SmartBank Database System

Table Structure

1. Customers Table

Attribute	Datatype	Description
Customer_ID	INT	Primary Key, Auto-Increment
Name	VARCHAR(100)	Full Name of the Customer
Address	VARCHAR(100)	Residential Address
Phone_Number	INT(10)	10-digit Phone Number
Email	VARCHAR(100)	Email Address
Date_Of_Birth	DATE	Date of Birth
National_ID	VARCHAR(20)	Unique National ID Number

2. Accounts Table

Attribute	Datatype	Description
Account_ID	INT	Primary Key, Auto-Increment
Customer_ID	INT	Foreign Key from Customers
Account_Type	ENUM('Savings', 'Current')	Type of Account
Balance	DECIMAL(15, 2)	Account Balance
Opening_Date	DATE	Account Creation Date
Branch_Name	VARCHAR(50)	Name of the Branch associated with the account

3. Transactions Table

Attribute	Datatype	Description
Transaction_ID	INT	Primary Key, Auto-Increment
Account_ID	INT	Foreign Key from Accounts
Transaction_Date	DATETIME	Date and Time of Transaction
Transaction_Type	ENUM('Deposit', 'Withdrawal', 'Transfer')	Type of Transaction
Amount	DECIMAL(15, 2)	Transaction Amount
Transaction_Mode	ENUM('Branch', 'ATM', 'Mobile', 'Online')	Status of Transaction
Remarks	VARCHAR(100)	Remarks

4. Loans Table

Attribute	Datatype	Description
Loan_ID	INT	Primary Key, Auto-Increment
Customer_ID	INT	Foreign Key from Customers
Loan_Type	ENUM('Home', 'Education', 'Personal', 'Vehicle', 'Car', 'Business')	Type of Loan
Loan_Amount	DECIMAL(15, 2)	Loan Amount
Interest_Rate	DECIMAL(5, 2)	Interest Rate (e.g., 7.5%)
Start_Date	DATE	Loan Start Date
End_Date	DATE	Loan End Date

5. Branches Table

Attribute	Datatype	Description
Branch_ID	INT	Primary Key, Auto-Increment
Branch_Name	VARCHAR(100)	Name of the Branch
City	VARCHAR(100)	City where the branch is located
State	VARCHAR(100)	State where the branch is located
Zip_Code	INT (10)	Zip Code for the branch location
Manager_Name	VARCHAR(100)	Name of the Branch Manager
Established_Date	DATE	Date when the branch was established

6. Employees Table

Attribute	Datatype	Description
Employee_ID	INT	Primary Key, Auto-Increment
Name	VARCHAR(100)	Full Name of the Employee
Position	VARCHAR(50)	Job Title/Role
Branch_ID	INT	Foreign Key from Branches
Hire_Date	DATE	Date the Employee was Hired
Salary	DECIMAL(15, 2)	Salary of the Employee
Contact_Number	INT(10)	Phone Number of the Employee
Email	VARCHAR(100)	Email Address of the Employee

7. Products Table

Attribute	Datatype	Description
Product_ID	INT	Primary Key, Auto-Increment
Product_Name	VARCHAR(100)	Name of the Product
Product_Type	ENUM('Credit Card', 'Debit Card', 'Fixed Deposit', etc.)	Type of Product
Interest_Rate	DECIMAL(5, 2)	Interest Rate (if applicable)
Minimum_Balance	DECIMAL(15, 2)	Minimum Balance required for the product
Bank_ID	INT	Foreign Key from Banks
Branch_ID	INT	Foreign Key from Branches
Launch_Date	DATE	Date when the product was launched

8. Documents Table

Attribute	Datatype	Description
Document_ID	INT	Primary Key, Auto-Increment
Document_Type	VARCHAR(100)	Type of Document
Associated_With	VARCHAR(100)	Entity the document is associated with (e.g., 'Customer')
Associated_ID	INT	ID of the associated entity (e.g., Customer_ID)
Upload_Date	DATE	Date of Document Upload
Expiry_Date	DATE	Expiry Date of the Document (if applicable)
Verified	ENUM('Yes', 'No')	Verification Status of the Document

9. Audit Logs Table

AuditLogs Table

Attribute	Datatype	Description
Log_ID	INT	Primary Key, Unique identifier for each log entry
Entity_Type	VARCHAR(50)	The type of entity being logged (e.g., Customer, Loan, Branch, etc.)
Employee_ID	INT	The ID of the employee performing the action (linked to the Employees table)
Action_Type	ENUM('INSERT', 'UPDATE', 'DELETE')	The type of action performed (e.g., INSERT, UPDATE, DELETE)
User_ID	INT	ID of the user performing the action
Timestamp	DATETIME	The date and time of the logged action

10. Cards Table

Manages debit and credit card information linked to accounts.

Attribute	Datatype	Description
Card_ID	INT (PK)	Unique identifier for each card
Account_ID	INT (FK)	References Accounts.Account_ID
Card_Type	ENUM('Debit', 'Credit')	Type of card
Card_Number	CHAR(16)	16-digit card number
Expiry_Date	DATE	Expiry date of the card
CVV	CHAR(3)	Card verification value (CVV)
Issued_Date	DATE	Date the card was issued
Card_Status	ENUM('Active', 'Blocked', 'Expired')	Status of the card

11. Insurance Table

Tracks insurance policies offered to customers.

Attribute	Datatype	Description
Policy_ID	INT (PK)	Unique identifier for each policy
Customer_ID	INT (FK)	References Customers.Customer_ID
Policy_Type	ENUM('Life', 'Health', 'Travel', 'Vehicle')	Type of insurance
Premium_Amount	DECIMAL(15, 2)	Monthly premium payment
Coverage_Amount	DECIMAL(15, 2)	Total coverage provided
Start_Date	DATE	Policy start date
End_Date	DATE	Policy end date
Policy_Status	ENUM('Active', 'Lapsed', 'Cancelled')	Status of the policy

Queries need to be done by today:

1. Create a database named **SmartBank**.
2. Define three schemas within the **SmartBank** database:
   - **Customer_Account**
   - **Customer_Offerings**
   - **Branch_Operations**
3. For each schema, create the corresponding tables based on the provided table structures.