-- Account Table

CREATE TABLE Accounts (

AccountID INT PRIMARY KEY,

Balance DECIMAL(10, 2) DEFAULT 0

);

-- Transaction History Table

CREATE TABLE Transaction\_History (

TransactionID INT AUTO\_INCREMENT PRIMARY KEY,

AccountID INT,

TransactionType VARCHAR(50),

Amount DECIMAL(10, 2),

TransactionDate TIMESTAMP DEFAULT CURRENT\_TIMESTAMP

);

Stored Procedures

1. Deposit Procedure

DELIMITER //

CREATE PROCEDURE Deposit(IN accID INT, IN amt DECIMAL(10, 2))

BEGIN

-- Increase balance

UPDATE Accounts SET Balance = Balance + amt WHERE AccountID = accID;

-- Log transaction

INSERT INTO Transaction\_History (AccountID, TransactionType, Amount)

VALUES (accID, 'Deposit', amt);

END //

## DELIMITER ;

## Withdrawal Procedure

DELIMITER //

CREATE PROCEDURE Withdraw(IN accID INT, IN amt DECIMAL(10, 2))

BEGIN

-- Check balance

IF (SELECT Balance FROM Accounts WHERE AccountID = accID) >= amt THEN

-- Decrease balance

UPDATE Accounts SET Balance = Balance - amt WHERE AccountID = accID;

-- Log transaction

INSERT INTO Transaction\_History (AccountID, TransactionType, Amount)

VALUES (accID, 'Withdrawal', amt);

ELSE

SIGNAL SQLSTATE '45000' SET MESSAGE\_TEXT = 'Insufficient balance';

END IF;

END //

# DELIMITER ;

# **Test Commands**

# **Insert Sample Data**

sql

INSERT INTO Accounts (AccountID, Balance) VALUES (1, 500);

1. **Perform Deposit**

sql

CALL Deposit(1, 200);

1. **Perform Withdrawal**

sql

CALL Withdraw(1, 100);

# Check Results

sql

SELECT \* FROM Accounts; SELECT \* FROM Transaction\_History;

**Expected Output**

1. **Accounts Table**  
   After running the procedures:

| **AccountID** | **Balance** |
| --- | --- |
| 1 | 600 |

1. **Transaction\_History Table**  
   All transactions are logged:

| **TransactionID** | **AccountID** | **TransactionType** | **Amount** | **TransactionDate** |
| --- | --- | --- | --- | --- |
| 1 | 1 | Deposit | 200 | 2024-12-07 12:00:00 |
| 2 | 1 | Withdrawal | 100 | 2024-12-07 12:05:00 |