Database project**:**

Bank Application Management System

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Banking Application Management System:

Introduction:

A Banking Account Management System (BAMS) is a comprehensive software solution designed to facilitate the management of customer accounts, Empoyee, transactions, loans, and related banking operations. It plays a crucial role in modern banking by automating various processes, enhancing efficiency, and providing better customer service.

**Applications**

* **Commercial Banks**: Manage Account\_Holder,accounts, loans, and transactions for personal and business banking.
* **Credit Unions**: Provide account and loan management services for their members.
* **Fintech Companies**: Offer innovative banking solutions through mobile and online platforms.
* **Regulatory Bodies**: Monitor banking activities and ensure compliance with financial regulations.

**Key Components:**

* **Bank and Branch Management**: The database includes tables to manage multiple banks and their respective branches, detailing their locations and management.
* **Employee Management**: It tracks employee information, linking them to their respective branches and roles within the organization.
* **Account and Account\_Holder Management**: The system maintains records of account holders and their accounts, providing essential details such as balances and types of accounts.
* **Transaction Management**: A dedicated table tracks all financial transactions, enabling the bank to monitor inflows and outflows effectively.
* **Loan Processing**: The database includes a structured approach to manage loan applications, linking them to account holders and processing employees.

**Entities:**

* Bank
* Branch
* Employee
* Account\_Holder
* AccountInfo
* Transaction
* Loan

**Entities and Attributes:**

**Bank**

* + Bank\_ID (Primary Key).
  + Bank\_Name
  + Location

**Branch**

* + Branch ID (Primary Key).
  + Bank ID (Foreign Key).
  + Branch\_Name
  + Manager\_Name

**Employee**

* + employee\_id(Primary Key).
  + employee\_name
  + brancheID(Foreign key )
  + salary

**Account\_Holder**

* + Acc\_HolID:(Primary Key).
  + Acc\_HolName.
  + Address
  + PhoneNum

**AccountInfo**

* + AccountID(Primary Key).
  + AccountType
  + BranchID(Foreign Key).
  + Acc\_HolderID (Foreign Key).
  + Balance

**Transation**

* + Transaction\_ID (Primary Key).
  + TransactionType
  + AccountID (Foreign Key).
  + Amount

**Loan**

* + LoanID (Primary Key).
  + LoanType
  + Acc\_HolderID (Foreign Key).
  + Employee\_ID(Foreign Key)
  + Amount

**Relationships**

**Bank to Branches: One-to-Many**

**Branches to AccountInfo: One-to-Many**

**Account\_Holder to AccountInfo: One-to-Many**

**Branches to Employees: One-to-Many**

**AccountInfo to Transactions: One-to-Many**

**Account\_Holder to Loan: One-to-Many**

**Employee to Loan : one-to-Many**

**ER Diagram:**

BRANCHES

HAS

Bank

HAD

MAINTAiN

ACCOUNT\_HOLDER

TAKE

LOAN

PROVIDE

EMPLOYEE

ACCOUNTS

HAS

AVILABLE

TRANSACTION

