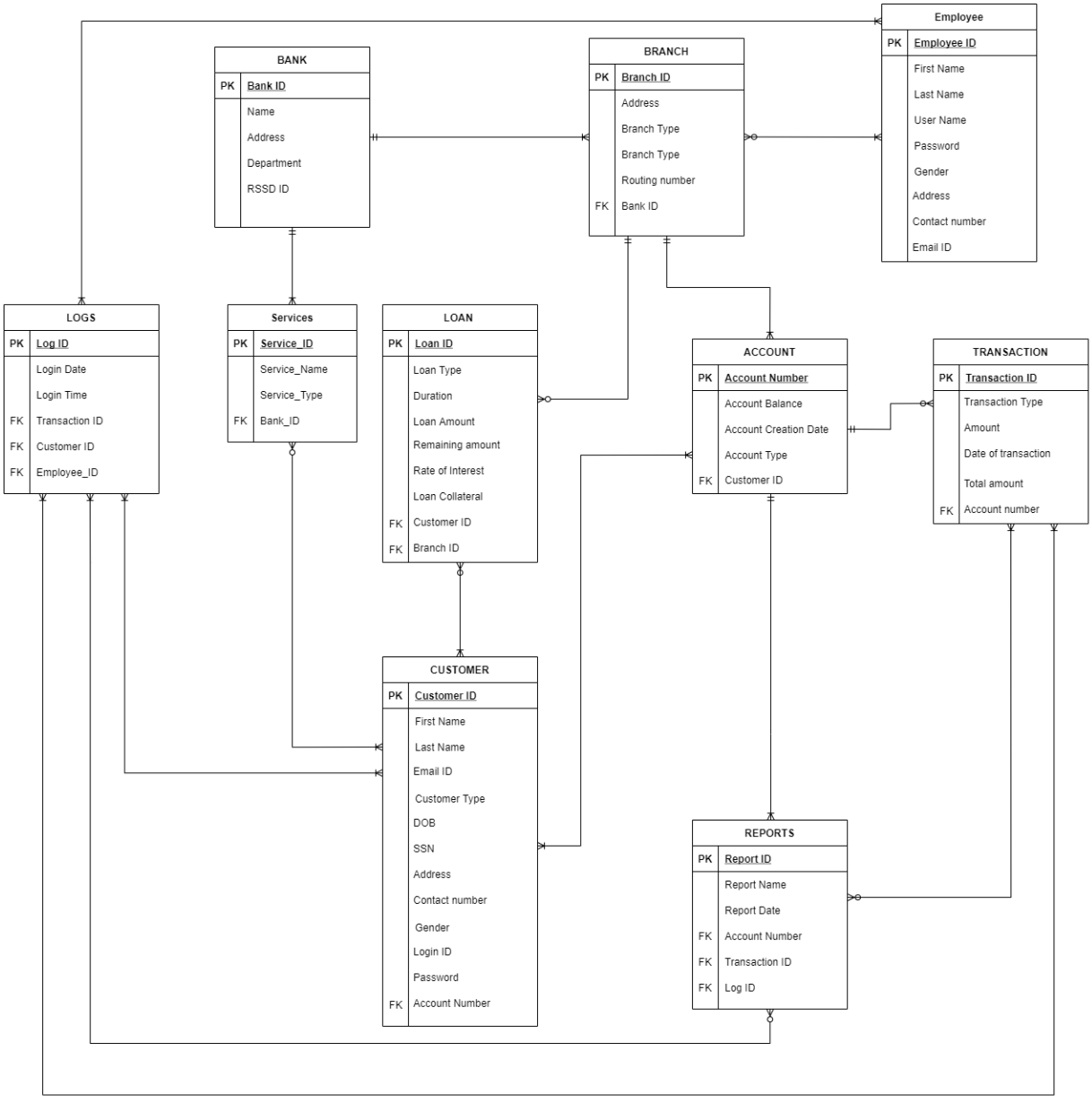
Group -2 | P2 - Initial ERD and Design document

Initial ERD -



Business Problem:

Efficiently perform and manage routine banking tasks like -

- Account creation/modification/deletion
- Fund transfers
- View account balances
- Generating account statements

Entity Descriptions:

Branch- Most of the banks have several locations spread throughout different cities. We have this module to handle those branches across the system. It will keep the branches manageable and offer a unique identity to each branch. Each branch will be assigned a unique identification number as well as a name. We can quickly determine the branch's location as well as other details such as the employees who work there.

Customer- These are the bank's primary source of revenue, and increasing the number of customers enhances the bank's market position. There are several sorts of clients, and everyone has an account that is tailored to their needs. Individual account holders, joint account holders, partnership firm holders, clubs and organisations, and trusts are the many categories of clients.

Account- Every customer has a unique account number, and the bank will only use that number to identify you. The account number will be the same across all of that bank's branches. This will save the account balance, as well as any interest paid by the bank to that customer. Savings Accounts, Current Accounts, and Checking Accounts are some of the other types of accounts that a client might have.

Transaction- Transactions are updated every time an account holder conducts any activity on the account. Transactions are used whenever a consumer makes a modification to their account, such as a payment or a deposit.

Loan- This entity will contain information about any client who has applied for a bank loan. This will save the loan information for a certain account number. If the consumer does not have any outstanding loans, the account will have null values. It will possess the following attributes: Loan ID, Account number, interest rate, duration, loan amount to mention a few.

Bank- Bank entity is the main entity of all other entities. It contains attributes like bank name, type, address and code. Each bank has a unique name. There are multiple types of banks in the US like Retail banks, Commercial banks, Investment banks, Community development banks. This entity can be uniquely identified by an attribute named RSSD ID. All the branches of the bank inherit properties of the bank containing name and RSSD ID.

Products & Services- This entity will contain information about the product purchased by a customer. It has a composite primary key which consists of Customer ID and Purchase ID to uniquely identify the purchase. In addition to this, it'll hold data about the type of purchased product, cost of the product and date of purchase.

Loans- Loan entity helps to keep track of the loan data for the bank, bank gives out loans to its customers at a particular interest rate and duration to make profit. It is very important for the

bank to maintain an updated record of loan data as slight differences in any variable value can change the amount the customer owes to the bank and affect the bank's profit.

Logs- The logs entity has the data regarding the exact time date when an activity/transaction is performed i.e. when the customer logs into his account or does the transaction. Which helps keep track of the customer’s activity.

Reports- The reports entity contains all the attributes required to give a summary or statement of a customer's transactions for a particular duration of time. It also helps the customers to keep track of their transactions as the customers can access their reports any time.