

Lab-01 – Weekday Paper
EEI4366 / EEX4366 – Data Modelling and Database Systems
Bachelor of Software Engineering Honours / Bachelor of Technology
Department of Electrical and Computer Engineering
The Open University of Sri Lanka
Academic Year – 2022/2023

Duration: 2 hours

Use “MySQL Workbench” to perform the following operations.
The database ‘**ABCBank**’ consists of the following tables with the given fields.

- **branch** (branchNo, city, branchContactNo)
- **customer**(nic, initials, surname, address, dob)
- **manager**(branchNo, mgrName, mgrPhoneNo, mgrAddress, mgrAppointmentDate)
- **bankAccount** (accountNo, accbalance, accType, createdDate, branchNo, nic)

Abbreviations used in the tables

- | | |
|-----------------------------------|--|
| ○ nic – National Identity No | ○ mgrAddress – Manager’s address |
| ○ dob – Date of Birth | ○ mgrAppointmentDate – Manager’s date of appointment |
| ○ mgrName – Manager’s Name | ○ accbalance – Account Balance |
| ○ mgrPhoneNo – Manager’s Phone No | ○ accType – Account Type |

Instructions:

1. The first record of data inserted to customer should be details pertaining to you. **(eg. nic – your registration number, initials - your initials, surname – your surname)**
2. Add your snumber and registration number as comments at the beginning of creation of the tables, beginning of insert queries and at the beginning of select queries.

```
# This comment continues to the end of line - single line comment
-- This comment continues to the end of line - single line comment
/*
this is a
multiple-line comment
*/
```
3. For all select queries the result set should also be taken and included as screenshots. **You need to add screenshots of all the queries** to a word file and upload it along with **your sql script file**.
4. You need to prepare the word file with screenshots and convert it to pdf to be uploaded to the dropbox. You need to prepare this file during the test as additional time for preparation will not be given. Extra 5 minutes will be provided after the lab test **only to upload your answers**.
5. **Any cases where plagiarism / copying is identified you will be getting Zero marks.** Therefore, DO NOT share your code with anyone. Both the copies of a copied assignment will be given zero marks.

Write SQL statements to do the following operations.

1. Create the given tables with appropriate data types and constraints.
2. Insert some dummy data into the tables to run queries on the tables. (At least 3 records should be inserted for each table)
3. A new column needs to be added to the branch table as “email”. Perform the given modification to the table using suitable SQL statement.
4. Write SQL statement to remove all the records pertaining to the accounts which has the AccType as “Senior”.
5. A tax amount of Rs. 100/- need to be deducted from all the bank accounts whose balance is more than Rs. 50000/-. Write SQL statement to update the account balance of accounts according to the given condition.
6. A manager can be contacted using the branch phone and therefore the phone number of the manager needs to be removed from that table. Write SQL statement for this purpose.
7. If a customer is removed from the database, automatically all his accounts need to be removed. Write SQL statement to add this constraint to the ‘bankAccount’ table.
8. Write SQL statements to view the following.
 - i. List of all the branches which belong to a city given as user input.
 - ii. List of all the bank accounts with Customer name (initials and surname), Account Number and account balance in the descending order of the balance available in the account.
 - iii. The number of accounts created per each branch, displayed with the branch number and the branch city. (If there are no accounts should display 0 as the count)
 - iv. The first 2 customers who have created accounts in this bank. Need to display customer NIC, address and created date.
 - v. Names of all the managers with the appointment date, city of the branch on which they are working and the branch contact number of all those who got appointments after ‘2022-01-01’.
 - vi. The bank account types having a sum of more than Rs. 50,000 account balance displayed with the account type and the total balance.

****For clarity of the code, inserting values relevant to the student and giving comments as instructed will be given 10 marks.***