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VIT[®]
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956) CO

Programme	:	B.Tech - CSE	Semester	:	Winter 18 - 19
Course	:	Database Management Systems (Embedded Lab)	Code	:	CSE2004
Faculty	:	Prof. A. Vijayalakshmi Prof. M. Premalatha	Slot	:	L3 + L4

Ex. No. 5
11/02/18

SQL – Subqueries

Create the table for the banking enterprise and set sufficient key attributes for the following schemas and insert sufficient tuples

customer(cust_name, cust_street, cust_city)

```
SQL> create table customer(cust_name varchar(20), cust_street varchar(20),cust_city  
varchar(20),constraint pk_cname primary key(cust_name));
```

Table created.

branch(bname, bcity, assets)

```
SQL> create table branch(bname varchar(20),bcity varchar(20),assets  
number(10),constraint pk_bname primary key(bname));
```

Table created.

account(acct_no, bname, balance)

```
SQL> create table account(acct_no varchar(20),bname varchar(20),balance  
number(10),constraint pk_accno primary key(acct_no),constraint fk_bname foreign  
key(bname) references branch);
```

Table created.

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loan(loan_no, bname, balance)

```
SQL> create table loan(loan_no varchar(20),bname varchar(20),balance number(10),
constraint pk_lno primary key(loan_no),constraint fk_b foreign key(bname) references branch);
```

Table created.

depositor(cust_name,acct_no)

```
SQL> create table depositor(cust_name varchar(20),acct_no varchar(20),constraint
fk_cusname foreign key(cust_name) references customer,constraint fk_acn foreign
key(acct_no) references account);
```

Table created.

borrower(cust_name, loan_no)

```
SQL> create table borrower(cust_name varchar(20),loan_no varchar(20),constraint
fk_cuname foreign key(cust_name) references customer,constraint fk_ln foreign key(loan_no)
references loan);
```

Table created.

Inserting Values to all the tables:

```
SQL> insert into customer values('Jyoti','Dwarka','Delhi');
```

1 row created.

```
SQL> insert into customer values('Ash','Chanakyapuri','Delhi');
```

1 row created.

```
SQL> insert into customer values('Sam','Vashi','Mumbai');
```

1 row created.

```
SQL> insert into customer values('Simran','Borivali','Mumbai');
```

1 row created.

```
SQL> insert into customer values('Siddhi','Kanchipuram','Chennai');
```

1 row created.

```
SQL> insert into customer values('Ram','TNagar','Chennai');
```

1 row created.

```
SQL> insert into branch values('Sainik Farms','Delhi','15000000');
```

1 row created.

```
SQL> insert into branch values('Gurgaon','Delhi','25000000');
```

1 row created.

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```
SQL> insert into branch values('Vandalur','Chennai','10000000');
```

1 row created.

```
SQL> insert into branch values('Kelambakkam','Chennai','9000000');
```

1 row created.

```
SQL> insert into branch values('Bandra','Mumbai','12500000');
```

1 row created.

```
SQL> insert into account values('HDFC00001','Sainik Farms',260000);
```

1 row created

```
SQL> insert into account values('HDFC00023','Gurgaon',450000);
```

1 row created.

```
SQL> insert into account values('HDFC00125','Bandra',1100000);
```

1 row created.

```
SQL> insert into account values('HDFC00134','Vandalur',700000);
```

1 row created.

```
SQL> insert into account values('HDFC00110','Kelambakkam',850000);
```

1 row created.

```
SQL> insert into loan values('L00001','Sainik Farms',60000);
```

1 row created.

```
SQL> insert into loan values('L00002','Gurgaon',100000);
```

1 row created.

```
SQL> insert into loan values('L00003','Vandalur',200000);
```

1 row created.

```
SQL> insert into loan values('L00004','Kelambakkam',30000);
```

1 row created.

```
SQL> insert into loan values('L00005','Bandra',70000);
```

1 row created.

```
SQL> insert into depositor values('Ash','HDFC00001');
```

1 row created.

```
SQL> insert into depositor values('Jyoti','HDFC00023');
```

1 row created.

```
SQL> insert into depositor values('Sam','HDFC00125');
```

1 row created.

```
SQL> insert into depositor values('Siddhi','HDFC00134');
```

1 row created.

```
SQL> insert into depositor values('Ram','HDFC00110');
```

1 row created.

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SQL> insert into borrower values('Ash','L00001');

1 row created.

SQL> insert into borrower values('Jyoti','L00002');

1 row created.

SQL> insert into borrower values('Siddhi','L00003');

1 row created.

SQL> insert into borrower values('Ram','L00004');

1 row created.

SQL> insert into borrower values('Simran','L00005');

1 row created.

Tables:

SQL> select * from customer;

CUST_NAME	CUST_STREET	CUST_CITY
Jyoti	Dwarka	Delhi
Ash	Chanakyapuri	Delhi
Sam	Vashi	Mumbai
Simran	Borivali	Mumbai
Siddhi	Kanchipuram	Chennai
Ram	TNagar	Chennai

6 rows selected.

SQL> select * from branch;

BNAME	BCITY	ASSETS
Sainik Farms	Delhi	15000000
Gurgaon	Delhi	25000000
Vandalur	Chennai	10000000
Kelambakkam	Chennai	9000000
Bandra	Mumbai	12500000

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SQL> select * from account;

ACCT_NO	BNAME	BALANCE
HDFC00001	Sainik Farms	260000
HDFC00023	Gurgaon	450000
HDFC00125	Bandra	1100000
HDFC00134	Vandalur	700000
HDFC00110	Kelambakkam	850000

SQL> select * from loan;

LOAN_NO	BNAME	BALANCE
L00001	Sainik Farms	60000
L00002	Gurgaon	100000
L00003	Vandalur	200000
L00004	Kelambakkam	30000
L00005	Bandra	70000

SQL> select * from depositor;

CUST_NAME	ACCT_NO
Ash	HDFC00001
Jyoti	HDFC00023
Sam	HDFC00125
Siddhi	HDFC00134
Ram	HDFC00110

SQL> select * from borrower;

CUST_NAME	LOAN_NO
Ash	L00001
Jyoti	L00002
Siddhi	L00003
Ram	L00004
Simran	L00005

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Write SQL queries for the following:

- 1. List the customer details in he has a loan.**

SQL> select cust_name from borrower where loan_no in(select loan_no from loan where balance>0);

CUST_NAME

Ash

Jyoti

Siddhi

Ram

Simran

- 2. List the branch details in there exists a branch name vandalur.**

SQL> select * from branch where bname in (select bname from branch where bname='Vandalur');

BNAME	BCITY	ASSETS
-------	-------	--------

Vandalur	Chennai	10000000
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- 3. List the account details which has more balance than at least one account.**

SQL> select acct_no from account where balance > some(select balance from account);

ACCT_NO

HDFC00023

HDFC00125

HDFC00134

HDFC00110

- 4. List the loan details which has the maximum loan amount.**

SQL> select loan_no from loan where balance >= all(select balance from loan);

LOAN_NO

L00003

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5. List the customer details if he has taken an account.

SQL> select cust_name from depositor where acct_no in(select acct_no from account where balance>0);

CUST_NAME

Ash

Jyoti

Sam

Siddhi

Ram

6. List the customers who have not taken any loans.

SQL> (select cust_name from depositor) minus (select cust_name from borrower);

CUST_NAME

Sam

7. List the customers who have an account and loan.

SQL> (select cust_name from depositor) intersect (select cust_name from borrower);

CUST_NAME

Ash

Jyoti

Ram

Siddhi

8. List the customers who have loan but not account.

SQL> (select cust_name from borrower) minus (select cust_name from depositor);

CUST_NAME

Simran

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9. List the customers who have account but not loan.

SQL> (select cust_name from depositor) minus (select cust_name from borrower);

CUST_NAME

Sam

10. List the customer details if he lives in Chennai.

SQL> select * from customer where cust_name in (select cust_name from customer where cust_city='Chennai');

CUST_NAME CUST_STREET CUST_CITY

Siddhi Kanchipuram Chennai

Ram TNagar Chennai

11. Increase all account balance with 2k if the customer lives in Chennai.

//tables unrelated. Not possible. Tables needed: customer and account.

12. Delete all the loans took in the branch located in Delhi.

delete from loan where bname in(select loan_no from loan where bname='Sainik Farms');

0 rows deleted.

delete from loan where bname in(select loan_no from loan where bname='Gurgaon');

0 rows deleted.