Green University of Bangladesh (GUB)
Dept. of Computer Science and Engineering

Course Name:

CSE 210: Database System Lab

Project Name:

Banking Database Management System

Submitted to:	*Submitted by:*
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Banking Database Management System

❑ Introduction:

This Project Is About Banking Database Management System. Sub Queries are attached with screenshot for better understanding.
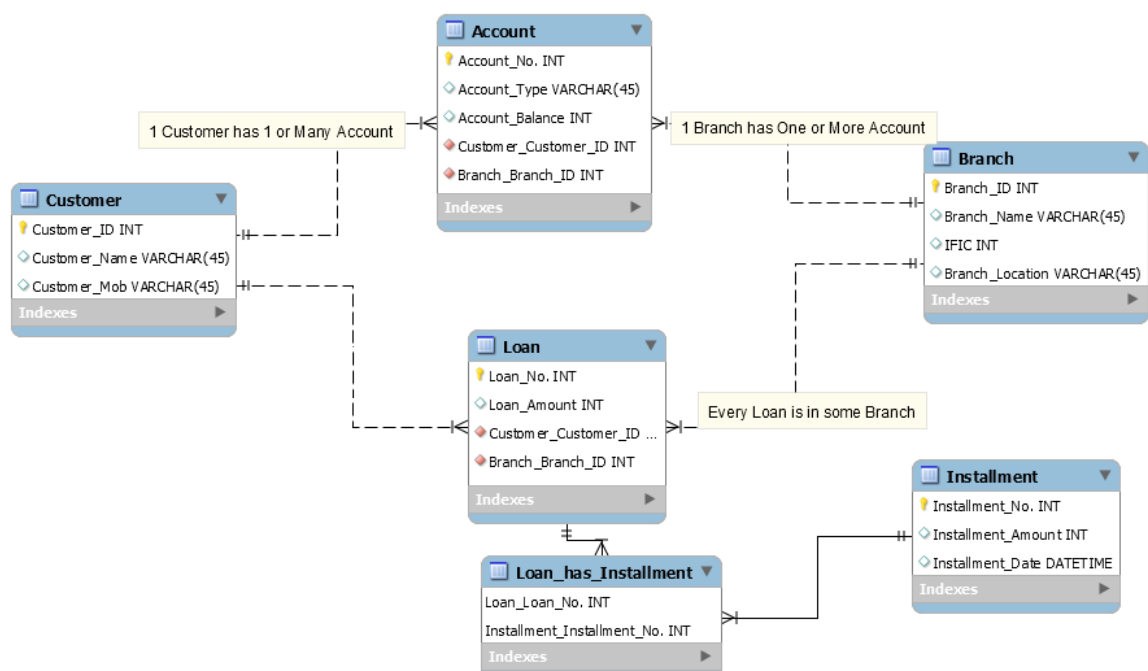
❑ Tools:

- MySQL Workbench.

❑ Feature:

- DDL
- DML
- View
- Procedural Language.

❑ Language Used:

- PL/SQL. (It is a high-performance and highly integrated database language.)

❑ ER Diagram:

❑ Views:

select *from Customer_ID_Name;

Customer_ID	Customer_Name
2	Tanvir
3	Rony
4	Kafi
5	Leo
6	Shawn
7	Ruhi
8	Rajib
9	Hasan

select *from br_location_count;

Branch_Location	Count_Branch
Dhaka	8
Gazipur	2
Uttara	2

select *from Account_View;

Account_No	Account_Type	Account_Balance	Customer_Customer_ID	Branch_Branch_ID
1	Current	5656413	1	1
2	Saving	6442136	2	2
3	Current	6562241	3	3
4	Current	1235451	4	4
5	Current	58763	5	5
6	Current	452569	6	6
7	Current	42787	7	7
8	Current	74556	8	8

select *from Branch_View;

Branch_ID	Branch_Name	IFIC	Branch_Location
1	Mirpur_Br	8764156	Dhaka
2	Gazipur_Br	6543132	Gazipur
3	Uttara_Br	5656413	Uttara
4	Mollartek_Br	2654123	Dhaka
5	Dhama_Br	9545313	Dhaka
6	Uttara_Br	1564686	Uttara
7	Gazipur_Br	5463131	Gazipur
8	Khilkhet_Br	4135356	Dhaka

❏ Views:

select *from Customer_View;

Customer_ID	Customer_Name	Customer_Mob
1	Zahid	018********
2	Tanvir	019********
3	Rony	013********
4	Kafi	015********
5	Leo	012********
6	Shawn	019********
7	Ruhi	014********
8	Rajib	015********
9	Hasan	014********

select *from Installment_View;

Installment_No	Installment_Amount	Installment_Date
1	59624	2017-06-15 00:00:00
2	60862	2018-11-15 00:00:00
3	55321	2019-12-15 00:00:00

select *from Loan_View;

Loan_No	Loan_Amount	Customer_Customer_ID	Branch_Branch_ID
1	62241	1	1
2	73513	2	2
3	69124	3	3

select *from loan_has_installment_View;

Loan_Loan_No	Installment_Installment_No
1	1
2	2
3	3

❑ **Procedural Function Call:**

call Saving_Cust; -- showing Customers' info who have Saving Accounts.

Account_No	Customer_Name	Customer_Mob
2	Tanvir	019*********
9	Hasan	014*********

call Current_Cust; -- showing Customers' info who have Current Accounts.

Account_No	Customer_Name	Customer_Mob
1	Zahid	018********
3	Rony	013********
4	Kafi	015********
5	Leo	012********
6	Shawn	019********
7	Ruhi	014********
8	Rajib	015********

call Cust_Branch_Loan; -- showing Customer, Branch and Loan info.

Customer_ID	Customer_Name	Branch_ID	Loan_Amount
1	Zahid	1	62241
2	Tanvir	2	73513
3	Rony	3	69124

call Cust_AC_No;

Account_No	Customer_ID	Customer_Name
1	1	Zahid
2	2	Tanvir
3	3	Rony
4	4	Kafi
5	5	Leo
6	6	Shawn
7	7	Ruhi
8	8	Rajib
0	0	Hasan

❑ **Procedural Function Call:**

call Cust_Br_Location; -- showing Customers Branch info.

customer_ID	Customer_Name	Branch_Location
1	Zahid	Dhaka
2	Tanvir	Gazipur
3	Rony	Uttara
4	Kafi	Dhaka
5	Leo	Dhaka
6	Shawn	Uttara
7	Ruhi	Gazipur
8	Rajib	Dhaka
9	Hasan	Dhaka

call Branch_Count;

Branch_Location	Count_Branch
Dhaka	8
Gazipur	2
Uttara	2

call Get_Cust_Loan_and_Branch;

Customer_ID	Customer_Name	loan_Amount	Branch_ID
1	Zahid	62241	1
2	Tanvir	73513	2
3	Rony	69124	3

call Get_Cust_Loan_and_installment;

Customer_ID	Customer_Name	Loan_Amount	Installment_Amount
1	Zahid	62241	59624
2	Tanvir	73513	60862
3	Rony	69124	55321

❑ Procedural Function Call:

call Get_Cust_LoanAmount;

	Customer_ID	Customer_Name	Loan_Amount
▶	1	Zahid	62241
	2	Tanvir	73513
	3	Rony	69124

call GetCust_ID_Name('Uttara_Br');

| Result Grid | | Filter Rows: | | Export: | Wrap Cell Content: |

	Customer_ID	Customer_Name
▶	3	Rony
	6	Shawn

❑ Complex Queries:

-- Customer ID, and Name from 3 tables:

select Customer.Customer_ID, Customer.Customer_Name from Customer join account on Customer.Customer_ID=Account.Customer_Customer_ID join branch on branch.Branch_ID = Account.Branch_Branch_ID;

| Result Grid | | Filter Rows: | | Export: | Wrap Cell Content: |

	Customer_ID	Customer_Name
▶	1	Zahid
	2	Tanvir
	3	Rony
	4	Kafi
	5	Leo
	6	Shawn
	7	Ruhi
	8	Rajib

-- Customer id and name of branch 2:

select Customer.Customer_ID, Customer.Customer_Name from Customer join account on Customer.Customer_ID=Account.Customer_Customer_ID join branch on branch.Branch_ID = Account.Branch_Branch_ID where branch.Branch_ID=2;

| Result Grid | | Filter Rows: | | Export: | Wrap Cell Content: |

	Customer_ID	Customer_Name
▶	2	Tanvir

❑ Complex Queries:

-- List of Customer who has taken loan and their amount:

select customer.Customer_ID, customer.Customer_Name, loan.Loan_Amount from customer join loan on Customer.Customer_ID=loan.Customer_Customer_ID;

Customer_ID	Customer_Name	Loan_Amount
1	Zahid	62241
2	Tanvir	73513
3	Rony	69124

-- List of Customers and their loan. Besides their installment amount:

select customer.Customer_ID, customer.Customer_Name, loan.Loan_Amount, installment.Installment_Amount from customer join loan on Customer.Customer_ID=loan.Customer_Customer_ID join loan_has_installment on loan_has_installment.Loan_Loan_No=Loan.Loan_No join Installment on Installment.Installment_No=loan_has_installment.Installment_Installment_No;

Customer_ID	Customer_Name	Loan_Amount	Installment_Amount
1	Zahid	62241	59624
2	Tanvir	73513	60862
3	Rony	69124	55321

-- Name of the Customers and id and their loan and from which branch do they take the loan:

select customer.Customer_ID, Customer.Customer_Name, loan.loan_Amount, branch.Branch_ID from customer join loan on Customer.Customer_ID=loan.Customer_Customer_ID join branch on loan.Branch_Branch_ID=branch.Branch_ID;

Customer_ID	Customer_Name	loan_Amount	Branch_ID
1	Zahid	62241	1
2	Tanvir	73513	2
3	Rony	69124	3

❑ **Complex Queries:**

-- Number of branch in a city:

SELECT Branch_Location, count(*) AS Count_Branch FROM branch Group By Branch_Location;

Branch_Location	Count_Branch
Dhaka	8
Gazipur	2
Uttara	2

-- Customer info from their branch:

Select customer.customer_ID, Customer.Customer_Name, branch.Branch_Location from customer join account on customer.customer_ID=account.Customer_Customer_ID join branch on account.Branch_Branch_ID=branch.Branch_ID;

customer_ID	Customer_Name	Branch_Location
1	Zahid	Dhaka
2	Tanvir	Gazipur
3	Rony	Uttara
4	Kafi	Dhaka
5	Leo	Dhaka
6	Shawn	Uttara
7	Ruhi	Gazipur
8	Rajib	Dhaka

-- Customers account no.:
SELECT account.Account_No, customer.Customer_ID, customer.Customer_Name FROM account INNER JOIN customer ON account.Account_No = customer.Customer_ID;

Account_No	Customer_ID	Customer_Name
1	1	Zahid
2	2	Tanvir
3	3	Rony
4	4	Kafi
5	5	Leo
6	6	Shawn
7	7	Ruhi
8	8	Rajib

❑ Complex Queries:

-- Customers id branch id and loan amount:

SELECT customer.Customer_ID, customer.Customer_Name, branch.Branch_ID, loan.Loan_Amount FROM ((loan INNER JOIN customer ON loan.Customer_Customer_ID=customer.Customer_ID) INNER JOIN branch ON loan.Branch_Branch_ID=branch.Branch_ID);

Customer_ID	Customer_Name	Branch_ID	Loan_Amount
1	Zahid	1	62241
2	Tanvir	2	73513
3	Rony	3	69124

-- Customer info whose account type is Current:
SELECT account.Account_No, customer.Customer_Name, customer.Customer_Mob FROM account, customer WHERE account.Customer_Customer_ID = customer.Customer_ID AND account.Account_Type = 'Current';

Account_No	Customer_Name	Customer_Mob
1	Zahid	018*********
3	Rony	013*********
4	Kafi	015*********
5	Leo	012*********
6	Shawn	019*********
7	Ruhi	014*********
8	Rajib	015*********

-- Customer info whose account type is Saving:
SELECT account.Account_No, customer.Customer_Name, customer.Customer_Mob FROM account, customer WHERE account.Customer_Customer_ID = customer.Customer_ID AND account.Account_Type = 'Saving';

Account_No	Customer_Name	Customer_Mob
2	Tanvir	019*********
9	Hasan	014*********