Personal Finance Schema Breakdown

Here's a breakdown of your personal finance schema with detailed explanations for each table, its attributes, primary keys, and foreign keys:

1. Account Table:

* id: (INT, Primary Key) Unique identifier for each account.
* name: (VARCHAR(255)) Name of the account (e.g., Checking, Savings, Credit Card).
* type: (VARCHAR(255)) Type of account (e.g., checking, savings, investment, loan).
* balance: (DECIMAL(10,2)) Current balance of the account.
* currency: (VARCHAR(3)) Currency of the account balance (e.g., USD, EUR, CAD).

2. Transaction Table:

* id: (INT, Primary Key) Unique identifier for each transaction.
* account\_id: (INT, Foreign Key) References the id of the account involved in the transaction.
* date: (DATE) Date the transaction occurred.
* amount: (DECIMAL(10,2)) Amount of the transaction (positive for income, negative for expense).
* description: (VARCHAR(255)) Brief description of the transaction.
* payee: (VARCHAR(255)) Payee or recipient of the transaction (optional).
* category\_id: (INT, Foreign Key) References the id of the category this transaction belongs to (optional).

3. Category Table:

* id: (INT, Primary Key) Unique identifier for each category.
* name: (VARCHAR(255)) Name of the category (e.g., groceries, rent, entertainment).
* budget: (DECIMAL(10,2) Optional) Planned budget amount for this category (used for budgeting).

4. Budget Table:

* id: (INT, Primary Key) Unique identifier for each budget entry.
* category\_id: (INT, Foreign Key) References the id of the category this budget applies to.
* period: (VARCHAR(255)) Time period the budget covers (e.g., monthly, yearly).
* planned\_amount: (DECIMAL(10,2)) Planned amount to spend in this category during the specified period.

5. Goal Table:

* id: (INT, Primary Key) Unique identifier for each goal.
* name: (VARCHAR(255)) Name of the goal (e.g., save for vacation, pay off debt).
* target\_amount: (DECIMAL(10,2)) Target amount to achieve for the goal.
* deadline: (DATE) Target date by which to achieve the goal.
* account\_id: (INT, Foreign Key) Optional reference to the id of the account where the goal amount will be saved.
* category\_id: (INT, Foreign Key) Optional reference to the id of the category where the goal relates to spending.

Relationships:

* One account can have many transactions.
* One transaction belongs to one account (foreign key to Account.id).
* One transaction can belong to one category (foreign key to Category.id).
* One category can have many transactions and can be included in a budget.
* One budget applies to one category and specifies the planned spending amount for a specific period.
* One goal can be associated with one account or one category (optional foreign keys).

Further Considerations:

* You can add additional tables based on your specific needs, such as Payee, Investment, or Debt.
* The foreign keys ensure data integrity by referencing existing entries in other tables.
* You can adjust data types and constraints based on your specific requirements and database platform.

By understanding the structure and relationships within this schema, you can effectively manage your personal finances and gain valuable insights into your spending and saving habits. Remember, this is a basic framework, and you can customize it further to fit your unique financial needs and goals.

Sure! Here are all tables with attributes and primary key and foreign key:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Table | Attribute | Type | Primary Key | Foreign Key |
| Account | id | INT | Yes |  |
| Account | name | VARCHAR(255) |  |  |
| Account | type | VARCHAR(255) |  |  |
| Account | balance | DECIMAL(10,2) |  |  |
| Account | currency | VARCHAR(3) |  |  |
| Transaction | id | INT | Yes |  |
| Transaction | account\_id | INT |  | FOREIGN KEY REFERENCES Account(id) |
| Transaction | date | DATE |  |  |
| Transaction | amount | DECIMAL(10,2) |  |  |
| Transaction | description | VARCHAR(255) |  |  |
| Transaction | payee | VARCHAR(255) |  |  |
| Transaction | category\_id | INT |  | FOREIGN KEY REFERENCES Category(id) |
| Category | id | INT | Yes |  |
| Category | name | VARCHAR(255) |  |  |
| Category | budget | DECIMAL(10,2) |  | NULL |
| Budget | id | INT | Yes |  |
| Budget | category\_id | INT |  | FOREIGN KEY REFERENCES Category(id) |
| Budget | period | VARCHAR(255) |  |  |
| Budget | planned\_amount | DECIMAL(10,2) |  |  |
| Goal | id | INT | Yes |  |
| Goal | name | VARCHAR(255) |  |  |
| Goal | target\_amount | DECIMAL(10,2) |  |  |
| Goal | deadline | DATE |  |  |
| Goal | account\_id | INT |  | FOREIGN KEY REFERENCES Account(id) |
| Goal | category\_id | INT |  | FOREIGN KEY REFERENCES Category(id) |