PRODUCT DISSECTION – STATE BANK OF INDIA

Company Overview:

State Bank of India (SBI), founded in 1955, is India's largest and oldest public sector bank, with a legacy spanning over two centuries. Originally established as the Bank of Calcutta in 1806, it was renamed the State Bank of India in 1955, following its nationalization by the Government of India. Headquartered in Mumbai, SBI has emerged as a major player in the global banking landscape, providing a wide range of banking and financial services, including retail banking, corporate banking, treasury operations, and more.

With a vast network of over 22,000 branches and 58,000 ATMs across India, SBI serves millions of customers both domestically and internationally. Known for its strong digital initiatives and customer-centric approach, SBI continues to innovate by integrating cutting-edge technologies, like mobile banking and digital payments, into its operations. As a pioneer in the Indian banking sector, SBI remains committed to driving financial inclusion and economic development, catering to the diverse needs of its customers and contributing significantly to India's growth story.

Product Dissection and Real-World Problems Solved by State Bank of India (SBI):

State Bank of India (SBI), India's biggest public sector bank, plays a key role in solving real-life financial problems through its wide range of products and services. With a strong presence in cities and villages, SBI helps make banking accessible to millions, including those in remote areas. By offering a large network of branches and digital services, SBI tackles the issue of limited access to banking, allowing people and businesses to manage their money more easily.

SBI offers many innovative products to meet different customer needs. For example, the **YONO (You Only Need One)** app brings together various banking and lifestyle services in one place, making it easier for customers to manage their finances. YONO solves the problem of having to use multiple apps by combining banking, shopping, investments, and loans into a single app, encouraging more people to use digital banking.

SBI also has different financial products for different types of customers. The **SBI Savings Account** helps people save money by offering good interest rates, easy digital management, and extra benefits like insurance and reward points. This product makes saving money simple and accessible, especially for those who are less familiar with banking.

SBI provides specialized loan products, such as **SBI Home Loans**, **SBI Education Loans**, and **SBI SME Loans**, which cater to the needs of homebuyers, students, and small businesses. These loans come with competitive interest rates, flexible repayment options, and easy digital processing, making it simpler for people to get the financial support they need. This helps customers achieve their dreams, whether it's buying a home, getting an education, or growing a business.

Product Dissection

Brand Ambassador: <u>Mahendra Singh Dhoni</u> (Former Indian Cricket Team captain)

Brand Ambassador

Case Study: How SBI Solves Real-World Problems

The State Bank of India (SBI), the largest public sector bank in India, has been tackling real-world challenges through a variety of banking services and innovative solutions. By understanding its customers' diverse needs and using technology, SBI has positioned itself as a customer-focused bank that promotes financial inclusion, supports economic growth, and provides secure and easy banking services to millions of people.

Problem 1: Limited Access to Banking in Rural Areas

Real-World Challenge:

Many people in rural areas of India have limited access to formal banking services, making it difficult for them to manage their finances and participate in the economy.

SBI's Solution:

SBI has expanded its reach by establishing over 22,000 branches and 58,000 ATMs, especially in rural and semi-urban areas. The bank has also introduced initiatives like SBI Kiosk Banking and Customer Service Points (CSPs) to bring banking services to remote regions. Additionally, the YONO (You Only Need One) app offers a range of banking services on mobile devices, allowing rural customers to access banking without needing to visit a branch. These efforts have helped millions of rural residents open accounts, access loans, and participate in the formal economy.

Problem 2: Need for Digital Banking Services

Real-World Challenge:

With the rise of digital transactions, there is a growing demand for secure, easy-to-use digital banking services that are accessible anytime, anywhere.

SBI's Solution:

SBI has embraced digital transformation with innovative products like the YONO app, which provides a one-stop solution for various banking needs, including payments, investments, insurance, loans, and online shopping. The bank has also enhanced security through features like two-factor authentication and biometric verification to ensure safe digital transactions. These steps have made digital banking more convenient and secure, meeting the needs of modern customers.

Problem 3: Lack of Financial Knowledge

Real-World Challenge:

Many people, particularly in rural and low-income areas, lack basic financial knowledge, which limits their access to banking services and leaves them vulnerable to exploitation.

SBI's Solution:

SBI has set up Financial Literacy Centers (FLCs) and launched initiatives like the SBI Youth for India Fellowship to educate people about basic banking, financial planning, and investments. These programs aim to raise awareness about savings, credit, insurance, and digital banking, especially among women, small farmers, and entrepreneurs. By promoting financial literacy, SBI empowers people to make informed financial decisions and reduces their reliance on informal credit sources.

Problem 4: Supporting Small and Medium Enterprises (SMEs)

Real-World Challenge:

SMEs often struggle to access affordable credit, limiting their ability to grow, create jobs, and contribute to the economy.

SBI's Solution:

SBI offers specialized financial products like SME Smart Score, e-MUDRA loans, and working capital finance to provide quick, easy, and collateral-free credit to small businesses. The bank also offers advisory services, digital platforms, and access to government schemes like Make in India and Atmanirbhar Bharat to help SMEs achieve their business goals.

Problem 5: Improving Operational Efficiency

Real-World Challenge:

Banks face the challenge of maintaining efficiency while handling a large number of transactions and complying with regulations, which can be costly and time-consuming.

SBI's Solution:

SBI uses technology to improve efficiency by automating processes, using core banking solutions (CBS), and employing data analytics to streamline operations. The bank also uses Artificial Intelligence (AI) and Machine Learning (ML) to improve customer service with chatbots, automated responses, and predictive analytics. These innovations reduce costs, minimize errors, and speed up services, leading to better customer satisfaction.

Conclusion:

SBI's growth as India's largest public sector bank shows its dedication to solving real-world problems with practical and innovative solutions. From expanding banking access in rural areas and promoting digital services to supporting SMEs and improving operational efficiency, SBI continues to adapt to the needs of its customers, playing a crucial role in India's economic development.

Top Features of SBI Online Banking:

1. **User Profiles**: SBI Online Banking allows users to create personal profiles for both personal and corporate banking. Users can manage their accounts, set up secure login credentials, and maintain their personal information, including names, addresses, and contact details. The personalized profile ensures secure access and reflects each user's unique banking needs.
2. **Banking Transactions**: One of the core features of SBI Online Banking is the ability to perform various banking transactions, including fund transfers, bill payments, and loan management. Users can conveniently transfer money to any bank account, pay utility bills, or recharge mobile phones, all from their online account.
3. **Interactions and Support**: SBI Online Banking provides a robust support system to ensure a seamless banking experience. Users can access 24/7 customer support, view detailed transaction histories, and receive instant alerts via SMS or email for every transaction, enhancing security and transparency.
4. **Account Management**: The platform enables users to efficiently manage their accounts by viewing balances, downloading statements, and tracking expenses. The "Savings Goals" feature helps users plan and achieve their financial objectives, while options for fixed deposits, recurring deposits, and investment products cater to various financial needs.
5. **Explore Banking Options**: SBI Online Banking offers personalized suggestions and tailored recommendations based on user preferences and behavior. This feature helps users discover relevant banking products, such as loans, credit cards, and investment plans, that align with their financial goals.
6. **Secure Login Types**: SBI provides two distinct types of logins for different banking needs:
    o **Personal Banking**: Designed for individual users, this login type offers access to a wide range of personal banking services, such as savings accounts, fixed deposits, personal loans, and more.
    o **Corporate Banking**: This login type caters to businesses and corporate clients, offering services such as cash management, bulk transactions, and corporate loan management, with advanced security measures to protect sensitive financial data.
7. **Enhanced Security**: SBI Online Banking emphasizes security with features such as two-factor authentication, OTP (One-Time Password) verification, and biometric login options. The platform also offers secure methods for managing and updating passwords to ensure the safety of user accounts.
8. **Accessibility and Convenience**: With a user-friendly interface and mobile app, SBI Online Banking ensures that users can access their accounts anytime, anywhere. The app is compatible with both Android and iOS devices, offering a seamless banking experience on the go.

◉ SBI

Schema Description:

The State Bank of India schema encompasses a comprehensive set of entities designed to manage various aspects of banking operations and customer interactions. It includes the **Customer** table for capturing essential details about each customer, the **DemandDraft** table for tracking demand drafts, and the **Deposit** table for managing customer deposits. The **FixedDeposit** table handles fixed deposits with relevant details, while the **DigiLocker** table tracks documents uploaded by customers. The **FinancialGoals** table records customers' financial aspirations, and the **Insurance** table maintains policy information. The **InterestRate** table documents applicable rates, and the **Liabilities** table captures customer liabilities. The **Loan** table manages various loan details, complemented by the **LoanClosure** table for tracking closures. The **MutualFund** table records mutual fund investments, while the **Nominee** table maintains nominee details. The **PaymentModes** table lists available payment methods, and the **PensionSlip** table tracks pension payments. The **RecurringDeposit** table promotes regular savings, and the **SafeDepositLocker** table records locker rentals. The **StandingInstruction** table handles automatic transactions, while the **TaxFiling** and **TDS** tables assist in tax management. The **Transaction** table records all customer transactions, with the **TransactionLimit** table setting limits for security. The **TransactionAudit** table maintains audit logs, and the **TransferOfAccount** table records account transfers, while the **Withdrawal** table manages withdrawal transactions. Together, these tables effectively manage the diverse needs of banking operations, enhance customer service, and ensure a secure banking experience for State Bank of India customers.

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Sample Database for Dissection: **sbi_pb**

Link

Abbreviations Entity:

- **AbbreviationID (Primary Key)**: A unique identifier for each abbreviation.
- **Abbreviation**: The abbreviation itself.
- **FullForm**: The complete form of the abbreviation.

Account Entity:

- **AccountID (Primary Key)**: A unique identifier for each account.
- **CustomerID (Foreign Key)**: References the associated customer.
- **AccountNumber**: The unique number assigned to the account.
- **AccountTypeID (Foreign Key)**: References the type of account.
- **IFSCCode**: The Indian Financial System Code for electronic fund transfers.
- **MICRCode**: The Magnetic Ink Character Recognition code for bank branch identification.
- **BranchName**: The name of the branch where the account is held.
- **BranchTelephoneNumber**: Contact number for the branch.
- **Balance**: The current balance of the account.
- **DateOpened**: The date the account was opened.
- **Status**: The current status of the account (active, inactive, etc.).
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.

AccountTypes Entity:

Account types categorize the different types of accounts available.

- **AccountTypeID (Primary Key)**: A unique identifier for each account type.
- **TypeName**: The name of the account type (e.g., savings, current).
- **Description**: A description of the account type.

Assets Entity:

Assets represent various financial assets owned by customers.

- **AssetID (Primary Key)**: A unique identifier for each asset.
- **CustomerID (Foreign Key)**: References the owner of the asset.
- **AssetType**: The type of asset (e.g., property, vehicle).
- **AssetValue**: The current value of the asset.
- **PurchaseDate**: The date the asset was purchased.
- **Status**: The current status of the asset.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the asset.

Banks Entity:

Banks are entities that hold various accounts and facilitate transactions.

- **BankID (Primary Key)**: A unique identifier for each bank.
- **BankName**: The name of the bank.
- **IFSCCode**: The Indian Financial System Code for the bank.
- **Branch**: The branch of the bank.
- **Address**: The address of the bank.
- **ContactNumber**: Contact number for the bank.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.

Bonds Entity:

Bonds represent fixed-income investments made by customers.

- **BondID (Primary Key)**: A unique identifier for each bond.
- **CustomerID (Foreign Key)**: References the owner of the bond.
- **BondType**: The type of bond (e.g., government, corporate).
- **InvestmentAmount**: The amount invested in the bond.
- **MaturityAmount**: The amount to be received at maturity.
- **Status**: The current status of the bond.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the bond.

Branches Entity:

Branches represent different locations of banks where customers can access services.

- **BranchID (Primary Key)**: A unique identifier for each branch.
- **BankID (Foreign Key)**: References the associated bank.
- **BranchName**: The name of the branch.
- **Address**: The address of the branch.
- **ContactNumber**: Contact number for the branch.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.

Certificate Entity:

Certificates represent various financial certificates issued to customers.

- **CertificateID (Primary Key)**: A unique identifier for each certificate.
- **CustomerID (Foreign Key)**: References the owner of the certificate.
- **CertificateType**: The type of certificate (e.g., fixed deposit).
- **IssueDate**: The date the certificate was issued.
- **ExpiryDate**: The date the certificate expires.
- **Status**: The current status of the certificate.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the certificate.

Chequebook Entity:

Chequebooks are linked to customer accounts and record issued cheques.

- **ChequebookID (Primary Key)**: A unique identifier for each chequebook.
- **AccountID (Foreign Key)**: References the associated account.
- **IssueDate**: The date the chequebook was issued.
- **NumberOfLeaves**: The total number of leaves in the chequebook.
- **Status**: The current status of the chequebook.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the chequebook.

CrossSellOffer Entity:

Cross-sell offers provide promotional offers to customers for additional products.

- **OfferID (Primary Key)**: A unique identifier for each offer.
- **CustomerID (Foreign Key)**: References the customer receiving the offer.
- **OfferType**: The type of offer (e.g., loan, insurance).
- **OfferDetails**: Details about the offer.
- **Status**: The current status of the offer.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the offer.

Customer Entity:

Customers are the primary users of the financial system.

- **CustomerID (Primary Key)**: A unique identifier for each customer.
- **FirstName**: The customer's first name.
- **MiddleName**: The customer's middle name.
- **Surname**: The customer's surname.
- **SpouseName**: The spouse's name, if applicable.
- **DateOfBirth**: The customer's date of birth.
- **BloodGroup**: The customer's blood group.
- **MobileNumber**: The customer's mobile number.
- **EmailID**: The customer's email address.
- **NomineeDetails**: Details about the nominee.
- **KYCStatus**: The Know Your Customer status.
- **PermanentAddress**: The customer's permanent address.

- **CurrentAddress**: The customer's current address.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the customer.

DemandDraft Entity:

Demand drafts are negotiable instruments issued against a bank account.

- **DemandDraftID (Primary Key)**: A unique identifier for each demand draft.
- **AccountID (Foreign Key)**: References the associated account.
- **Amount**: The amount of the demand draft.
- **IssuedDate**: The date the demand draft was issued.
- **BeneficiaryName**: The name of the beneficiary.
- **BranchName**: The name of the branch issuing the demand draft.
- **Status**: The current status of the demand draft.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the demand draft.

Deposit Entity:

Deposits represent funds added to customer accounts.

- **DepositID (Primary Key)**: A unique identifier for each deposit.
- **AccountID (Foreign Key)**: References the associated account.
- **DepositDate**: The date the deposit was made.
- **DepositAmount**: The amount deposited.
- **DepositType**: The type of deposit (e.g., cash, cheque).
- **Status**: The current status of the deposit.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the deposit.

DigiLocker Entity:

DigiLocker stores digital documents for customers.

- **DigiLockerID (Primary Key)**: A unique identifier for each DigiLocker entry.
- **CustomerID (Foreign Key)**: References the owner of the DigiLocker.
- **DocumentType**: The type of document stored.
- **UploadDate**: The date the document was uploaded.
- **Status**: The current status of the DigiLocker entry.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the DigiLocker.

FinancialGoals Entity:

Financial goals represent the objectives set by customers for their finances.

- **GoalID (Primary Key)**: A unique identifier for each goal.
- **CustomerID (Foreign Key)**: References the customer setting the goal.
- **GoalType**: The type of financial goal (e.g., retirement, education).
- **TargetAmount**: The amount to be saved or invested.
- **AchievedAmount**: The amount already saved or invested.
- **TargetDate**: The date by which the goal should be achieved.

- **Status**: The current status of the goal.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the goal.

Funds Entity:

Funds represent various financial funds available for investment.

- **FundID (Primary Key)**: A unique identifier for each fund.
- **FundType**: The type of fund (e.g., mutual fund, hedge fund).
- **InvestmentAmount**: The amount invested in the fund.
- **CurrentValue**: The current value of the fund.
- **Status**: The current status of the fund.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the fund.

FixedDeposit Entity:

Fixed deposits represent a type of savings account with a fixed interest rate.

- **FixedDepositID (Primary Key)**: A unique identifier for each fixed deposit.
- **CustomerID (Foreign Key)**: References the owner of the fixed deposit.
- **DepositAmount**: The amount deposited.
- **InterestRate**: The interest rate for the deposit.
- **MaturityDate**: The date the deposit matures.
- **Status**: The current status of the fixed deposit.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the fixed deposit.

InvestmentEntity:

Investments represent the various investment options available to customers.

- **InvestmentID (Primary Key)**: A unique identifier for each investment.
- **CustomerID (Foreign Key)**: References the owner of the investment.
- **InvestmentType**: The type of investment (e.g., stocks, bonds).
- **InvestmentAmount**: The amount invested.
- **CurrentValue**: The current value of the investment.
- **Status**: The current status of the investment.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the investment.

Loan Entity:

Loans represent borrowed funds that customers can access.

- **LoanID (Primary Key)**: A unique identifier for each loan.
- **CustomerID (Foreign Key)**: References the borrower of the loan.
- **LoanAmount**: The amount borrowed.
- **InterestRate**: The interest rate for the loan.
- **Tenure**: The repayment tenure for the loan.
- **Status**: The current status of the loan.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the loan.

Notifications Entity:

Notifications keep customers informed about their accounts and activities.

- **NotificationID (Primary Key)**: A unique identifier for each notification.
- **CustomerID (Foreign Key)**: References the customer receiving the notification.
- **NotificationType**: The type of notification (e.g., alert, reminder).
- **NotificationDate**: The date the notification was sent.
- **Status**: The current status of the notification.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the notification.

OnlineBanking Entity:

Online banking represents the digital banking services available to customers.

- **OnlineBankingID (Primary Key)**: A unique identifier for each online banking entry.
- **CustomerID (Foreign Key)**: References the customer using online banking.
- **Username**: The username for the online banking account.
- **Password**: The password for the online banking account.
- **Status**: The current status of the online banking account.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with online banking.

Payments Entity:

Payments represent various payment transactions made by customers.

- **PaymentID (Primary Key)**: A unique identifier for each payment.
- **AccountID (Foreign Key)**: References the associated account.
- **PaymentAmount**: The amount of the payment.
- **PaymentDate**: The date the payment was made.
- **Status**: The current status of the payment.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the payment.

StandingInstruction Entity:

Standing instructions automate regular payments or transfers set by customers.

- **InstructionID (Primary Key)**: A unique identifier for each standing instruction.
- **CustomerID (Foreign Key)**: References the customer setting the instruction.
- **InstructionDetails**: Details about the standing instruction.
- **Status**: The current status of the instruction.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the instruction.

TaxFiling Entity:

Tax filings represent the tax documents filed by customers.

- **FilingID (Primary Key)**: A unique identifier for each tax filing.

- **CustomerID (Foreign Key)**: References the customer filing the taxes.
- **FilingYear**: The year for the tax filing.
- **Amount**: The amount of tax due.
- **Status**: The current status of the tax filing.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the tax filing.

TDS Entity:

Tax Deducted at Source (TDS) records the tax deducted on behalf of customers.

- **TDSID (Primary Key)**: A unique identifier for each TDS record.
- **CustomerID (Foreign Key)**: References the customer associated with the TDS.
- **TDSAmount**: The amount of TDS deducted.
- **FilingYear**: The year for the TDS filing.
- **Status**: The current status of the TDS record.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the TDS.

Transaction Entity:

Transactions represent financial transactions associated with customer accounts.

- **TransactionID (Primary Key)**: A unique identifier for each transaction.
- **AccountID (Foreign Key)**: References the account associated with the transaction.
- **TransactionType**: The type of transaction (e.g., debit, credit).
- **TransactionDate**: The date of the transaction.
- **Amount**: The amount involved in the transaction.
- **Status**: The current status of the transaction.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the transaction.

TransactionLimit Entity:

Transaction limits define the maximum allowed transactions for each account type.

- **LimitID (Primary Key)**: A unique identifier for each limit.
- **AccountTypeID (Foreign Key)**: References the account type for the limit.
- **LimitAmount**: The maximum transaction amount allowed.
- **Status**: The current status of the limit.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.

TransactionAudit Entity:

Transaction audits track changes and audits related to transactions.

- **AuditID (Primary Key)**: A unique identifier for each audit.
- **TransactionID (Foreign Key)**: References the associated transaction.
- **AuditDate**: The date the audit occurred.
- **Status**: The current status of the audit.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.

TransferOfAccount Entity:

Transfers of accounts record the movement of customer accounts.

- **TransferID (Primary Key)**: A unique identifier for each transfer.
- **CustomerID (Foreign Key)**: References the customer transferring the account.
- **OldAccountID (Foreign Key)**: References the account being transferred.
- **NewAccountID (Foreign Key)**: References the new account.
- **TransferDate**: The date of the transfer.
- **Status**: The current status of the transfer.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.

Withdrawal Entity:

Withdrawals represent funds taken out of customer accounts.

- **WithdrawalID (Primary Key)**: A unique identifier for each withdrawal.
- **AccountID (Foreign Key)**: References the associated account.
- **WithdrawalDate**: The date of the withdrawal.
- **Amount**: The amount withdrawn.
- **Status**: The current status of the withdrawal.
- **AbbreviationID (Foreign Key)**: References any relevant abbreviation.
- **AccountTypeID (Foreign Key)**: References the type of account associated with the withdrawal.

Relationships are:

- **Customers own Accounts** – Each customer can have multiple accounts, and each account belongs to one customer.
- **Customers hold Certificates** – Each customer can hold multiple certificates, and each certificate is linked to one customer.
- **Customers receive Chequebooks** – Each customer can receive multiple cheque books, and each chequebook is associated with one account.
- **Customers are offered Cross-Sell Offers** – Each customer can receive multiple cross-sell offers, and each offer can target multiple customers.
- **Customers set Financial Goals** – Each customer can set multiple financial goals, and each goal is linked to one customer.
- **Customers make Payments** – Customers can make multiple payments, and each payment is associated with one account.
- **Customers withdraw Funds** – Each customer can make multiple withdrawals, and each withdrawal is linked to one account.
- **Customers have DigiLockers** – Each customer can have multiple DigiLocker entries, and each entry belongs to one customer.
- **Customers have Investments** – Customers can have multiple investments, and each investment is linked to one customer.
- **Customers take Loans** – Each customer can take out multiple loans, and each loan is associated with one customer.
- **Customers receive Notifications** – Customers can receive multiple notifications, and each notification is directed at one customer.
- **Customers use Online Banking** – Each customer can have one online banking account, and each online banking entry is linked to one customer.
- **Accounts have Transactions** – Each account can have multiple transactions, and each transaction is associated with one account.
- **Accounts have Deposits** – Each account can receive multiple deposits, and each deposit is linked to one account.

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- **Accounts have Withdrawals** – Each account can have multiple withdrawals, and each withdrawal is linked to one account.
- **Transactions have Audits** – Each transaction can have multiple audits, and each audit is linked to one transaction.
- **Account Types define Limits** – Each account type can have multiple transaction limits, and each limit is linked to one account type.
- **Customers set Standing Instructions** – Each customer can set multiple standing instructions, and each instruction is linked to one customer.
- **Customers file Taxes** – Each customer can file multiple tax documents, and each filing is associated with one customer.
- **Customers have TDS records** – Each customer can have multiple TDS records, and each TDS record is linked to one customer.
- **Transfers of Accounts occur between Customers** – Each customer can transfer accounts, and each transfer involves one customer and two accounts (old and new).
- **Funds belong to Customers** – Each customer can invest in multiple funds, and each fund can be associated with multiple customers.
- **Deposits are linked to Certificates** – Each certificate can be associated with one or more deposits, and each deposit may relate to multiple certificates.
- **Demand Drafts are linked to Accounts** – Each account can have multiple demand drafts, and each demand draft is linked to one account.
- **Transaction Limits apply to Accounts** – Each account type can have multiple transaction limits, and each limit is defined for one account type.
- **Standing Instructions are linked to Payments** – Each standing instruction can automate multiple payments, and each payment can be a result of one standing instruction.
- **Fixed Deposits are linked to Customers** – Each customer can have multiple fixed deposits, and each fixed deposit is linked to one customer.
- **Withdrawals are recorded for Accounts** – Each account can have multiple withdrawals, and each withdrawal is associated with one account.
- **Transaction Audits track Transactions** – Each transaction can have multiple audits, and each audit is linked to one transaction.

ER Diagram:

Let's create an ER diagram that clearly shows the relationships and attributes of the entities in the banking system. This diagram will help visualize the important parts of the bank's data model. It will illustrate how various entities like Customers, Accounts, Transactions, Loans, and Assets interact with each other.

For example, customers can have multiple accounts, and each account can have various transactions, loans, and deposits associated with it. The diagram will also show how customers manage their investments, set financial goals, and use services like online banking and notifications. It will highlight the connections between banks and their branches, as well as how products like fixed deposits, bonds, and mutual funds relate to customer accounts.

By looking at this diagram, you'll get a better understanding of how the banking system works. It captures the different financial products and services and shows how they are all linked together. This will give you a clearer picture of how customers interact with the bank and the various services offered to them.

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ER Diagram: State Bank of India*

sbi_pb.loan
loanid	integer NN
customerid	integer
accountid	integer
loantype	character varying(50)
principalamount	numeric(15,2)
interestrate	numeric(5,2)
tenure	integer
emiamount	numeric(15,2)
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.fixeddeposit
depositid	integer NN
customerid	integer
depositamount	numeric(15,2)
interestrate	numeric(5,2)
maturitydate	date
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.nominee
nomineeid	integer NN
customerid	integer
nomineename	character varying(255)
relationship	character varying(50)
nomineeshare	numeric(5,2)
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.branches
branchid	integer NN
bankid	integer
branchname	character varying(255)
address	text
contactnumber	character varying(15)
abbreviationid	integer

sbi_pb.insurance
insuranceid	integer NN
customerid	integer
policynumber	character varying(50)
coverageamount	numeric(15,2)
premiumamount	numeric(15,2)
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.certificate
certificateid	integer NN
customerid	integer
certificatetype	character varying(50)
issuedate	date
expirydate	date
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.digilocker
digilockerid	integer NN
customerid	integer
documenttype	character varying(50)
uploaddate	date
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.taxfiling
filingid	integer NN
customerid	integer
filingyear	integer
filingamount	numeric(15,2)
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.payment modes
paymentmodeid	integer NN
paymentmodename	character varying(50)
abbreviationid	integer

sbi_pb.bonds
bondid	integer NN
customerid	integer
bondtype	character varying(50)
investmentamount	numeric(15,2)
maturityamount	numeric(15,2)
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.interestrate
rateid	integer NN
accounttypeid	integer
interestrate	numeric(5,2)
effectivedate	date
status	character varying(50)
abbreviationid	integer

sbi_pb.deposit
depositid	integer NN
accountid	integer
depositdate	date
depositamount	numeric(15,2)
deposittype	character varying(50)
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.abbreviations
abbreviationid	integer NN
abbreviation	character varying(10)
fullform	character varying(255)

sbi_pb.withdrawal
withdrawalid	integer NN
accountid	integer
withdrawaldate	date
withdrawalamount	numeric(15,2)
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.tds
tdsid	integer NN
customerid	integer
tdsamount	numeric(15,2)
tdsdate	date
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.recurringdeposit
depositid	integer NN
customerid	integer
depositamount	numeric(15,2)
interestrate	numeric(5,2)
maturitydate	date
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.crosselloffer
offerid	integer NN
customerid	integer
offertype	character varying(50)
offerdetails	text
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.banks
bankid	integer NN
bankname	character varying(255)
ifsccode	character varying(11)
branch	character varying(255)
address	text
contactnumber	character varying(15)
abbreviationid	integer

sbi_pb.demanddraft
demanddraftid	integer NN
accountid	integer
amount	numeric(15,2)
issueddate	date
beneficiaryname	character varying(255)
branchname	character varying(255)
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.chequebook
chequebookid	integer NN
accountid	integer
issuedate	date
numberofleaves	integer
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.financialgoals
goalid	integer NN
customerid	integer
goaltype	character varying(50)
targetamount	numeric(15,2)
achievedamount	numeric(15,2)
targetdate	date
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.liabilities
liabilityid	integer NN
customerid	integer
liabilitytype	character varying(50)
liabilityamount	numeric(15,2)
duedate	date
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.pensionslip
slipid	integer NN
customerid	integer
pensionamount	numeric(15,2)
issuedate	date
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.transaction
transactionid	integer NN
accountid	integer
transactiondate	date
amount	numeric(15,2)
transactiontype	character varying(50)
description	text
abbreviationid	integer
accounttypeid	integer

sbi_pb.assets
assetid	integer NN
customerid	integer
assettype	character varying(50)
assetvalue	numeric(15,2)
purchasedate	date
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.standinginstruction
instructionid	integer NN
accountid	integer
instructiontype	character varying(50)
amount	numeric(15,2)
frequency	character varying(50)
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.form15g15h
formid	integer NN
customerid	integer
formtype	character varying(50)
filingdate	date
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.transactionlimit
limitid	integer NN
accountid	integer
limittype	character varying(50)
limitamount	numeric(15,2)
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.loanclosure
closureid	integer NN
loanid	integer
closuredate	date
closureamount	numeric(15,2)
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.safedepositlocker
lockerid	integer NN
customerid	integer
lockernumber	character varying(20)
branchname	character varying(255)
rentamount	numeric(15,2)
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.golddeposit
depositid	integer NN
customerid	integer
goldweight	numeric(10,2)
depositamount	numeric(15,2)
maturitydate	date
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.transactionsaudit
auditid	integer NN
transactionid	integer
auditdate	date
changes	text
auditor	character varying(255)
abbreviationid	integer
accounttypeid	integer

sbi_pb.mutualfund
fundid	integer NN
customerid	integer
fundtype	character varying(50)
investmentamount	numeric(15,2)
currentvalue	numeric(15,2)
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.transferofaccount
transferid	integer NN
customerid	integer
oldbranch	character varying(255)
newbranch	character varying(255)
transferdate	date
status	character varying(50)
abbreviationid	integer
accounttypeid	integer

sbi_pb.accounttypes
accounttypeid	integer NN
typename	character varying(50)
description	text
abbreviationid	integer

sbi_pb.customer
customerid	integer NN
firstname	character varying(255)
middlename	character varying(255)
surname	character varying(255)
spousename	character varying(255)
dateofbirth	date
bloodgroup	character varying(10)
mobilenumber	character varying(15)
emailid	character varying(255)
nomineedetails	text
kycstatus	character varying(50)
permanentaddress	text
currentaddress	text
abbreviationid	integer
accounttypeid	integer

sbi_pb.account
accountid	integer NN
customerid	integer
accountnumber	character varying(20)
accounttypeid	integer
ifsccode	character varying(11)
micrcode	character varying(9)
branchname	character varying(255)
branchtelephonenumber	character varying(15)
balance	numeric(15,2)
dateopened	date
status	character varying(50)
abbreviationid	integer