

**CHAROTAR UNIVERSITY OF SCIENCE & TECHNOLOGY  
DEVANG PATEL INSTITUTE OF ADVANCE TECHNOLOGY &  
RESEARCH**

**COMPUTER SCIENCE & ENGINEERING**

**Class: 4CSE1**

**Subject Name: Database Management System**

**Semester: IV**

**Subject Code: CE246**

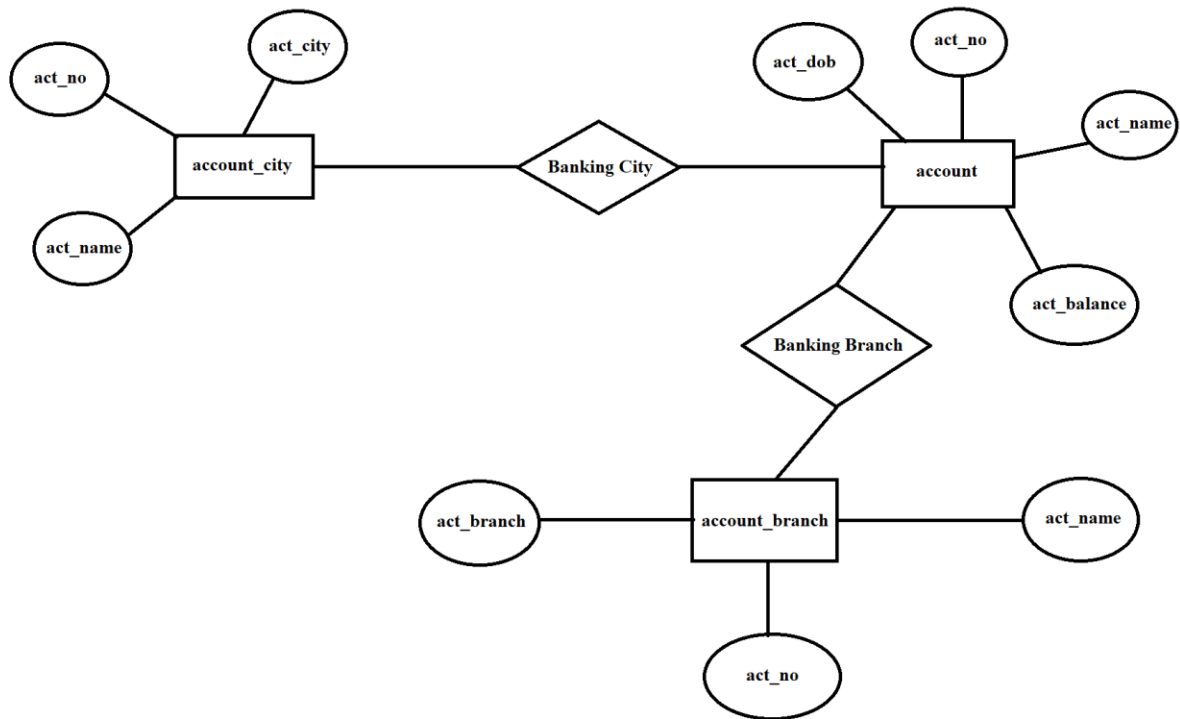
**Academic year: 2021-22**

**Mini Project Title: Transaction Management System**

**Group Members: Nisarg Chaniyara (ID-19DCS016)**

**Param Jani (ID-19DCS042)**

## ER Diagram For The Project



## Tables-Data Dictionary

### account table

The screenshot shows the Oracle Database Express Edition interface. The SQL Commands window contains the following text:

```

desc account;
desc account_branch;
desc account_city;

select * from account;
select * from account_branch;
select * from account_city;

DECLARE
xact_no account.act_no%type;
xact_balance account.act_balance%type;
opt number(1);

```

Below the SQL Commands window, the Results tab is selected, displaying the structure of the ACCOUNT table:

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
ACCOUNT	ACT_NO	Varchar2	10	-	-	-	✓	-	-
	ACT_NAME	Varchar2	10	-	-	-	✓	-	-
	ACT_BALANCE	Number	-	10	0	-	✓	-	-
	ACT_DOB	Date	7	-	-	-	✓	-	-

At the bottom right of the interface, it says "Application Express 2.1.0.00.39 Copyright © 1999, 2006, Oracle. All rights reserved."

```
select * from account;
```

**Results** Explain Describe Saved SQL History

ACT_NO	ACT_NAME	ACT_BALANCE	ACT_DOB
19DCS001	Rajesh	35000	12-JUL-01
19DCS002	Shyam	30000	05-NOV-93
19DCS003	Bimal	55000	12-DEC-97
19DCS004	Neel	46000	31-JAN-00
19DCS005	Tushar	37900	27-FEB-02
19DCS006	Falguni	35060	01-JUL-98
19DCS007	Parimal	12070	17-SEP-01
19DCS008	Apu	17800	14-JUN-94
19DCS009	Sheetal	65070	22-AUG-95
19DCS010	Shiv	35600	07-MAY-99

10 rows returned in 0.00 seconds

[CSV Export](#)

## account\_branch

The screenshot shows the Oracle Database Express Edition interface. The SQL Commands window contains the following text:

```

desc account;
desc account_branch;
desc account_city;

select * from account;
select * from account_branch;
select * from account_city;

DECLARE
xact_no account.act_no%type;
xact_balance account.act_balance%type;
opt number(1);

```

Below the SQL Commands window, the Results tab is selected, displaying the structure of the ACCOUNT\_BRANCH table:

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
ACCOUNT_BRANCH	ACT_NO	Varchar2	10	-	-	-	✓	-	-
	ACT_NAME	Varchar2	10	-	-	-	✓	-	-
	ACT_BRANCH	Varchar2	10	-	-	-	✓	-	-

At the bottom right, it says "Application Express 2.1.0.0.39 Copyright © 1999, 2006, Oracle. All rights reserved."

```
select * from account_branch;
```

**Results** Explain Describe Saved SQL History

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

10 rows returned in 0.00 seconds

[CSV Export](#)

## account\_city

Oracle Database Express Edition

User: 19DCS016

Home > SQL > SQL Commands

Autocommit Display 10 Save Run

```

desc account;
desc account_branch;
desc account_city;

select * from account;
select * from account_branch;
select * from account_city;

DECLARE
xact_no account.act_no%type;
xact_balance account.act_balance%type;
opt number(1);

```

Results Explain Describe Saved SQL History

Object Type TABLE Object ACCOUNT\_CITY

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
ACCOUNT_CITY	ACT_NO	Varchar2	10	-	-	-	✓	-	-
	ACT_NAME	Varchar2	10	-	-	-	✓	-	-
	ACT_CITY	Varchar2	10	-	-	-	✓	-	-

1 - 3

Application Express 2.1.0.0.39  
Copyright © 1999, 2006, Oracle. All rights reserved.

Language: en-us

```
select * from account_city;
```

Results Explain Describe Saved SQL History

ACT_NO	ACT_NAME	ACT_CITY
19DCS001	Rajesh	Vadodara
19DCS002	Shyam	Bangalore
19DCS003	Bimal	Delhi
19DCS004	Neel	Mumbai
19DCS005	Tushar	Bhavnagar
19DCS006	Falguni	Mumbai
19DCS007	Parimal	Kolkata
19DCS008	Apu	Pune
19DCS009	Sheetal	Ahmedabad
19DCS010	Shiv	Hyderabad

10 rows returned in 0.00 seconds

[CSV Export](#)

### **Code Of Project**

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

```
create table account_branch(act_no varchar2(10), act_name varchar2(10),
act_branch varchar2(10));
```

```
create table account_city(act_no varchar2(10), act_name varchar2(10), act_city
varchar2(10));
```

```
insert into account values('19DCS001','Rajesh','35000','12-JUL-2001');
```

```
insert into account values('19DCS002','Shyam','30000','05-NOV-1993');
```

```
insert into account values('19DCS003','Bimal','55000','12-DEC-1997');
```

```
insert into account values('19DCS004','Neel','46000','31-JAN-2000');
```

```
insert into account values('19DCS005','Tushar','37900','27-FEB-2002');
```

```
insert into account values('19DCS006','Falguni','35060','01-JUL-1998');
```

```
insert into account values('19DCS007','Parimal','12070','17-SEP-2001');
```

```
insert into account values('19DCS008','Apu','17800','14-JUN-1994');
```

```
insert into account values('19DCS009','Sheetal','65070','22-AUG-1995');
```

```
insert into account values('19DCS010','Shiv','35600','07-MAY-1999');
```

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

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

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

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

```
insert into account_branch values('19DCS005','Tushar','Ghoga');
```

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

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

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

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

```
desc account;
```

```
desc account_branch;
```

```
desc account_city;
```

```
select * from account;
```

```
select * from account_branch;
```

```
select * from account_city;
```

```
DECLARE
```

```
xact_no account.act_no%type;
```

```
xact_balance account.act_balance%type;
```

opt number(1);

deposit number(10);

withdrawal number(10);

BEGIN

xact\_no:= :Enter\_Account\_Number;

opt:= :1Deposit\_2Withdrawal\_3Balance;

select act\_balance into xact\_balance

from account

where act\_no=xact\_no ;

IF( opt = 1 ) THEN

deposit:= :Enter\_Deposit\_Amount;

update account

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 ) 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;

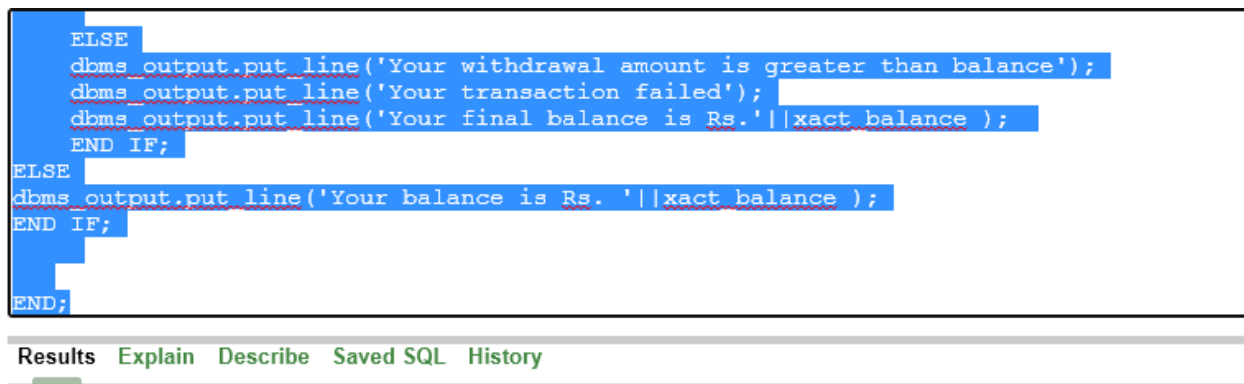
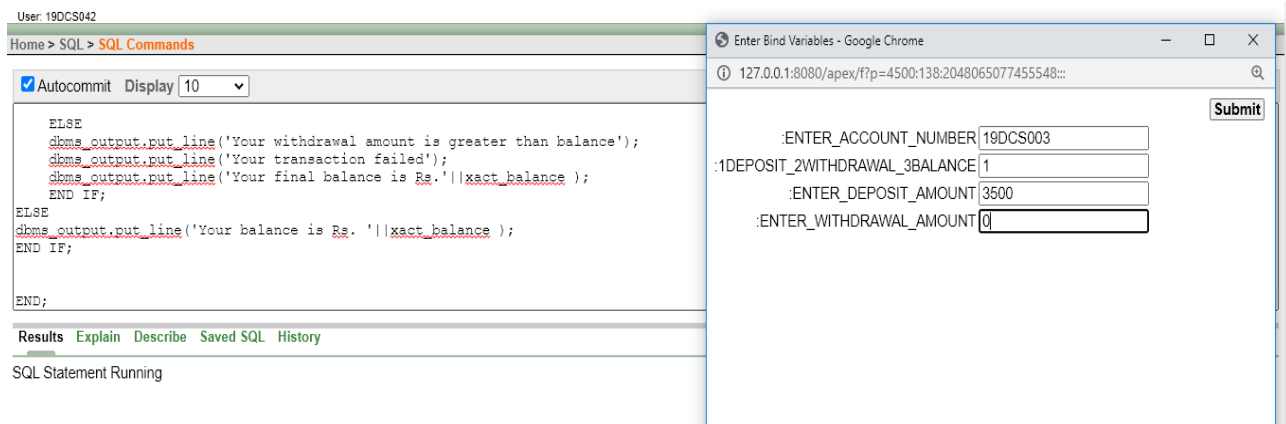
ELSE

dbms\_output.put\_line('Your balance is Rs. '||xact\_balance );

END IF;

END;

## Screenshot of the Outputs



User: 19DCS042

Home > SQL > SQL Commands

☒ Autocommit Display 10

```
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;
```

Results Explain Describe Saved SQL History

SQL Statement Running

Enter Bind Variables - Google Chrome

127.0.0.1:8080/apex/f?p=4500:138:2048065077455548::

Submit

:ENTER\_ACCOUNT\_NUMBER 19DCS007

:1DEPOSIT\_2WITHDRAWAL\_3BALANCE 2

:ENTER\_DEPOSIT\_AMOUNT 0

:ENTER\_WITHDRAWAL\_AMOUNT 3566

Home > SQL > SQL Commands

☒ Autocommit Display 10

```
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;
```

Results Explain Describe Saved SQL History

Rs. 3566 has been debited in your account  
Your final balance is Rs.8504

1 row(s) updated.

0.00 seconds

**If you do not enter deposit amount or withdrawal amount then it will show your balance according to your account number**

The screenshot shows the SQL Developer interface with a PL/SQL block in the SQL Commands window. The block is as follows:

```
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;
```

Below the code, the 'Results' tab is selected, showing 'SQL Statement Running'. To the right, a web browser window titled 'Enter Bind Variables - Google Chrome' is open, displaying a form with the following fields:

- :ENTER\_ACCOUNT\_NUMBER: 19DCS010
- :1DEPOSIT\_2WITHDRAWAL\_3BALANCE: 3
- :ENTER\_DEPOSIT\_AMOUNT:
- :ENTER\_WITHDRAWAL\_AMOUNT:

A 'Submit' button is located at the bottom right of the form.

The screenshot shows the SQL Developer interface with the same PL/SQL block. The 'Results' tab is selected, displaying the following output:

```
Your balance is Rs. 35600
1 row(s) updated.
0.00 seconds
```

Below the output, the 'Results' tab is selected, showing 'SQL Statement Running'.

### **Limitation Of Our Project**

**It will ask for both Deposit and withdrawal amount at the same time but first we have asked for the number to choose - 1 for Deposit, 2 for Withdrawal and 3 for Checking the balance hence it will overcome it.**

### **Conclusion**

**From this project we have learned about how to use PL/SQL and all its concepts.**