

ATM SYSTEM - SAP ABAP PROJECT

Project Features

For Customers:

- Login using Card Number & PIN
- Check Account Balance
- Withdraw Money (Only if sufficient funds and available banknotes exist)
- Deposit Money
- View Transaction History

For Bank Employees:

- Login using Employee ID & Password
- Load Money into ATM
- Check ATM Details (Available cash and banknotes)
- Enable/Disable ATM
- View ATM Transactions

System Flow

Customer Flow:

Login: Enter Card Number & PIN (Validates from the zbank_card_table).

Select Action:

- Check Balance (Fetch from the zbank_account_table).
- Withdraw Money (Deduct amount, verify banknotes in the zbank_atm_cash_table).
- Deposit Money (Add amount to the zbank_account_table).
- View Transactions (Display from the zbank_transactions_table).

Bank Employee Flow:

Login: Enter Employee ID & Password (Validates from the zbank_employee_table).

Select Action:

- Load Money into ATM (Update zbank_atm_cash_table).

- Check ATM Details (View available banknotes and balance from zbank_atm_cash_table).
- Enable/Disable ATM (Update zbank_atm_machine_table status to active/inactive).
- View ATM Transactions (Fetch from zbank_transactions_table).

SAP ABAP Development Requirements

Database Tables and Their Purpose

Table Name	Purpose
zbank_customer_table	Stores customer details.
zbank_account_table	Stores account details.
zbank_card_table	Stores card details.
zbank_transactions_table	Stores transaction logs.
zbank_atm_machine_table	Stores ATM details.
zbank_atm_cash_table	Tracks ATM banknotes.
zbank_employee_table	Stores Employee login details.

Table Relationships

- zbank_customer_table links to zbank_account_table via Customer ID.
- zbank_card_table links to zbank_customer_table.
- zbank_account_table updates on transactions.
- zbank_transactions_table logs account changes.
- zbank_atm_cash_table manages banknotes.
- zbank_atm_machine_table maintains ATM status.
- zbank_employee_table manages ATM operations.

Logic for Deposit & Withdrawal Handling

Deposit Logic:

- User deposits an amount.
- The system adds the amount to their zbank_account_table.
- The system updates the zbank_atm_cash_table to reflect the added banknotes.

Withdrawal Logic & Affected Tables:

User enters withdrawal amount.

System Validations:

- Check balance in zbank_account_table.
- Verify ATM cash in zbank_atm_machine_table.
- Ensure correct denominations in zbank_atm_cash_table.

Process Withdrawal:

- Deduct from zbank_account_table.
- Reduce banknotes in zbank_atm_cash_table.
- Update ATM balance in zbank_atm_machine_table.

Record Transaction in zbank_transactions_table.

Dispense Cash & Confirm Transaction.

- If insufficient banknotes, transaction fails.
- If ATM runs out of cash, update zbank_atm_machine_table.

Error Handling & Additional Considerations:

- If a withdrawal request cannot be fulfilled due to insufficient denominations, prompt the user.
- If the ATM has insufficient cash, trigger an alert for employee refilling.
- Transaction logs track cash movements for audit.