

Database Design
CS 6360.003(Spring 2020)
Assignment 3
Divya Birla
2021514344

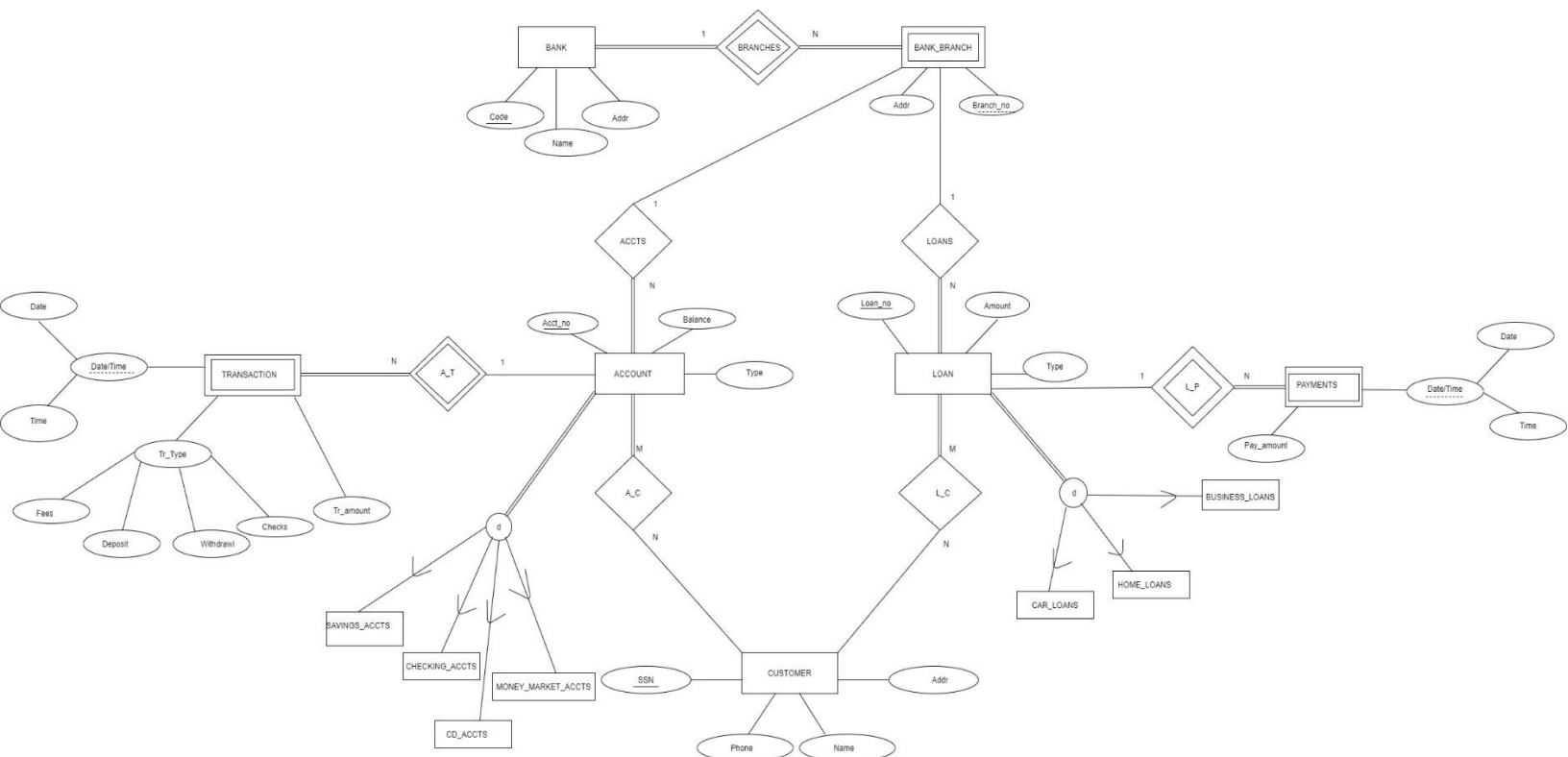
QUESTION 8:

Consider the BANKER schema above, and suppose that it is necessary to keep track of different types of ACCOUNTS (SAVINGS_ACCTS, CHECKING_ACCTS, MONEY_MARKET_ACCTS, CD_ACCTS) and LOANS (CAR_LOANS, HOME_LOANS, BUSINESS_LOANS).

Suppose further that it is also desirable to keep track of each ACCOUNT's TRANSACTIONS (deposits, withdrawals, checks, fees) and each LOAN's PAYMENTS; both of these include the amount, date, and time.

Modify the BANK schema, using ER and EER concepts of specialization and generalization to implement the above requirements. State any assumptions you make about the additional requirements.

ANSWER:



The following assumptions were made while modifying the ER diagram:

1. The ACCOUNT entity can be a member of at most one of the subclasses: SAVINGS_ACCTS, CHECKING_ACCTS, MONEY_MARKET_ACCTS, CD_ACCTS.
2. The LOAN entity can be a member of at most one of the subclasses: CAR_LOANS, HOME_LOANS, BUSINESS_LOANS.
3. The type of TRANSACTION(deposits, withdrawals, checks, fees) is specified by the "Tr_type" attribute.
4. The attributes "Deposit", "Withdrawal", "Checks" and "Fees" specify the different types of TRANSACTION.
- 5.. The "date/time" attribute is assumed to be the partial key for both TRANSACTION and PAYMENTS weak entity types.
6. The amount for PAYMENT is specified by the "Pay_amount" attribute.
7. The amount for TRANSACTION is specified by the "Tr_amount" attribute.