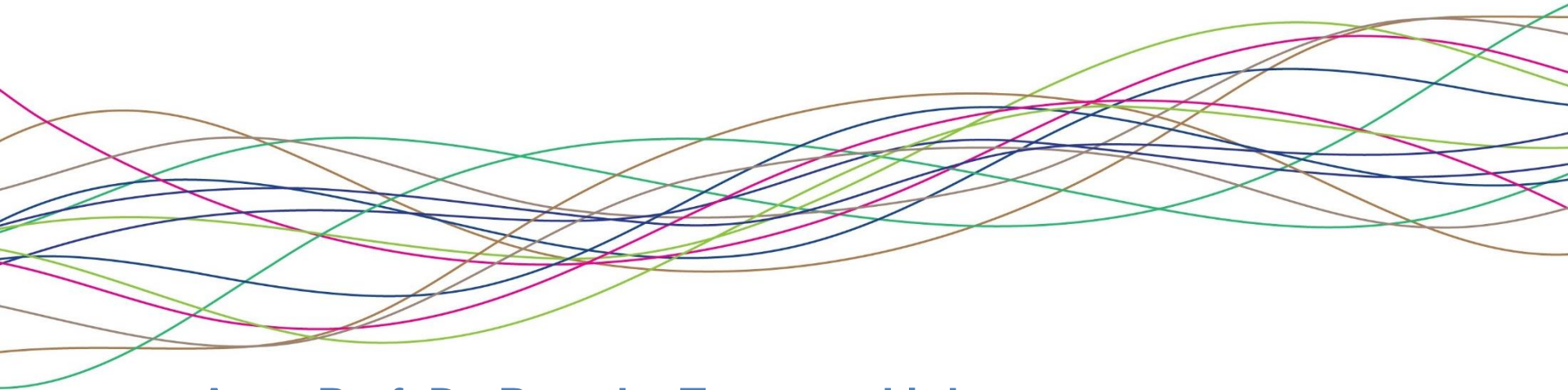# ITCS393 Database Systems Lab

Lab 14: Transaction

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Lab Exercise 14

Prepare BankAccount table

Q 0: Create BankAccount table using the following statements

```
DROP TABLE IF EXISTS BankAccount;

CREATE TABLE BankAccount (
        AccountNum INT NOT NULL PRIMARY KEY,
        CustomerNum INT NOT NULL FOREIGN KEY REFERENCES Customer(CustomerNum),
        AccountBalance MONEY
)
```

Q 1: Create 'AddAccounts' transaction to insert 3 records as follow. If the records can be inserted, commit the transaction. Otherwise, rollback the transaction.

AccountNum	CustomerNum	AccountBalance
117	997	1000.0000
118	998	2000.0000
119	999	500.0000

Run the transaction in Q 1, select all data in BankAccount, and explain the results.
Run the transaction in Q 1 <u>again</u>, select all data, and explain the results.

Lab Exercise 14

Q 2: Create 'TransferMoney' transaction to transfer money from one account to another account using the variables declared below
---> to transfer money '550' from account number 117 to account number 118

```
DECLARE @from INT = 117
DECLARE @to INT = 118
DECLARE @amount MONEY = 550

-- YOUR CODE GOES HERE --
```

BEFORE

AccountNum	CustomerNum	AccountBalance
117	997	1000.0000
118	998	2000.0000
119	999	500.0000

AFTER

AccountNum	CustomerNum	AccountBalance
117	997	450.0000
118	998	2550.0000
119	999	500.0000

You have to update the account balance of these bank accounts (both @to and @from). If the balance in the account is enough to transfer, print successfully transferred message, and commit the transaction. Otherwise, print insufficient balance and rollback the transaction.

```
(1 row affected)
(1 row affected)
SUCCESSFULLY TRANSFERRED
```
commit

```
(1 row affected)
(1 row affected)
INSUFFICIENT BALANCE
```
rollback

Run the transaction Q 2 twice, see the results, and explain what happends.