

National University of Computer and Emerging Sciences



In Lab Exercise

“Stored Procedures, UDFs, Views”

Database Systems

Spring 2023

Department of Computer Science

FAST-NU, Lahore, Pakistan

Exercise

For this exercise use the following schema, the script to create this schema and populate data is given in ATM.SQL file

Questions: -

- 1- Create a UDF that takes cardNum and returns balance.
- 2- Create a UDF that takes userId returns all details of the user.
- 3- Create a procedure that takes a user name and display his details.
- 4- Create a procedure that takes the userId and displays the owner's **cardNum, balance**. Use UDF created in question#2 to get the balance against the cardNum.

Note: A user can have more than one cards

- 5- Write UDF that works the same as question#4.
- 6- Create a procedure that takes the user's id, and returns no. of cards of that user in an output parameter.
- 7- Create a procedure **Login** that takes card number, PIN, and returns the status in an output parameter. @status =1 if card number and PIN are valid and @status=0 otherwise.

(Hint: IF/ELSE).

Can we write UDF that works same as Login SP? Don't write query, just explain in 1 to 2 lines.

- 8- Create a procedure to update the PIN. The procedure takes Card Number, old PIN, and new Valid PIN (Length 4) and prints "PIN is Updated" if PIN gets updated or "Error" otherwise.
- 9- Create a procedure **Withdraw** using Login Procedure (Question#6), the procedure will take Card Number, PIN, an amount for the transaction. Now insert detail of the transaction in **Transaction Table** if the transaction is successful with **TransType =1**(successful Transaction) and next **transID (calculate the max transID and increment transID, then insert in the table)**. If the transaction fails insert **TransType=4** (Failed Transaction). Update the balance against the card number accordingly.

Can we write UDF that works same as Question#9? Don't write query, just explain in 1 to 2 lines.