National University of Computer and Emerging Sciences

In Lab Exercise 7

"Stored Procedures"

Database Systems

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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

	userTypeID	name
1	1	Silver
2	2	Gold
3	3	Bronze
4	4	Common

	userId	name	userType	phoneNum	city
1	1	Ali	2	03036067000	Narowal
2	2	Ahmed	1	03036047000	Lahore
3	3	Aqeel	3	03036063000	Karachi
4	4	Usman	4	03036062000	Sialkot
5	5	Hafeez	2	03036061000	Lahore

	userID	cardNum
1	1	1324327436569
2	2	2324325423336
3	3	2324325436566
4	1	2343243253436

	cardNum	cardTypeID	PIN	expireDate	balance
1	1324327436569	3	1770	2022-07-01	43025.31
2	2324325423336	3	0234	2020-03-02	14425.62
3	2324325436566	1	1234	2019-02-06	34325.52
4	2324325666456	2	1200	2021-02-05	24325.3
5	2343243253436	2	0034	2020-09-02	34025.12

	cardTypeID	name	description
1	1	Debit	Spend Now, Pay Now
2	2	Credit	Spend Now, Pay later
3	3	Gift	Enjoy

	transId	transDate	cardNum	amount	transType
1	1	2017-02-02	1324327436569	500	1
2	2	2018-02-03	2343243253436	3000	3
3	3	2017-05-06	2324325436566	2500	2
4	4	2016-09-09	2324325436566	2000	1
5	5	2015-02-10	2324325423336	6000	4

	transTypeID	typeName	description
1	1	Withdraw	NULL
2	2	Deposit	NULL
3	3	Schedul...	NULL
4	4	Failed	NULL

User
- userId
- name
- userType
- phoneNum
- city

UserCard
- userID
- cardNum

Transaction
- transId
- transDate
- cardNum
- amount
- transType

UserType
- userTypeID
- name

Card
- cardNum
- cardTypeID
- PIN
- expireDate
- balance

CardType
- cardTypeID
- name
- description

TransactionType
- transTypeID
- typeName
- description
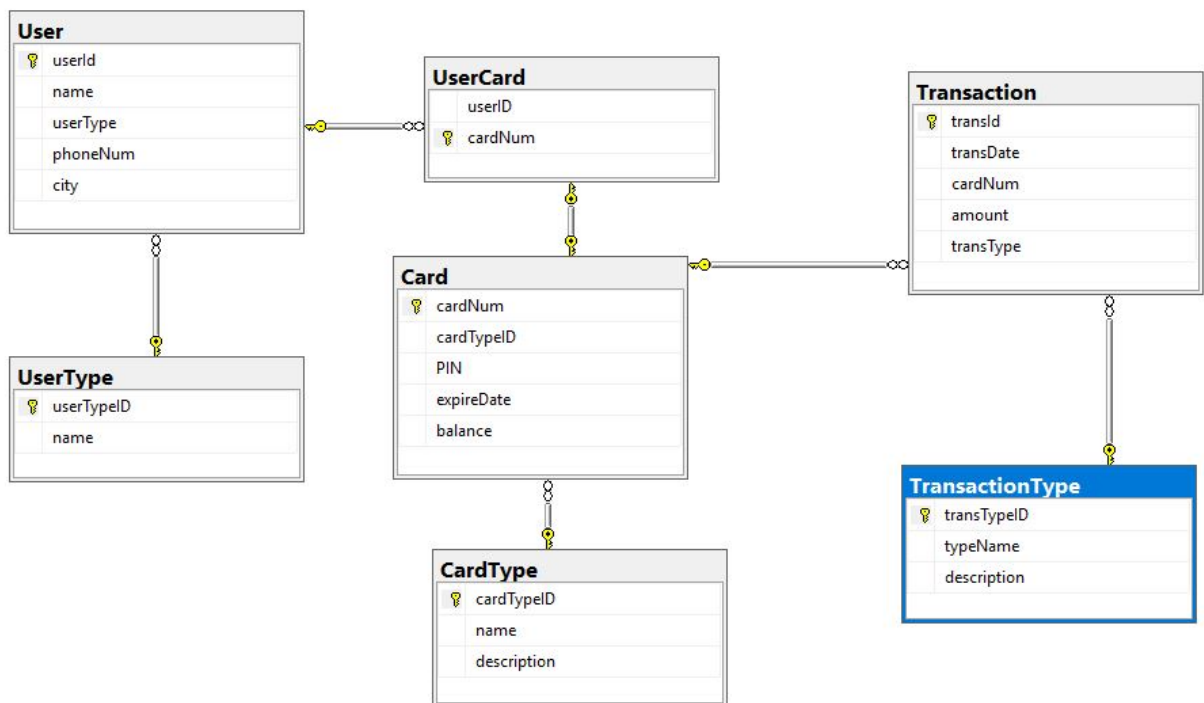
Write script to execute PROCEDURE for each question.

1- Create a procedure to display all the user's details.

2- Create a procedure that takes user name and display his details.

3- Create a procedure that takes card number and display owner's **name, phone number and city**.

4- Create a procedure that returns minimum balance in an output parameter.

5- Create a procedure that takes user name, id and returns no. of cards of that user in an output parameter.

6- Create a procedure Login that takes card number, PIN and returns the status in an output parameter. @status =1 if card number and PIN is valid and @status=0 otherwise.

   (Hint: IF/ELSE).

7- Create a procedure to update the PIN. The procedure takes Card Number, old PIN and new Valid PIN (Length 4) and print 'Updated PIN' if PIN gets updated or 'Error' otherwise.
   (Google it if you don't know how to compare the Length).

8- Create a procedure **WithDraw** using Login Procedure (Question#6), the procedure will take CardNumber, PIN, amount for 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 table).** If the transaction fails insert **TransType**=4 (Failed Transaction). Update the balance against the card number accordingly.