DATABASE MANAGEMENT SYSTEM PROJECT REPORT

(Project Semester August-December 2020)

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SECTION : K21PD

PROGRAMME : B.Tech CSE

COURSE CODE : INT306

PROJECT NAME : TRANSACTION MANAGEMENT SYSTEM

Under the Guidance of

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Submitted To: -

School of Computer Science and Engineering

Lovely Professional University, Phagwara

CERTIFCATE

This is to certify that ..... (student's name) bearing Registration no. ..... has completed ..... <Course Code> project titled, **"....."** under my guidance and supervision. To the best of my knowledge, the present work is the result of his/her original development, effort and study.

Signature and Name of the Supervisor :

Designation of the Supervisor School of:

……

Lovely Professional University

Phagwara, Punjab.

DECLARATION

I, ..., student of ..... (Program name) under CSE/IT Discipline at, Lovely Professional University, Punjab, hereby declare that all the information furnished in this project report is based on my own intensive work and is genuine.

Date: signature :

Registration No. ..... name of student :

INTRODUCTION

Transactions are a set of operations used to perform a logical set of work. A transaction usually means that the data in the database has changed. One of the major uses of DBMS is to protect the user's data from system failures. It is done by ensuring that all the data is restored to a consistent state when the computer is restarted after a crash. The transaction is any one execution of the user program in a DBMS. Executing the same program multiple times will generate multiple transactions.

Our database schema consisted of three databases which records personal details, branch details and city information respectively. Database is made using SQL. We have used PL SQL for our transaction system where account number and transaction option is asked. According to the input of the user, transactions occur. Lastly the user's current balance is shown and updated in the database.

This software is supported to eliminate and in some cases reduce the hardships faced by this existing system. Moreover this system is designed for the particular need of the company to carry out operations in a smooth and effective manner.

The application is reduced as much as possible to avoid errors while entering the data. It also provides error message while entering invalid data. No formal knowledge is needed for the user to use this system. Thus by this all it proves it is user-friendly. Cheque Book Transaction System, as described above, can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their

other activities rather to concentrate on the record keeping. Thus it will help organization in better utilization of resources.

Objectives

The main objective of the Project on Transaction management System is to manage the details of Transaction, Transaction Type, Accounts, Accounts Type. It manages all the information about Customer, Accounts Type, account branch. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for managing the Transaction, Customer, Transaction Type.

Functions :

- Provides the searching facilities based on various factors. Such as Transaction Type, Accounts, Accounts Type , branch type.
- .Transaction management System also manage the Customer details online for Accounts details, Accounts Type details, Cheque Book.
- It tracks all the information of Transaction, Customer, Accounts etc
- Manage the information of Transaction
- Shows the information and description of the Cheque Book, Transaction Type.
- To increase efficiency of managing the Cheque Book, Transaction
- It deals with monitoring the information and transactions of Accounts.
- Editing, adding and updating of Records is improved which

results in proper resource management of data.

About SQL and PL/SQL used in Project

this project is made by using simple statements and query of sql and the functions are added by using pl/sql in this project.

SQL : SQL is a domain-specific language used in programming and designed for managing data held in a relational database management system, or for stream processing in a relational data stream management system.

- Sql is used for creating the table .
- We have three tables in our project which is created by using of sql.
- We used some basics statements and query as create table , insert table , show table , where , update.

PL/SQL : PL/SQL is Oracle Corporation's procedural extension for SQL and the Oracle relational database. PL/SQL is available in Oracle Database, Times Ten in-memory database, and IBM Db2. Oracle Corporation usually extends PL/SQL functionality with each successive release of the Oracle Database.

- We used pl/sql for maintaining the transactions details such as withdraw , deposit.
- We used the concept of looping , if conditions , if else statements .
- Pl/sql is also used for taking input from the user and printing the output after the transactions.

SOURCE CODE

```
create table accountDetailsCust(act_no varchar2(10), act_name varchar2(10),
act_balance number(10), act_dob date);

drop table accountDetailsCust ;


create table account_branch_details(act_no varchar2(10), act_name varchar2(10),
act_branch varchar2(10));


create table account_city_details(act_no varchar2(10), act_name varchar2(10), act_city
varchar2(10));



create table custDetails(act_no varchar2(10), act_name varchar2(10), cust_city
varchar2(10),cust_phno number(10) , cust_email varchar2(20) , cust_fathername
varchar2(20),cust_address varchar(20));



insert into custDetails
values('19DCS001','Rajesh','Ganganagar','9982586461','rajesh123@gmail.com','Suman
Mishra','Anupgarh');

insert into custDetails
values('35540426','Kamal','koderma','9982586471','kamal123@gmail.com','Keshav
Jha','Dandadi');

insert into custDetails
```

values('35547203','Rameswar','Chatra','9782586482','ramar123@gmail.com','Mantu Jha','Itkhori');

insert into custDetails
values('35567004','Nagendra','Dumka','9982586468','nagendra@gmail.com','Suraj modi','Palipur');

insert into custDetails
values('19DCS004','Nagendra','Neel','9982586468','Neel@gmail.com','Shiv modi','sherpur');

insert into custDetails
values('35567004','Parimal','mumbai','9982534468','Parimal@gmail.com','Ishan sharma','Bikaner');

insert into custDetails
values('35567004','Nagendra','Dumka','9982586468','nagendra@gmail.com','Suraj modi','Palipur');

----------account details----------

insert into accountDetailsCust values('19DCS001','Rajesh','35000','12-7-2001');

insert into accountDetailsCust values('19DCS002','Shyam','30000','05-1-1993');

insert into accountDetailsCust values('19DCS003','Bimal','55000','12-9-1997');

insert into accountDetailsCust values('19DCS004','Neel','46000','3-9-2000');

insert into accountDetailsCust values('19DCS005','Tushar','37900','7-2-2002');

insert into accountDetailsCust values('19DCS006','Falguni','35060','11-7-1998');

insert into accountDetailsCust values('19DCS007','Parimal','12070','9-17-2001');

insert into accountDetailsCust values('19DCS008','Apu','17800','12-7-1994');

insert into accountDetailsCust values('19DCS009','Sheetal','65070','2-6-1995');

insert into accountDetailsCust values('19DCS010','Shiv','35600','07-5-1999');

```
insert into accountDetailsCust values('19DCS011','Ashish','90000','11-11-11');

insert into accountDetailsCust values('35540426','NIKHIL','56000','11-8-11');

insert into accountDetailsCust values('35540567','Aditya','78000','1-8-11');
```

----------account branch details----------

```
insert into account_branch_details values('19DCS001','Rajesh','Manjalpur');

insert into account_branch_details values('19DCS002','Shyam','MG Road');

insert into account_branch_details values('19DCS003','Bimal','Mayapuri');

insert into account_branch_details values('19DCS004','Neel','Borivali');

insert into account_branch_details values('19DCS005','Tushar','Ghogha');

insert into account_branch_details values('19DCS006','Falguni','Powai');

insert into account_branch_details values('19DCS007','Parimal','Dum Dum');

insert into account_branch_details values('19DCS008','Apu','Hinjewadi');

insert into account_branch_details values('19DCS009','Sheetal','Maninagar');

insert into account_branch_details values('19DCS010','Shiv','Gachibowli');

insert into account_branch_details values('19DCS011','Ashish','RANCHI');

insert into account_branch_details values('35540426','NIKHIL','Koderma');
```

```
insert into account_branch_details values('35540567','Aditya','Chatra');
```

----------account based on different cities----------

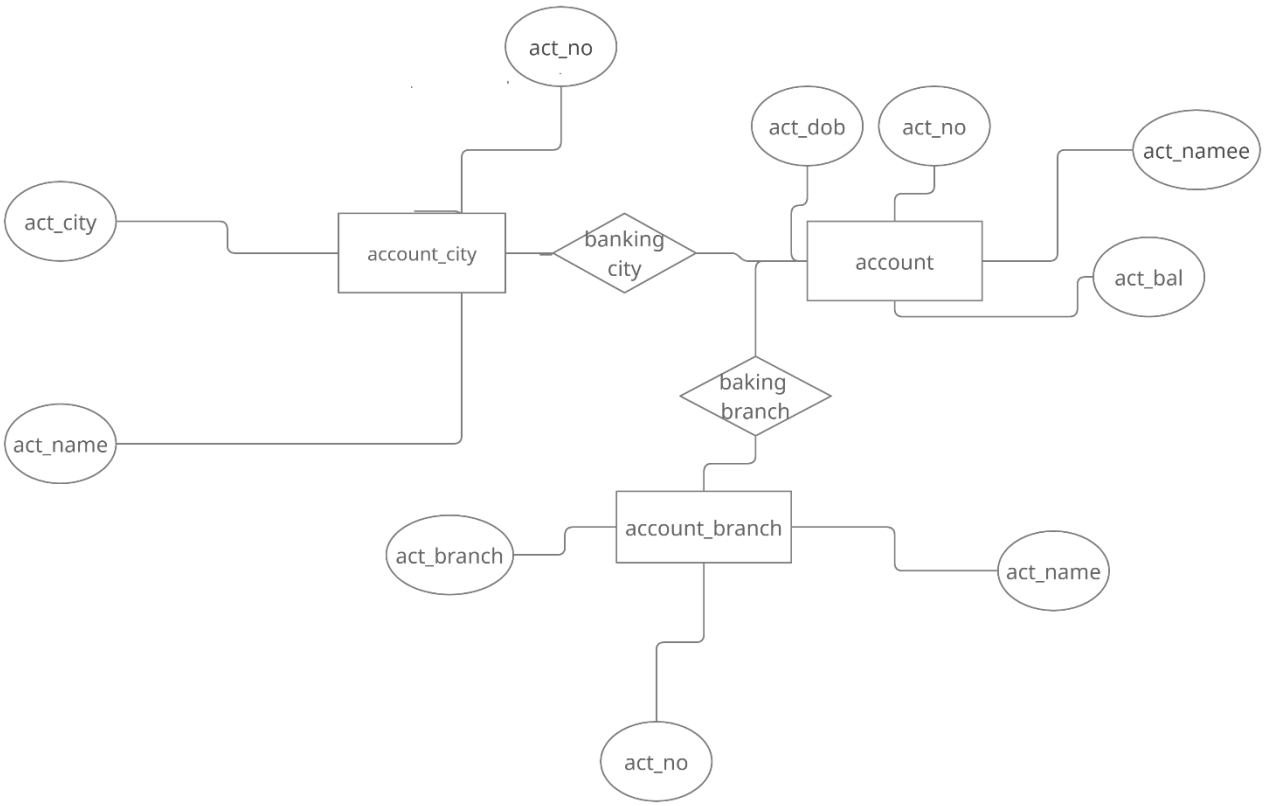
```
insert into account_city_details values('19DCS001','Rajesh','Vadodara');
insert into account_city_details values('19DCS002','Shyam','Bangalore');
insert into account_city_details values('19DCS003','Bimal','Delhi');
insert into account_city_details values('19DCS004','Neel','Mumbai');
insert into account_city_details values('19DCS005','Tushar','Bhavnagar');
insert into account_city_details values('19DCS006','Falguni','Mumbai');
insert into account_city_details values('19DCS007','Parimala','Kolkata');
insert into account_city_details values('19DCS008','Apu','Pune');
insert into account_city_details values('19DCS009','Sheetal','Ahmedabad');
insert into account_city_details values('19DCS010','Shiv','Hyderabad');

insert into account_city_details values('19DCS011','Ashish','Ganganagar');
insert into account_branch_details values('35540426','NIKHIL','Jaingagar');
insert into account_branch_details values('35540567','Aditya','Dumka');
```

```
create table AccountType(act_no varchar2(10) PRIMARY KEY, act_type1 varchar2(20) , act_type2 varchar2(20));

drop table AccountType ;

insert into AccountType values('19DCS001','saving account' , 'current account');

insert into AccountType values('19DCS002','saving account' , 'current account');

insert into AccountType values('19DCS003','saving account' , 'current account');

insert into AccountType values('19DCS004','saving account' , 'current account');

insert into AccountType values('19DCS005','saving account' , 'current account');

insert into AccountType values('19DCS006','saving account' , 'current account');

insert into AccountType values('19DCS007','saving account' , 'current account');

insert into AccountType values('19DCS008','saving account' , 'current account');

insert into AccountType values('19DCS009','saving account' , 'current account');

insert into AccountType values('19DCS010','saving account' , 'current account');



select * from accountDetailsCust ;

select * from account_branch_details ;

select * from account_city_details ;

select * from custdetails ;


DECLARE

xact_no accountDetailsCust.act_no%type;
```

```
xact_balance accountDetailsCust.act_balance%type;
opt number(1);
deposit number(10);
withdrawal number(10);
act_type number(5);

BEGIN
xact_no:= :Enter_Account_Number;
opt:= :1Deposit_2Withdrawal_3Balance;
act_type:= :1current_2saving;
select act_balance into xact_balance
from accountDetailsCust
where act_no=xact_no ;

IF( opt = 1 and act_type = 1  ) THEN
deposit:= :Enter_Deposit_Amount;
update accountDetailsCust
 set act_balance=act_balance+deposit
where act_no=xact_no ;

xact_balance :=xact_balance +deposit;
dbms_output.put_line('Rs. '||deposit||' has been creadited in your account');
dbms_output.put_line('Your final balance is Rs. '||xact_balance );
```

```
ELSIF( opt = 2 and act_type = 2 ) THEN
withdrawal:= :Enter_Withdrawal_Amount;
    IF ( withdrawal<=xact_balance ) THEN
    update account
     set act_balance=act_balance-withdrawal
    where act_no=xact_no ;

    xact_balance:=xact_balance -withdrawal;
    dbms_output.put_line('Rs. '||withdrawal||' has been debited in your account');
    dbms_output.put_line('Your final balance is Rs.'||xact_balance );

    ELSE
    dbms_output.put_line('Your withdrawal amount is greater than balance');
    dbms_output.put_line('Your transaction failed');
    dbms_output.put_line('Your final balance is Rs.'||xact_balance );
    END IF;

ELSE
dbms_output.put_line('Your balance is Rs. '||xact_balance );
END IF;



END;
```

ER Diagrams


act_no
act_dob
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act_namee
act_city
account_city
banking city
account
act_bal
baking branch
act_name
account_branch
act_branch
act_name
act_no

RESULTS

ACT_NO	ACT_NAME	ACT_CITY
19DCS005	Tushar	Bhavnagar
19DCS006	Falguni	Mumbai
19DCS001	Rajesh	Vadodara
19DCS002	Shyam	Bangalore
19DCS003	Bimal	Delhi
19DCS004	Neel	Mumbai
19DCS005	Tushar	Bhavnagar
19DCS006	Falguni	Mumbai
19DCS008	Apu	Pune
19DCS009	Sheetal	Ahmedabad
More than 10 rows available. Increase rows selector to view more rows.		

10 rows returned in 0.00 seconds Download

Results Explain Describe Saved SQL History

ACT_NO	ACT_NAME	ACT_BRANCH
19DCS007	Parimal	Dum Dum
19DCS003	Bimal	Mayapuri
19DCS002	Shyam	MG Road
19DCS010	Shiv	Gachibowli
19DCS009	Sheetal	Maninagar
19DCS008	Apu	Hinjewadi
19DCS006	Falguni	Powai
19DCS005	Tushar	Ghogha
19DCS004	Neel	Borivali
19DCS001	Rajesh	Manjalpur

10 rows returned in 0.01 seconds Download

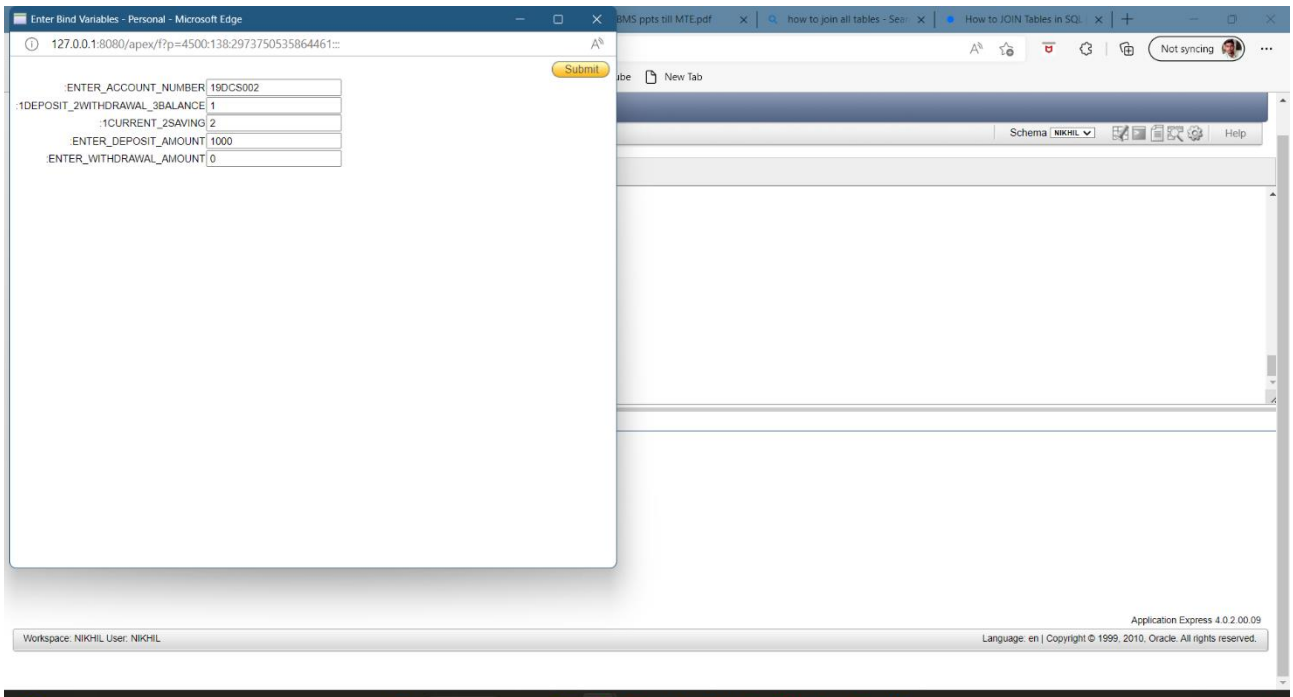
Results Explain Describe Saved SQL History

ACT_NO	ACT_NAME	CUST_CITY	CUST_PHNO	CUST_EMAIL	CUST_FATHERNAME	CUST_ADDRESS
35547203	Rameswar	Chatra	9782586482	ramar123@gmail.com	Mantu Jha	Itkhori
19DCS001	Rajesh	Ganganagar	9982586461	rajesh123@gmail.com	Suman Mishra	Anupgarh
35540426	Kamal	koderma	9982586471	kamal123@gmail.com	Keshav Jha	Dandadi
35567004	Nagendra	Dumka	9982586468	nagendra@gmail.com	Suraj modi	Palipur
19DCS004	Nagendra	Neel	9982586468	Neel@gmail.com	Shiv modi	sherpur
35567004	Parimal	mumbai	9982534468	Parimal@gmail.com	Ishan sharma	Bikaner

6 rows returned in 0.00 seconds Download

ACT_NO	ACT_NAME	ACT_BALANCE	ACT_DOB
19DCS001	Rajesh	37000	12/10/2001
19DCS002	Shyam	28000	05/11/1993
19DCS003	Bimal	55000	12/12/1997
19DCS006	Falguni	35060	01/07/1998
19DCS010	Shiv	35600	07/05/1999

5 rows returned in 0.00 seconds Download


Enter Bind Variables - Personal - Microsoft Edge
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Submit
:ENTER_ACCOUNT_NUMBER 19DCS002
:1DEPOSIT_2WITHDRAWAL_3BALANCE 1
:1CURRENT_2SAVING 2
:ENTER_DEPOSIT_AMOUNT 1000
:ENTER_WITHDRAWAL_AMOUNT 0
Not syncing
New Tab
Schema NIKHIL
Help
Application Express 4.0.2.00.09
Workspace: NIKHIL User: NIKHIL
Language: en | Copyright © 1999, 2010, Oracle. All rights reserved.
27°C
Haze
Search
ENG
US
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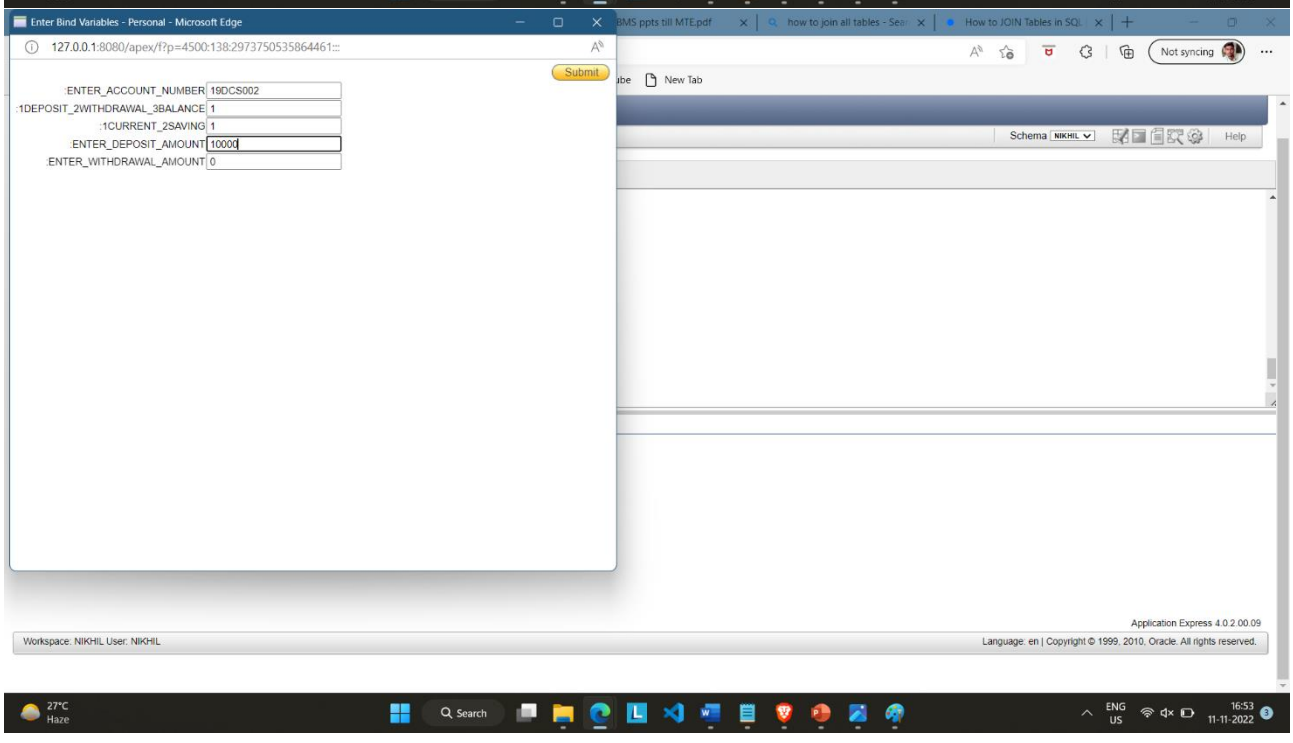
11-11-2022


Enter Bind Variables - Personal - Microsoft Edge
127.0.0.1:8080/apex/f?p=4500:138:29737505358644611::
Submit
:ENTER_ACCOUNT_NUMBER 19DCS002
:1DEPOSIT_2WITHDRAWAL_3BALANCE 1
:1CURRENT_2SAVING 1
:ENTER_DEPOSIT_AMOUNT 10000
:ENTER_WITHDRAWAL_AMOUNT 0
Not syncing
New Tab
Schema NIKHIL
Help
Application Express 4.0.2.00.09
Workspace: NIKHIL User: NIKHIL
Language: en | Copyright © 1999, 2010, Oracle. All rights reserved.
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Search
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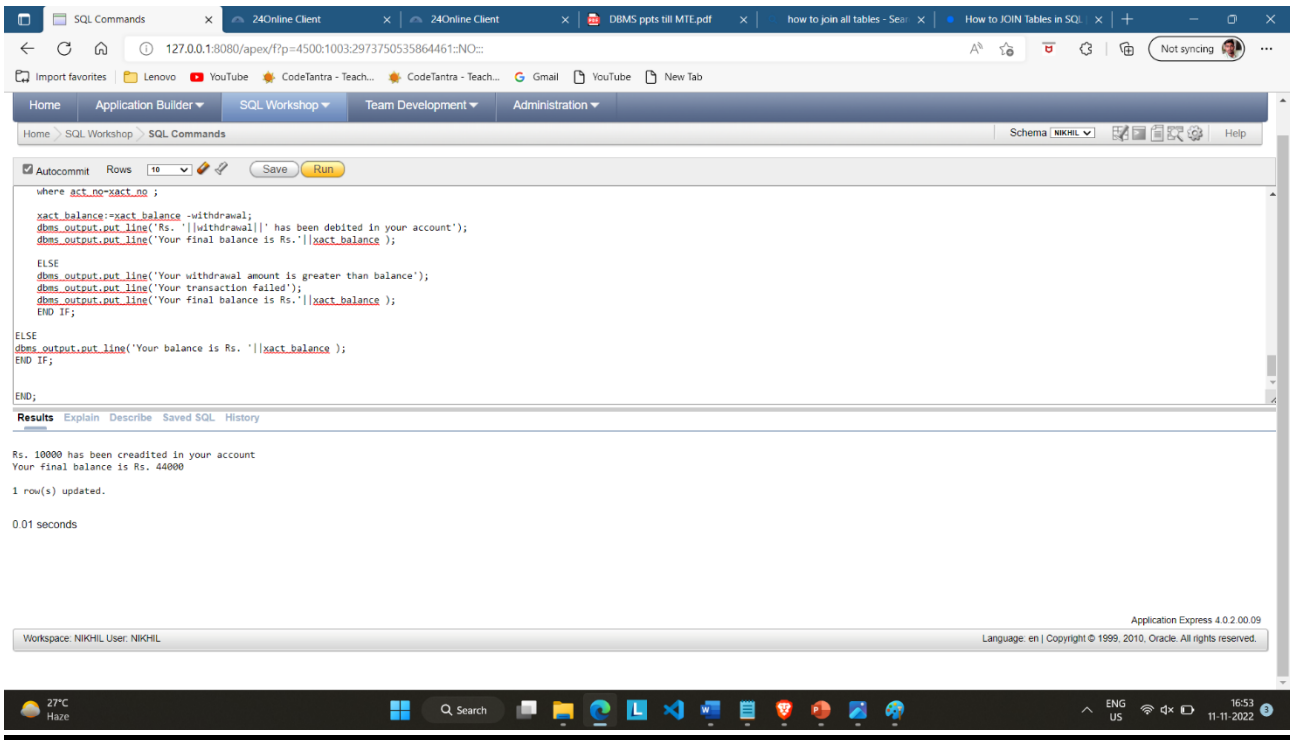
11-11-2022



Conclusion

So we have 5 tables and in 5 tables we were storing customer details , branch details , account details ,account type and city details. So if user wants to do transactions in their account then he tells the bank employee to enter their account number , account type and the type of transactions he wants.

There are 3 transaction types :

1. Withdraw after selecting the account type
2. Deposit
3. Show balance

References

- https://www.geeksforgeeks.org/transaction-states-in-dbms/
- https://en.wikipedia.org/wiki/PL/SQL