

ATM System ER Diagram

The **ER diagram for ATM management system** shows the relationships of the **ATM transaction and process** entities that build its **database design**. This ER diagram is done by identifying the ATM transaction process entities, their properties, and the interactions between them.

The **ATM machine system database design** is sketched out using **ER (entity-relationship) diagram**. This sketch becomes the actual basis of the system's data storage that will serve as data destination and source.

ATM Machine Transaction Features

- **ATM Machine Management** - ATM management can keep track of the status and the transactions in the devices. It can also assist and help manage cash more efficiently, evaluate transaction data, spot potential fraud, keep track of transactions, and coordinate servicing.
- **Customer Management** - This feature aids banks in managing clients and better understanding their demands so that the proper solutions can be provided swiftly. This also enables the bank to identify, segment, communicate with, and create long-term relationships with clients on a per-customer basis.
- **Manage Reports** - This reports management will help the bank admin to have the timely and relevant information which are needed for monitoring purposes. It could also help in tracing every transaction done in the system. Managing the Reports will provide security to the valuable information that may be used to generate future projections and improve customer services.
- **Manage Customer Transactions** - Customer transactions management is in charge of creating and associating transaction activities up-to-date. This feature will also help the admin when there are issues on the customers' side and ensure the given cards were all working.
- **Transaction and Reports Management** - This feature will store the transactions made by the customers including their information and the reports of every transaction and timetable.

What is an ER Diagram?

In DBMS, the **ER Diagram of ATM machine system** is also known as the **ATM transaction process database design**. It is the graphical depiction of relationships between all the entities involved in the system. Its major components are Entities, Attributes, and Relationships.

To build and troubleshoot relational databases, the **ATM management system ER Diagram** is used. It works best with DFD (Data Flow Diagram), which is responsible for data movement. Developing the **database design for ATM system** would be much easier with the help of ER diagram.

Importance of ER Diagram

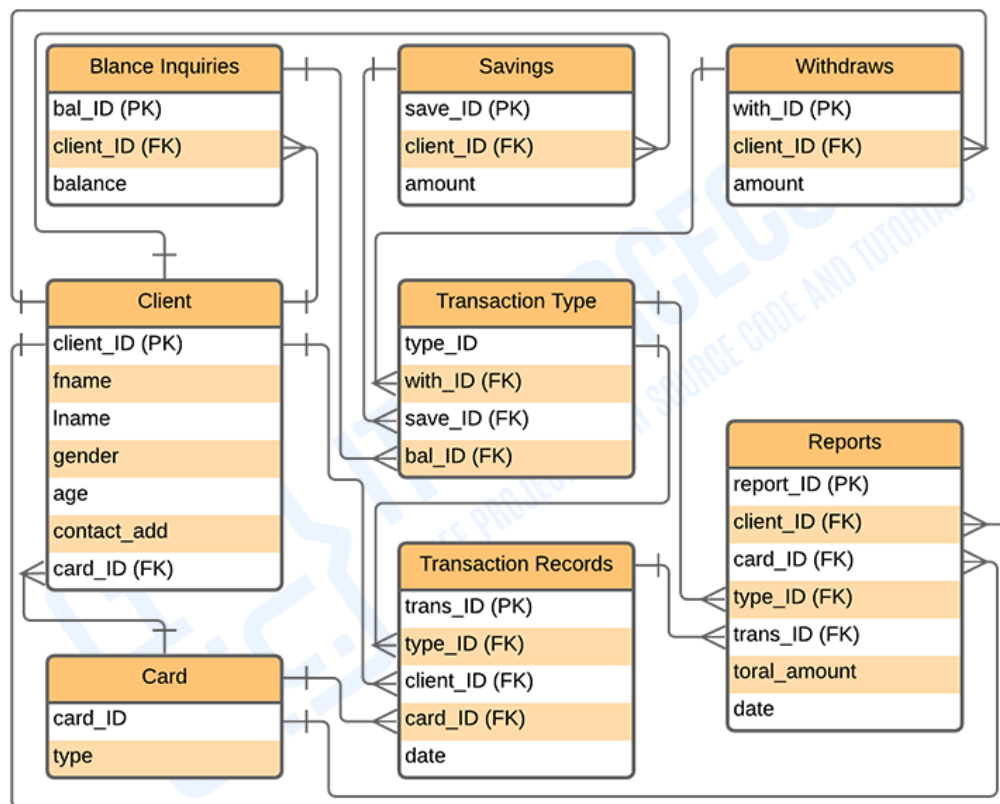
The **importance of ER diagram for ATM machine system** is to help in modeling its data storage or database. It is the basis of the project's database foundation for construction. The **ATM system entity-relationship diagram (ERD)** also aids in defining the data types to be stored such as their attributes and characteristics.

All other real-world projects are presented with ER Diagrams (database designs). To display the details and attributes of a data store, the **er diagram for ATM management system** is used in conjunction with its data flow diagram. It visualizes how data is connected generically.

ERD (Entity-relationship diagram) is utilized in software engineering during the planning phase of software development. It aids in the identification of various system constituents and their interrelationships. **ATM Management System ERD** is also used as the foundation of the ATM system DFD (Dataflow Diagram).

ER Diagram for ATM Management System

The ERD or **ER Diagram for ATM System** shows the system entity relationships in each entity and their supposed functions in each relationship. Now here's the sample ER Diagram of ATM Management System.



ATM Management System ER Diagram

Based on the image above, the **Entity-Relationship (ER) Diagram for ATM Machine** is the blueprint of the **ATM Transaction Process database**, and these are presented in **tables**. The tables are made to meet the required specification of the system and provide much more specific details of each entity within the system. The purpose of this ER Diagram is to fully understand the ATM Management System as well as the relationships of tables in the project database design.

ATM Management System Database Design

This **ATM System database design** was made based on ATM processing requirements. The system can secure and monitor the activities or transactions of the card holders. The bank admin can have access to the clients' status during checking of transactions. All in all, they can handle and secure the client's every activity.

The features included in this ATM Management system's ERD were the security and monitoring of the card holders' transaction records and status. These features were also listed and recorded in reports that served as the history of all the activities done in the system.

ATM Management System ER Diagram (ERD) Tables

These tables below provide the complete database table details such as **Field Name, Descriptions, data types, and character lengths**. Each of these tables represents the characteristics and the attributes of data storage.

The **field** column presents the names of each database's attributes, the **description** column gives the complete thought of each attribute, the **type** column is their data type and the **length** is for their character lengths.

Table Name: Client

Field	Description	Type	Length
client_ID (PK)	Client ID	Int	11
fname	Client First Name	Varchar	255
lname	Client Last Name	Int	11
gender	Client Gender	Text	
age	Client Age	Int	11
contact_add	Contact Address	Int	11

Table Name: Card

Field	Description	Type	Length
card_ID (PK)	Card ID	Int	11
card_number	Card Number	Int	11

Table Name: Balance Inquiries

Field	Description	Type	Length
bal_ID (PK)	Balance ID	Int	11

client_ID (FK)	Client ID	Int	11
card_ID (FK)	Card ID	Int	11
balance	Remaining Balance	Int	11

Table Name: Withdraws

Field	Description	Type	Length
with_ID (PK)	Withdraws ID	Int	11
client_ID (FK)	Client ID	Int	11
card_ID (FK)	Card ID	Int	11
Amount	Amount	Int	11

Table Name: Savings

Field	Description	Type	Length
save_ID (PK)	Withdraws ID	Int	11
client_ID (FK)	Client ID	Int	11
card_ID (FK)	Card ID	Int	11
Amount	Amount	Int	11

Table Name: Transaction Records

Field	Description	Type	Length
trans_ID (PK)	Transaction ID	Int	11
type_ID (FK)	Transaction Type	Int	11
client_ID (FK)	Client ID	Int	11
date	Date of Transaction	Date	

Table Name: Transaction Type

Field	Description	Type	Length
type_ID (PK)	Transaction Type ID	Int	11
name_ID (FK)	Transaction Name ID	Int	11

Table Name: Reports

Field	Description	Type	Length
report_ID	Report ID	Int	11
client_ID (FK)	Client ID	Int	11
card_ID (FK)	Card ID	Int	11
trans_ID (FK)	Transaction ID	Int	11
type_ID (FK)	Type ID	Int	11
total_amount	Total Amount	Int	11
date	Date of Report	Date	

The tables given will be the basis for developers on how would they do the **ATM management system database design**. It has the complete description of the database and they will put this into the program or data storage the same as the names given to each of the tables. They will create a database with the attributes given as well as the value of each attribute.