# Database Structure

**Tables**:

* Transactions: Stores transaction details (including AccountCurrency).
* TransactionStatus: Contains possible transaction statuses (e.g., successful, failed).
* ServerURLs: Maps server URLs based on geographical location.
* Banks: Contains information about integrated banks.
* Merchants: Stores merchant details.
* Payment: Manages payment information.
* MerchantPayment: Links merchants to payment methods.
* Countries: Holds country data for risk analysis.
* Users: Stores user information.
* Reports: Keeps records of reports generated.
* RiskManagement: Contains risk-related information.
* AuditLogs: Records audit trails for transactions.

**Table Relationship Overview**

1. **Users Table**: Stores user details.
2. **Merchants Table**: Stores merchant details and links to their country.
3. **Banks Table**: Stores bank details and links to the country.
4. **Countries Table**: Stores country information (e.g., name and ISO code).
5. **Payment Table**: Stores available payment types.
6. **MerchantPayment Table**: Stores the relationships between merchants and accepted payment types (many-to-many relationship).
7. **Transactions Table**: Stores transaction records, linking users, merchants, and banks with a foreign key to the payment type.
8. **TransactionStatusTable**: Logs the status of a transaction and any status messages.
9. **ServerURLsTable**: Maps a country to its server URL.
10. **RiskManagement Table**: Logs risk evaluations for transactions (e.g., high-risk and fraud flags).
11. **Reports Table**: Summarizes daily reports for transactions.
12. **AuditLogs Table**: Tracks actions (like transaction approvals, cancellations) for auditing purposes.

**Relations between PK and FK**

* **Users (PK)** <--> **Transactions.UserId (FK)**
* **Merchants (PK)** <--> **Transactions.MerchantId (FK)**
* **Banks (PK)** <--> **Transactions.BankId (FK)**
* **Countries (PK)** <--> **Merchants.CountryId (FK)**
* **Countries (PK)** <--> **Banks.CountryId (FK)**
* **Transactions (PK)** <--> **TransactionStatusTable.TransactionId (FK)**
* **Transactions (PK)** <--> **RiskManagement.TransactionId (FK)**
* **Transactions (PK)** <--> **AuditLogs.TransactionId (FK)**

