|  |
| --- |
| **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

1. Write UDF that works the same as question#4.
2. Create a procedure that takes the user’s id, and returns no. of cards of that user in an output parameter.
3. 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.

1. 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.
2. 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.