

Assignment 1 : Import database named “BANK” from given resource file in database folder. The following figure shows the structure of BANK database. Note that all fields must set to allow NULL value except primary key. Write store procedures to deposit and withdraw amount of money.

-- Procedure for depositing money

```
DELIMITER //
CREATE PROCEDURE DepositMoney(IN accID INT, IN amount FLOAT)
BEGIN
    INSERT INTO transaction (type, amount, date, accid) VALUES ('D', amount, NOW(), accID);
    UPDATE account SET bal = bal + amount WHERE ID = accID;
END //
DELIMITER ;
```

-- Procedure for withdrawing money

```
DELIMITER //
CREATE PROCEDURE WithdrawMoney(IN accID INT, IN amount FLOAT)
BEGIN
    INSERT INTO transaction (type, amount, date, accid) VALUES ('W', amount, NOW(), accID);
    UPDATE account SET bal = bal - amount WHERE ID = accID;
END //
DELIMITER ;
```

Assignment 2 : Import database named “BANK” from given resource file (as before/ use the same database) in database folder. The following figure shows the structure of BANK database. Note that all fields must set to allow NULL value except primary key.

1. Write Trigger to prevent transaction edit.

2. Write Trigger to check balance of money before insert.

If balance of money is not enough to Withdraw, please alert message “Not enough money”, however, if balance of money is enough, insert the record and update new balance to “bal” column.

-- Trigger to prevent editing of transactions

DELIMITER //

CREATE TRIGGER PreventTransactionEdit BEFORE UPDATE ON transaction
FOR EACH ROW

BEGIN

SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT = 'Cannot edit a transaction record';

END //

DELIMITER ;

-- Trigger to check balance before inserting a transaction

DELIMITER //

CREATE TRIGGER CheckBalanceBeforeInsert BEFORE INSERT ON transaction
FOR EACH ROW

BEGIN

DECLARE balance FLOAT;

-- Retrieve current balance from the account table

SELECT bal INTO balance FROM account WHERE ID = NEW.accid;

-- If the transaction is a withdrawal and there are insufficient funds, prevent the transaction

IF NEW.type = 'W' AND (balance < NEW.amount) THEN

SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT = 'Not enough money';

END IF;

END //

DELIMITER ;