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# DATABASE DESIGN FOR MOBILE BANKING APPLICATION

**MOBILE BANKING** **APPLICATION**

* **Mobile banking applications have revolutionized the way individuals manage their finances by providing convenient access to banking services directly from Smartphones and tablets. These applications enable users to perform real-time transactions such as fund transfers, bill payments, and mobile check deposits with just a few taps, eliminating the need for physical bank visits. Enhanced security features like biometric authentication ensure the protection of sensitive information, while user-friendly interfaces make it easy for everyone to navigate their accounts. Additionally, many apps include budgeting tools and real-time notifications, allowing users to track spending and stay informed about their financial status. As reliance on mobile technology grows, these applications have become essential for modern banking, empowering users to take control of their financial lives in an increasingly fast-paced world.**

# Entities :

* Users
* Account
* Transactions
* Bills
* Cards
* Loans
* Tranfers

# Attributes :

* **Users**
* User\_id
* Usename
* Password
* Email
* Phone
* **Account**
* Account\_id
* User\_id
* Account\_type
* Balance
* **Transactions**
* Transaction\_id
* Account\_id
* Transaction\_type
* Amount
* transaction\_date
* **Bills**
* Bill\_Type
* User\_id
* Bill\_ID
* Amount\_due
* Due\_date
* **Cards**
* User\_id
* Card\_number
* Card\_type
* Expiry\_date
* **Loans**
* Loan\_id
* User\_id
* Intest\_rate
* Amount
* Term
* **Transfers**
* Transfer\_id
* from\_account\_id
* to\_account\_id
* Amount
* Transfer\_date
* Status

 **Users and Accounts:**

* **Relationship:** One-to-Many
* **Explanation:** Each user can have multiple accounts (e.g., checking, savings, loans). However, each account is associated with only one user. This allows users to manage different types of accounts under a single profile.

 **Accounts and Transactions:**

* **Relationship:** One-to-Many
* **Explanation:** Each account can have multiple transactions associated with it (e.g., deposits, withdrawals, transfers). This relationship allows for detailed tracking of financial activity within each account.

 **Users and Bills:**

* **Relationship:** One-to-Many
* **Explanation:** Each user can have multiple bills they need to pay (e.g., utilities, subscriptions). Each bill is linked to one user, facilitating management of all payment obligations in one place.

  **Users and Cards:**

* **Relationship:** One-to-Many
* **Explanation:** A user can have multiple cards (e.g., debit and credit cards) associated with their accounts. Each card is linked to a specific user, allowing for easy management of card-related activities.

 **Users and Loans:**

* **Relationship:** One-to-Many
* **Explanation:** Each user can take out multiple loans (e.g., personal, mortgage, auto loans). Each loan is associated with one user, enabling easy tracking of all loan obligations.

 **Accounts and Transfers:**

* **Relationship:** One-to-Many (with respect to both from and to accounts)
* **Explanation:** Each transfer transaction is linked to two accounts: the account from which funds are being transferred and the account to which funds are being transferred. This relationship tracks the flow of money between accounts.

**Cards**

HAS

**Bills**

MAKE

**Transactions**

**Loans**

HAVE

HAVE

**Users**

**Account**

**Transfers**

DO

