Project Report (Group A)

CSE 311L

Database Management System

Section 09

Summer 2020

North South University

Submitted To: Prof. Rifat Ahmed Hassan (RAH1)

Project Title : Bank Management System

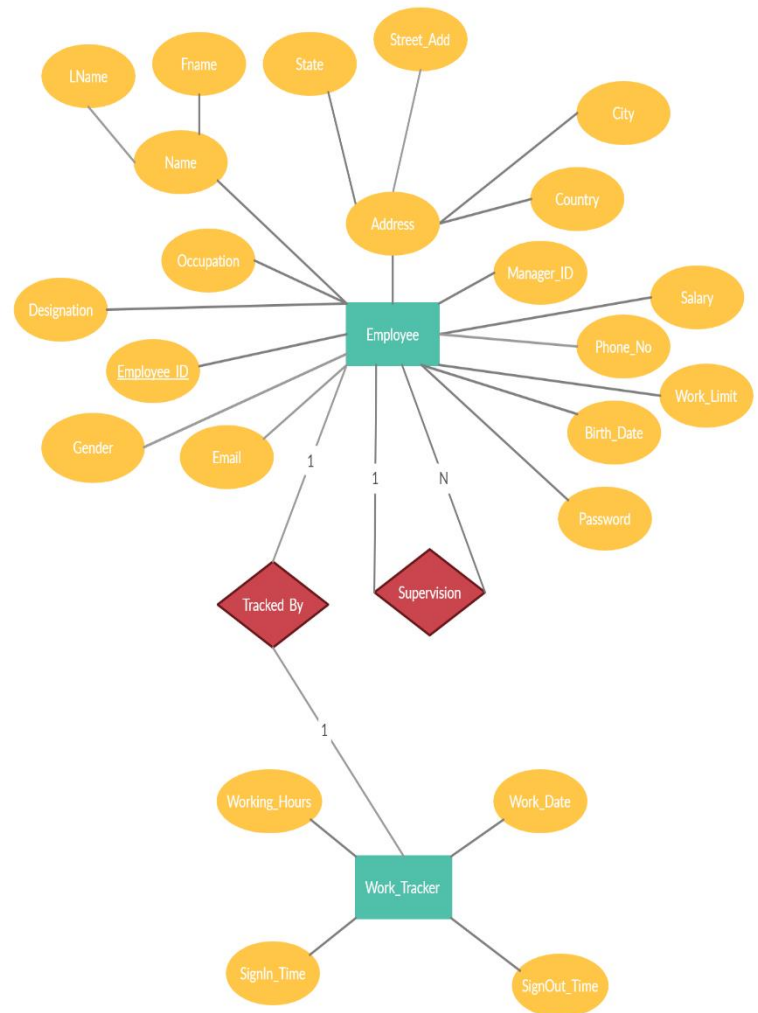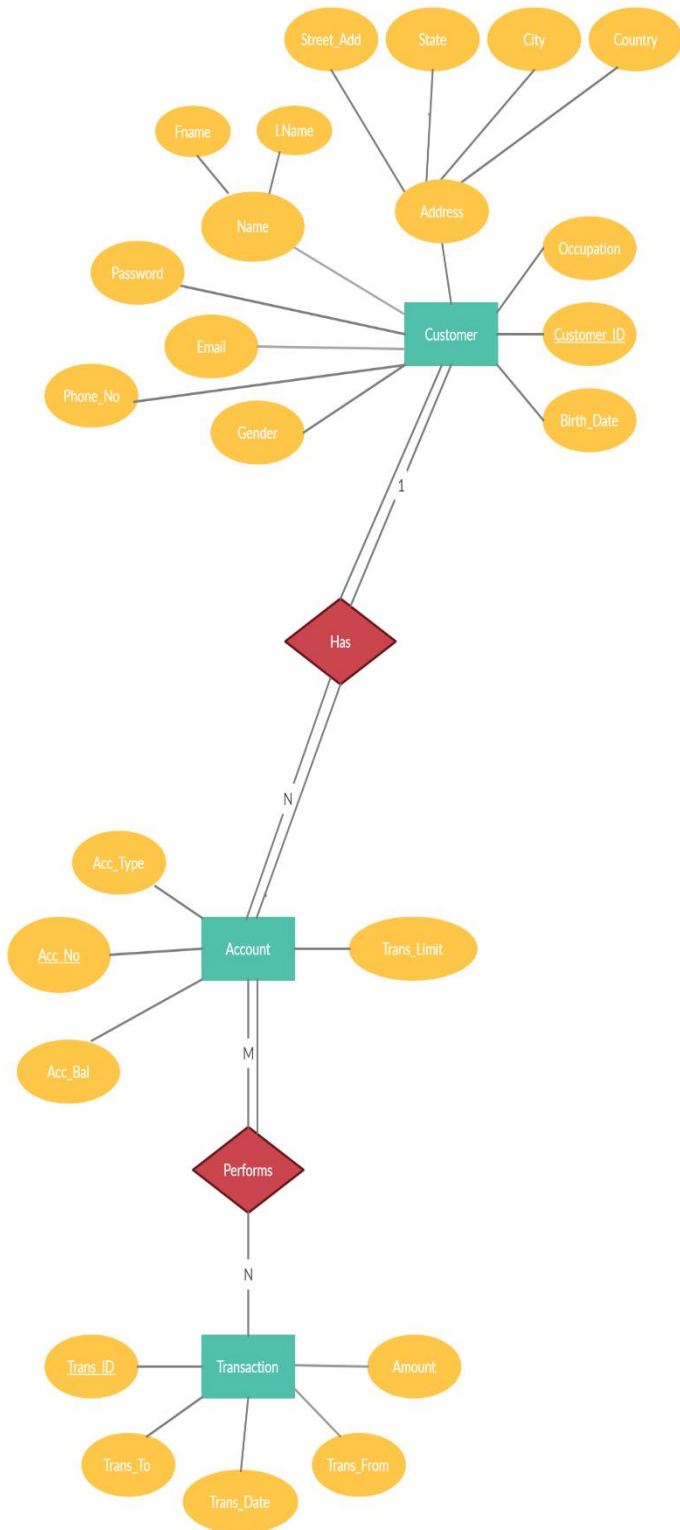| Name	ID	Email
Mohammad Nabiluzzaman Neloy	1831251042	mohammad.nabiluzzman@northsouth.edu
Md Faisal	1821725642	md.faisal3@northsouth.edu
Tammam Haque	1821151642	tammam.haque@northsouth.edu

Introduction:

The main objective of the project is to develop online Banking system for banks. In present system, all banking work is done manually and it is also difficult to find the account information of an account holder. In this bank management system, we have tried to automate some of the banking processes. In our bank management system users can check their balance online and they can also transfer money from one account to another, online. It also gives the facility of keeping records of daily transactions. The main purpose of developing this web app is to design an application, which could store bank data and provide an interface for retrieving customer and employee related details with 100% accuracy. The key feature of BMS is the work tracking system developed for employees to keep track of their working hours.

Technology Used:

1. *HTML* – We have used HTML to construct the frontend of the webpage
2. *CSS* – We have used CSS to design the Pages and to add style materials.
3. *JAVASCRIPT* – We have used JAVASCRIPT to redirect pages.
4. *PHP* – We have used PHP to connect our webpage with our database to ensure better functionality and to perform some extra back-end tasks.
5. *MySQL & XAMPP* – We have used MySQL & XAMPP to construct the 'Bank Management System's' database, all the tables in the database and to create a local host.
6. *CREATLY* – We have used the online web app named CREATLY to draw the ER diagram & perform the relational mapping.
7. *ADOBE XD* – We have used this software to design mockups of the website before the actual web development.
8. *MICROSOFT POWERPOINT* – We have used MS PowerPoint to prepare the design presentation.
9. *MICROSOFT WORD* – We have used MS Word to prepare the project proposal and the project report.
10. *GIT & GITHUB* – We have used this technology to showcase our code and to keep track of our activities.
11. *ATOM or SUBLIME IDE* – We have used these two IDEs to write our codes.

ER Diagram:

Customer entity attributes: Street_Add, State, City, Country, Fname, LName, Name, Address, Password, Email, Phone_No, Gender, Occupation, Customer_ID, Birth_Date

Employee entity attributes: LName, Fname, State, Street_Add, Name, City, Country, Address, Occupation, Manager_ID, Salary, Designation, Employee_ID, Phone_No, Work_Limit, Gender, Email, Birth_Date, Password

Customer —1— Has —N— Account

Account attributes: Acc_Type, Acc_No, Trans_Limit, Acc_Bal

Account —M— Performs —N— Transaction

Transaction attributes: Trans_ID, Amount, Trans_To, Trans_Date, Trans_From

Employee —1— Tracked By

Employee —1— Supervision —N—

Tracked By —1— Work_Tracker

Work_Tracker attributes: Working_Hours, Work_Date, SignIn_Time, SignOut_Time

Relational Mapping:

Customer

Customer_ID (PK)	bigInt(20) NOT NULL
FName	varchar(20)
LName	varchar(20)
Email	varchar(40) NOT NULL
Password	varchar(40) NOT NULL
Gender	varchar(1)
Birth_Date	date
Occupation	varchar(30)
Phone_No	varchar(11)
Street_Add	varchar(60)
City	varchar(20)
State	varchar(20)
Country	varchar(30)

Account

Acc_No (PK)	bigInt(20) NOT NULL
Customer_ID (FK)	bigInt(20) NOT NULL
Acc_Type	varchar(20)
Acc_Bal	double(9,2)
Trans_Limit	double(7,2)

Transaction

Trans_ID (PK)	bigInt(20) NOT NULL
Trans_From	bigInt(20) NOT NULL
Trans_To	bigInt(20) NOT NULL
Amount	double(9,2)
Trans_Date	date

Employee

Employee_ID (PK)	bigInt(20) NOT NULL
FName	varchar(20)
LName	varchar(20)
Email	varchar(40) NOT NULL
Password	varchar(40) NOT NULL
Gender	varchar(1)
Birth_Date	date
Occupation	varchar(30)
Phone_No	varchar(11)
Street_Add	varchar(60)
City	varchar(20)
State	varchar(20)
Country	varchar(30)
Designation	varchar(30)
Salary	double(8,2)
Work_Limit	int(6)
Manager_ID	bigInt(20)

Work_Tracker

Employee_ID (PK) (FK)	bigInt(20) NOT NULL
SignIn_Time (PK)	time
SignOut_Time	time
Work_Date (PK)	date
Working_Hours	decimal(2,1)

Features Added:

1. _Sign In_ – The Sign In page uses credentials like email and password for the determination of the accessibility of an individual customer. In case of an employee, the employee's credentials like employee ID and password are necessary.

2. _Sign Up_ – The Sign-Up page allows an individual to create a new account on the server. Customers can register for a new account. Whereas, employees can register to track their work data.

3. _Employee Page_ – The employee page provides options like profile data retrieval, work details retrieval, and work tracked data retrieval.

4. _Customer Page_ – This page enables a customer to see his/her profile, account details, transactions, and also provides the facility to send some amount of money to another account using the email address of the receiver.

5. _Transactions_ – The transactions have a unique transaction ID that is automatically generated by the system itself. And it keeps records of the date when the transaction is performed along with the amount that has been sent.

6. _Work Tracking System_ – The work tracking system is a feature for the employee page that keeps track of the time worked by the employee. It also stores data like date, sign in time and sign out time. Additionally, it calculates the time worked on a session and display the time in "hours". It also calculates the average worked hours per week.

Work Division & Contribution:

1. *Mohammad Nabiluzzaman Neloy:*
   - Wrote Project Proposal
   - Updated the Web App Designs
   - Connected the Database with the Web App
   - Developed all the Back-End functionalities
2. *Tammam Haque:*
   - Designed ER Diagram
   - Designed Relational Mapping
   - Wrote Project Report
   - Gathered information about banks
3. *Md. Faisal:*
   - Designed the basic HTML structure of the web app
   - Added initial designs of the web app using CSS.

Reference:

- *w3schools*: https://www.w3schools.com/
- *stack overflow*: https://stackoverflow.com/
- *Git Hub:* https://github.com/
- *Creately :* https://creately.com/
- *got it .ai*: https://www.got-it.ai/
- *mdn web docs*: https://developer.mozilla.org/
- *php.net*: https://www.php.net/
- *geeksforgeeks*: https://www.geeksforgeeks.org/