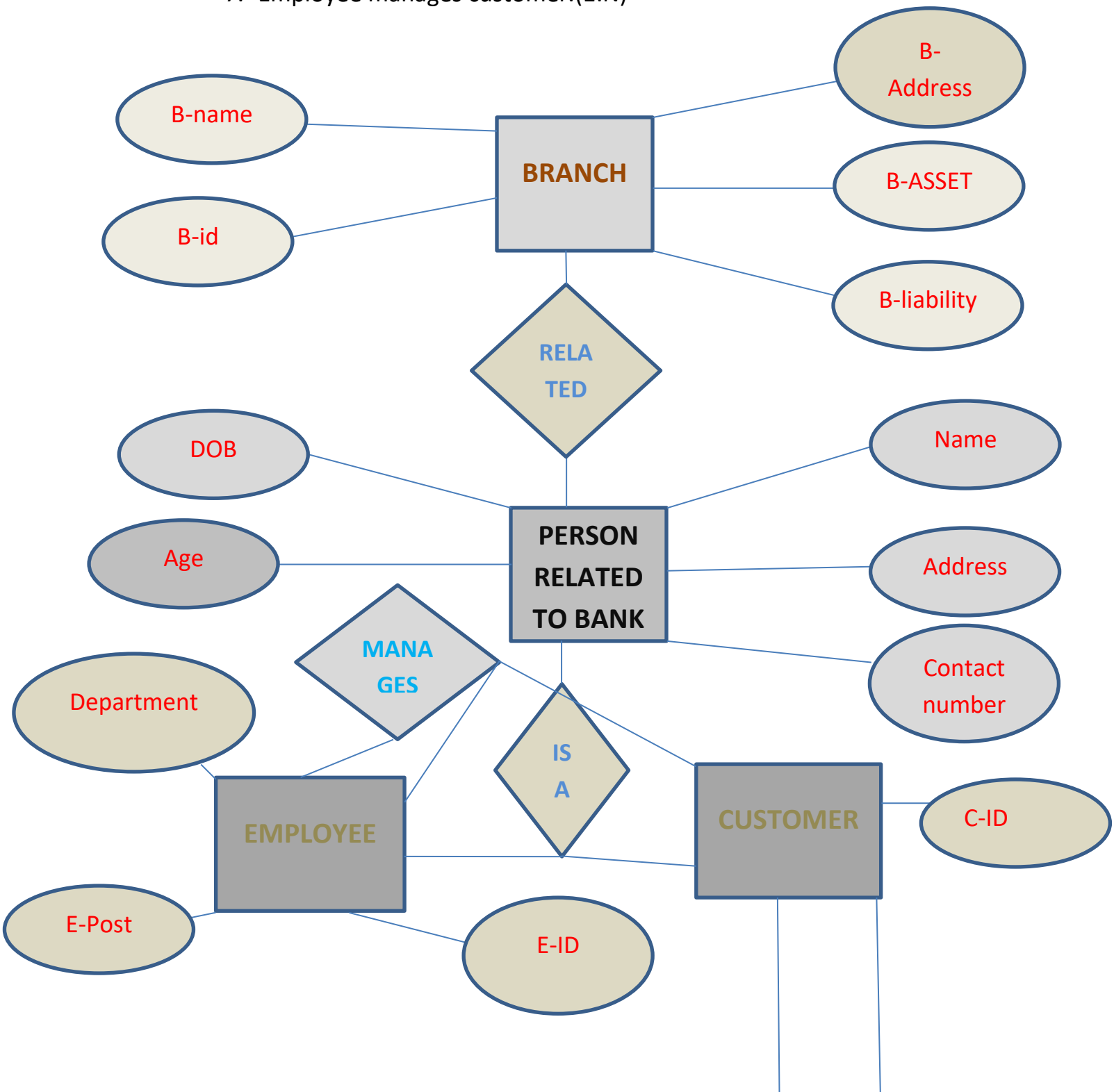
1. Branch
2. Customer
3. Employee
4. Account : 1)Current account 2)Savings account
5. Loan
6. Payment (Weak entity--total participation depends on strong entity)

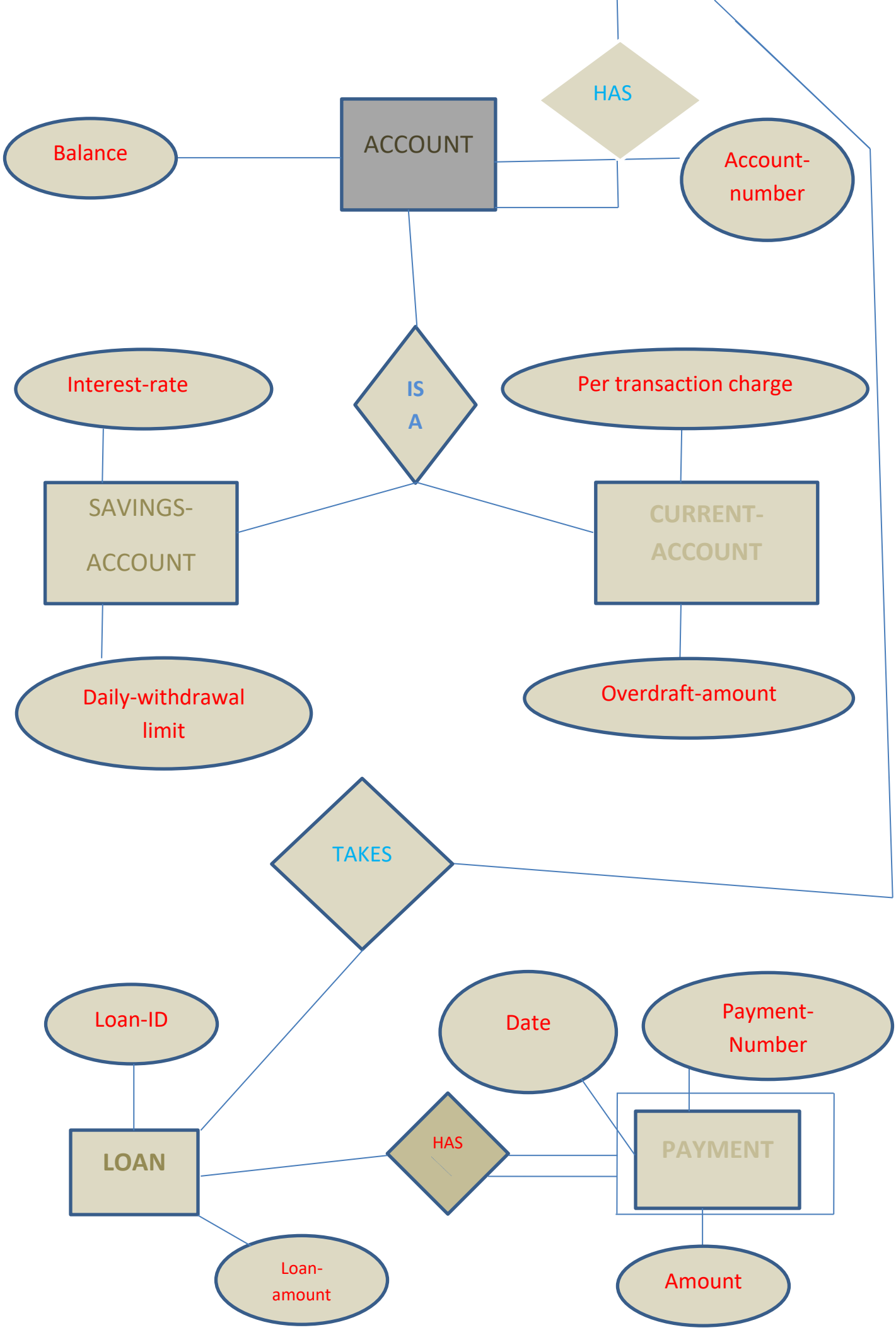
STEP: 02 DEFINING ATTRIBUTES OF EACH ENTITY AND THEIR TYPE

1. **Branch** : B-name(composite), B-id (primary-key), B-address(composite), B-Asset(single-valued), B-liability(single-valued)
2. **Customer** : C-name (Composite), C-id (primary-key), C-address(composite), C-contact number (single-valued) ,DOB(single-valued),C- Age(derived)
3. **Employee :** E-name (Composite), E-id (primary-key), E-address(composite), E-contact number (single-valued), DOB(single-valued), Age (derived), Department (single-valued),E-Post(single-valued)
   Customer—Employee—Generalize (Person—related—to—bank)
4. **Savings account** : Account-number (primary-key), Balance(single-valued),interest-rate (single-valued), Daily-withdrawal limit(single-valued)
5. **Current account** : Account-number (primary-key), Balance(single-valued),Pertransaction_charge(Single-valued),Overdraft-amount(Single-valued) **Savings account-- Current account—Generalize**
6. **Loan :** Loan-ID (Primary-key),loan-amount(single-valued)
7. **Payment (Weak-Entity**) : Payment-Number(Primary-key), amount,date

STEP: 03 DEFINING RELATIONSHIP, THEIR TYPE AND MAPPING CARDIANILITY

1. Bank has branches.(1:N)
2. Employee works in branches (N:1).
3. Customer several accounts.(1:N)
4. Customer takes loan(1;N)
5. Loan has payment(1:N)
6. Employee manages employee(1:N)
7. Employee manages customer.(1:N)




HAS
ACCOUNT
Balance
Account-number
IS A
Interest-rate
Per transaction charge
SAVINGS-ACCOUNT
CURRENT-ACCOUNT
Daily-withdrawal limit
Overdraft-amount
TAKES
Loan-ID
Date
Payment-Number
HAS
LOAN
PAYMENT
Loan-amount
Amount