**Lab Sheet 07**

**IE2042 – Database Management Systems for Security Semester 1, 2022**

**Activity 01**

Consider the schema of the Bank example you have used in lab sheet 4.

**Bank (bCode, bankName, registration)**

**Branch (bCode, branchNo, branchName, address) Foreign key (bCode) references Bank (bCode)**

**AccountType (accCode, accName, description, intRate, maxCheques, type) Account (accNo, balance, bCode, branchNo, accCode)**

**Foreign key (bCode,branchNo) references Branch(bCode,branchNo) Foreign key (accCode) references AccountType(accCode)**

**Customer (custNo, custName, address, phone, NIC, PIN) Belongs\_to (custNo, accNo)**

**Foreign key (custNo) references Customer (custNo) Foreign key (accNo) references Account (accNo)**

**Transaction (tid, amount , description, executedBy, date) Has (tid, accountNo, type)**

**Foreign key (accNo) references Account (accNo) Foreign key (tid) references Transaction (tid)**

Answer the following questions based on the above schema. Use the tables you have created in Lab Sheet 04 to check your answers.

**Lab Sheet 05**

**IE2042 – Database Management Systems for Security Semester 1, 2021**

1. Create a view to show the customer name, branch name, branch address, and balance of top three customers of Sampath Bank. The top 3 customers are the customers with the 3 highest balances in the Bank.
2. Create a view which shows the total number of deposits (i.e ‘Credits’) made by customers in different banks.
3. Create a function which returns the total of account balances in a given branch in a given bank.
4. Create a function which returns the total of withdrawals (i.e ‘Debit’) made in a given year by a given customer using a given method (ex: ‘Teller’).
5. Create a procedure to update a given account by a given amount of money and given the operation (ex: ‘Credit’ or ‘Debit).
6. Create a procedure which is capable of transferring a given amount of money between two given accounts.
7. Assuming that each account should have a minimum balance of Rs.500, create a trigger to ensure that each withdrawal would not result in a balance below the above amount.
8. Assuming that the daily withdrawal limit via ‘ATM’ is 80000, create a trigger to ensure that no more than Rs.80000 is withdrawn from an account.
9. Create a trigger to update the balance column in the account table whenever a transaction occurs based on the transaction type (ex: If certain account is credited with some amount of money, add that amount to the account table).

Note: Use the procedure you have used in question 5 to do this.