

LAB 1

Thursday, April 27, 2023 4:51 PM

Course Code:	BCSE302P	Course Name:	Database Systems Lab
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Experiment no:	1-4	Registration no:	21BAI1830
Experiment name:			
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1)

```
SQL> create table branch_21bai1830(branch_name varchar2(30), branch_city varchar2(30), assets number(8,2));
Table created.

SQL> desc branch_21bai1830
Name          Null?    Type
-----        -----
BRANCH_NAME      VARCHAR2(30)
BRANCH_CITY      VARCHAR2(30)
ASSETS          NUMBER(8,2)

SQL>
```

```
SQL> create table account_21bai1830(account_no varchar2(11), branch_name varchar(11), balance number(8));
Table created.

SQL> create table branch_21bai1830(branch_name varchar2(30), branch_city varchar2(30), assets number(8,2));
create table branch_21bai1830(branch_name varchar2(30), branch_city varchar2(30), assets number(8,2))
*
ERROR at line 1:
ORA-00955: name is already used by an existing object

SQL> desc account_21bai1830
Name          Null?    Type
-----        -----
ACCOUNT_NO      VARCHAR2(11)
BRANCH_NAME      VARCHAR2(11)
BALANCE          NUMBER(8)
```

```
SQL> create table customer_21bai1830(customer_id varchar2(11), customer_name varchar2(20), customer_street varchar2(15), customer_city varchar2(15));
Table created.

SQL> desc customer_21bai1830
Name          Null?    Type
-----        -----
CUSTOMER_ID      VARCHAR2(11)
CUSTOMER_NAME      VARCHAR2(20)
CUSTOMER_STREET      VARCHAR2(15)
CUSTOMER_CITY      VARCHAR2(15)

SQL>
```

```

SQL> desc depositor_21bai1830
 Name          Null?    Type
----- -----
 CUSTOMERID           VARCHAR2(11)
 CUSTOMER_NO          VARCHAR2(11)

SQL> create table loan_21bai1830(loan_no varchar2(4), branch_name varchar2(30), amount number(8,2));
Table created.

SQL> desc loan_21bai1830
 Name          Null?    Type
----- -----
 LOAN_NO            VARCHAR2(4)
 BRANCH_NAME        VARCHAR2(30)
 AMOUNT             NUMBER(8,2)

SQL> create table borrower_21bai1830(customer_id varchar2(11), loan_no varchar2(4));
Table created.

SQL> desc borrower_21bai1830
 Name          Null?    Type
----- -----
 CUSTOMER_ID        VARCHAR2(11)
 LOAN_NO            VARCHAR2(4)

SQL>

```

2)

```

SQL> alter table account_21bai1830 add account_opening_date number(8);
Table altered.

SQL> desc account_21bai1830
 Name          Null?    Type
----- -----
 ACCOUNT_NO           VARCHAR2(11)
 BRANCH_NAME         VARCHAR2(11)
 BALANCE              NUMBER(8)
 ACCOUNT_OPENING_DATE NUMBER(8)

SQL> alter table customer_21bai1830 alter column customer_street varchar2(20);
alter table customer_21bai1830 alter column customer_street varchar2(20)
*
ERROR at line 1:
ORA-01735: invalid ALTER TABLE option

SQL> alter table customer_21bai1830 modify customer_street varchar2(20);
Table altered.

SQL> desc customer_21bai1830
 Name          Null?    Type
----- -----
 CUSTOMER_ID        VARCHAR2(11)
 CUSTOMER_NAME      VARCHAR2(20)
 CUSTOMER_STREET    VARCHAR2(20)
 CUSTOMER_CITY      VARCHAR2(15)

SQL>

```

3)

```

SQL> alter table account_21bai1830 add primary key (account_no);
Table altered.

SQL> desc account_21bai1830
Name          Null?    Type
-----
ACCOUNT_NO           NOT NULL VARCHAR2(11)
BRANCH_NAME          VARCHAR2(11)
BALANCE              NUMBER(8)
ACCOUNT_OPENING_DATE NUMBER(8)

SQL> alter table branch_21bai1830 add primary key (branch_name);
Table altered.

SQL> desc branch_21bai1830
Name          Null?    Type
-----
BRANCH_NAME          NOT NULL VARCHAR2(30)
BRANCH_CITY          VARCHAR2(30)
ASSETS               NUMBER(8,2)

SQL> alter table customer_21bai1830 add primary key (customer_id);
Table altered.

SQL> desc customer_21bai1830
Name          Null?    Type
-----
CUSTOMER_ID          NOT NULL VARCHAR2(11)
CUSTOMER_NAME         VARCHAR2(20)
CUSTOMER_STREET        VARCHAR2(20)
CUSTOMER_CITY          VARCHAR2(15)

SQL> alter table loan_21bai1830 add primary key (loan_no);
Table altered.

SQL> desc loan_21bai1830
Name          Null?    Type
-----
LOAN_NO           NOT NULL VARCHAR2(4)
BRANCH_NAME          VARCHAR2(30)
AMOUNT              NUMBER(8,2)

```

```

SQL> alter table account_21bai1830 add foreign key (branch_name) references branch_21bai1830(branch_name);
Table altered.

SQL> desc account_21bai1830
Name          Null?    Type
-----
ACCOUNT_NO           NOT NULL VARCHAR2(11)
BRANCH_NAME          VARCHAR2(11)
BALANCE              NUMBER(8)
ACCOUNT_OPENING_DATE NUMBER(8)

```

```

SQL> alter table depositor_21bai1830 add foreign key(customerid) references customer_21bai1830(customer_id);
Table altered.

```

```

SQL> alter table loan_21bai1830 add foreign key (branch_name) references branch_21bai1830(branch_name);
Table altered.

SQL> desc loan_21bai1830
Name          Null?    Type
-----
LOAN_NO           NOT NULL VARCHAR2(4)
BRANCH_NAME          VARCHAR2(30)
AMOUNT              NUMBER(8,2)

```

4) Drop foreign key

```

SQL> SELECT constraint_name
  2  FROM user_constraints
  3  WHERE table_name = 'LOAN_21BAI1830' AND constraint_type = 'R';

CONSTRAINT_NAME
-----
SYS_C007260

SQL> ALTER table loan_21bai1830 dro constraint SYS_C007260;
ALTER table loan_21bai1830 dro constraint SYS_C007260
*
ERROR at line 1:
ORA-01735: invalid ALTER TABLE option

SQL> ALTER table loan_21bai1830 drop constraint SYS_C007260;

Table altered.

SQL> desc loan_21bai1830;
Name          Null?    Type
-----
LOAN_NO      NOT NULL VARCHAR2(4)
BRANCH_NAME   VARCHAR2(30)
AMOUNT        NUMBER(8,2)

```

5. Set loan_no attribute of borrower table as foreign key with cascade deletion, which refers to loan table loan_no column.

```

SQL> alter table borrower_21bai1830 add constraint fk_bor_loan foreign key(loan_no) references loan_21bai1830(loan_no) on delete cascade;
Table altered.

SQL> desc borrower_21bai1830
Name          Null?    Type
-----
CUSTOMER_ID   VARCHAR2(11)
LOAN_NO       VARCHAR2(4)

SQL> desc loan_21bai1830
Name          Null?    Type
-----
LOAN_NO      NOT NULL VARCHAR2(4)
BRANCH_NAME   VARCHAR2(30)
AMOUNT        NUMBER(8,2)

```

6. Add foreign key for the customer_id of borrower table which refers to customer table with constraint name.

```

SQL> alter table borrower_21bai1830 add constraint fk_bor_cus foreign key(customer_id) references customer_21bai1830(customer_id);
Table altered.

SQL> desc borrower_21bai1830
Name          Null?    Type
-----
CUSTOMER_ID   VARCHAR2(11)
LOAN_NO       VARCHAR2(4)

SQL> desc customer_21bai1830
Name          Null?    Type
-----
CUSTOMER_ID   NOT NULL VARCHAR2(11)
CUSTOMER_NAME  VARCHAR2(20)
CUSTOMER_STREET  VARCHAR2(20)
CUSTOMER_CITY   VARCHAR2(15)

```

LAB 2

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```
SQL> ALTER TABLE BRANCH_21BAI1830 MODIFY ASSETS NUMBER(10,2);
Table altered.

SQL> INSERT INTO BRANCH_21BAI1830(BRANCH_NAME, BRANCH_CITY, ASSETS) VALUES ('Perryridge', 'Rye', 5000000);
1 row created.

SQL> INSERT INTO BRANCH_21BAI1830(BRANCH_NAME, BRANCH_CITY, ASSETS) VALUES ('Downtown', 'Stamford', 1000000);
1 row created.

SQL> INSERT INTO BRANCH_21BAI1830(BRANCH_NAME, BRANCH_CITY, ASSETS) VALUES ('Brighton', 'Paloalto', 2500000);
1 row created.

SQL> INSERT INTO BRANCH_21BAI1830(BRANCH_NAME, BRANCH_CITY, ASSETS) VALUES ('Redwood', 'Harrison', 1500000);
1 row created.

SQL> INSERT INTO BRANCH_21BAI1830(BRANCH_NAME, BRANCH_CITY, ASSETS) VALUES ('Mianus', 'Pitsfield', 4500000);
1 row created.

SQL> INSERT INTO BRANCH_21BAI1830(BRANCH_NAME, BRANCH_CITY, ASSETS) VALUES ('Roundhill', 'Princeton', 1500000);
1 row created.

SQL> INSERT ALL
  2  INTO account_21bai1830 (ACCOUNT_NO, BRANCH_NAME, BALANCE) VALUES ('019_28_3746', 'Perryridge', 15000)
  3  INTO account_21bai1830 (ACCOUNT_NO, BRANCH_NAME, BALANCE) VALUES ('182_73_6091', 'Downtown', 23000)
  4  INTO account_21bai1830 (ACCOUNT_NO, BRANCH_NAME, BALANCE) VALUES ('192_83_7465', 'Brighton', 18000)
  5  INTO account_21bai1830 (ACCOUNT_NO, BRANCH_NAME, BALANCE) VALUES ('321_12_3123', 'Redwood', 5000)
  6  INTO account_21bai1830 (ACCOUNT_NO, BRANCH_NAME, BALANCE) VALUES ('336_66_9999', 'Mianus', 5000)
  7  INTO account_21bai1830 (ACCOUNT_NO, BRANCH_NAME, BALANCE) VALUES ('963_96_3963', 'Roundhill', 5000)
  8  INTO account_21bai1830 (ACCOUNT_NO, BRANCH_NAME, BALANCE) VALUES ('376_66_9999', 'Mianus', 9000)
  9  INTO account_21bai1830 (ACCOUNT_NO, BRANCH_NAME, BALANCE) VALUES ('963_96_3964', 'Mianus', 13000)
 10 SELECT 1 FROM dual;

8 rows created.

SQL> select * from account_21bai1830
  2
SQL> select * from account_21bai1830;

ACCOUNT_NO  BRANCH_NAME      BALANCE ACCOUNT_OPENING_DATE
-----  -----
019_28_3746 Perryridge      15000
182_73_6091 Downtown        23000
192_83_7465 Brighton         18000
321_12_3123 Redwood          5000
336_66_9999 Mianus           5000
963_96_3963 Roundhill        5000
376_66_9999 Mianus           9000
963_96_3964 Mianus          13000

8 rows selected.

SQL> INSERT INTO loan_21bai1830 (LOAN_NO, BRANCH_NAME, AMOUNT)
 2 WITH loan_data AS (
 3   SELECT '1_11' AS LOAN_NO, 'Roundhill' AS BRANCH_NAME, 9000 AS AMOUNT FROM dual UNION ALL
 4   SELECT '1_14', 'Downtown', 15000 FROM dual UNION ALL
 5   SELECT '1_15', 'Perryridge', 15000 FROM dual UNION ALL
 6   SELECT '1_16', 'Perryridge', 13000 FROM dual UNION ALL
 7   SELECT '1_17', 'Downtown', 10000 FROM dual UNION ALL
 8   SELECT '1_23', 'Redwood', 20000 FROM dual UNION ALL
 9   SELECT '1_93', 'Mianus', 500 FROM dual
10 )
11 SELECT LOAN_NO, BRANCH_NAME, AMOUNT FROM loan_data;

7 rows created.
```

RETRIEVAL

```
1 SELECT BRANCH_NAME  
2 FROM loan_bai1830;  
3  
^
```

1) **BRANCH_NAME**

Roundhill

Downtown

Perryridge

Perryridge

Downtown

Redwood

Mianus

```
1 SELECT DISTINCT BRANCH_NAME  
2 FROM loan_bai1830;  
3  
^
```

2) **BRANCH_NAME**

Roundhill

Downtown

Perryridge

Redwood

Mianus

```
1 UPDATE account_bai1830  
2 SET BALANCE = BALANCE - (BALANCE * 0.1);  
3  
4  
3)
```

```
1 SELECT CUSTOMER_NAME  
2 FROM customer_bai1830  
3 WHERE CUSTOMER_CITY IN ('Pittsfield', 'Stamford');  
4
```

```
1 SELECT LOAN  
2 FROM loan_bai1830  
3 WHERE BRANCH_NAME = 'Perryridge' AND AMOUNT > 1200;  
4  
5) LOAN
```

1_15

1_16

```
1 SELECT LOAN
2 FROM loan_bai1830
3 WHERE AMOUNT BETWEEN 10000 AND 20000;
4
```

6) LOAN

1_14

1_15

1_16

1_17

1_23

```
1 SELECT CUSTOMER_NAME
2 FROM customer_bai1830
3 WHERE CUSTOMER_STREET LIKE '%Main%';
4
```

7) CUSTOMER_NAME

jones

hayes

```
1 SELECT *
2 FROM loan_bai1830
3 ORDER BY AMOUNT DESC;
4
```

LOAN	BRANCH_NAME	AMOUNT
1_23	Redwood	20000
1_14	Downtown	15000
1_15	Perryridge	15000
1_16	Perryridge	13000
1_17	Downtown	10000
1_11	Roundhill	9000
1_93	Mianus	500

```
1 SELECT CUSTOMER_NAME
2 FROM customer_bai1830
3 WHERE CUSTOMER_NAME LIKE '_u%';
4
```

```
1 SELECT CUSTOMER_NAME  
2 FROM customer_bai1830  
3 WHERE CUSTOMER_NAME LIKE '_u%';  
4
```

9)

```
 CUSTOMER_NAME
```

```
turner
```

```
curry
```

```
1 SELECT DISTINCT b.BRANCH_NAME  
2 FROM Branch_bai1830 b  
3 WHERE b.ASSETS > (SELECT MAX(ASSETS) FROM Branch_bai1830 WHERE BRANCH_CITY = 'Stamford');  
4
```

10)

```
 BRANCH_NAME
```

```
Perryridge
```

```
Brighton
```

```
Redwood
```

```
Mianus
```

```
Roundhill
```

BUILT IN FUNCTIONS

```
1 SELECT BRANCH_NAME, AVG(BALANCE) AS AVERAGE_BALANCE  
2 FROM account_bai1830  
3 GROUP BY BRANCH_NAME;  
4  
5  
6  
7  
8
```

1)

BRANCH_NAME	AVERAGE_BALANCE
Brighton	16200
Downtown	20700
Mianus	8100
Perryridge	13500
Redwood	4500
Roundhill	4500

```

1 SELECT CUSTOMER_CITY
2 FROM customer_bai1830
3 GROUP BY CUSTOMER_CITY
4 HAVING COUNT(*) > 4;
5
6

```

```

1 SELECT AMOUNT
2 FROM loan_bai1830
3 WHERE BRANCH_NAME = 'Adyar'
4 ORDER BY AMOUNT DESC
5 LIMIT 2, 1;
6

```

LAB 4

```

SQL> INSERT ALL
  2  INTO STUBAI1830 (REGNO, SNAME, CGPA, PHONE, SCHOOL) VALUES ('20BCE1001', 'HARSH', '9.0', '8979867898', 'CSE')
  3  INTO STUBAI1830 (REGNO, SNAME, CGPA, PHONE, SCHOOL) VALUES ('21BCE1002', 'ALEX', '9.3', '8979867899', 'CSE')
  4  SELECT 1 FROM DUAL;

2 rows created.

SQL> INSERT ALL
  2  INTO STUBAI1830 (REGNO, SNAME, CGPA, PHONE, SCHOOL) VALUES ('20BCE1003', 'abhi', '8.9', '8888888888', 'it')
  3  INTO STUBAI1830 (REGNO, SNAME, CGPA, PHONE, SCHOOL) VALUES ('20BCE1004', 'virat', '7.8', '000000', 'ece')
  4  INTO STUBAI1830 (REGNO, SNAME, CGPA, PHONE, SCHOOL) VALUES ('20BCE1005', 'anmol', '8.3', '888888', 'ecm')
  5  INTO STUBAI1830 (REGNO, SNAME, CGPA, PHONE, SCHOOL) VALUES ('20BCE1007', 'akash', '6.8', '555555', 'ece')
  6  select 1 from dual;

4 rows created.

SQL> desc stubai1830
Name          Null?    Type
-----        -----
REGNO          VARCHAR2(30)
SNAME          VARCHAR2(10)
CGPA           NUMBER(2,1)
PHONE          VARCHAR2(10)
SCHOOL         VARCHAR2(10)

SQL> select * from stubai1830\
  2
SQL> select * from stubai1830;

REGNO          SNAME      CGPA  PHONE      SCHOOL
-----        -----
20BCE1001      HARSH     9     8979867898 CSE
21BCE1002      ALEX      9.3   8979867899 CSE
20BCE1003      abhi      8.9   8888888888 it
20BCE1004      virat     7.8   000000     ece
20BCE1005      anmol     8.3   888888     ecm
20BCE1007      akash     6.8   555555     ece

6 rows selected.

SQL> select school, avg(CGPA) as avg_cgpa, max(CGPA) as max_cgpa
  2  from stubai1830
  3  group by school;

SCHOOL        AVG_CGPA  MAX_CGPA
-----        -----
it            8.9       8.9
CSE           9.15      9.3
ece           7.3       7.8
ecm           8.3       8.3

```

LAB 3

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1)

```
1 SELECT e.eid, MAX(a.cruisingrange) AS max_cruising_range
2 FROM employees_bai1830 e
3 JOIN certified_bai1830 c ON e.eid = c.eid
4 JOIN aircraft_bai1830 a ON c.aid = a.aid
5 GROUP BY e.eid
6 HAVING COUNT(*) > 3;
7
8
9
10
```

eid	max_cruising_range
1	8000

2)

```
1 SELECT e.ename
2 FROM employees_bai1830 e
3 JOIN flights_bai1830 f ON e.salary < (SELECT MIN(price) FROM flights_bai1830 WHERE from_city = 'Los Angeles' AND to_city =
4
5
6
7
8
```

3)

```
1 SELECT a.aname, AVG(e.salary) AS average_salary
2 FROM aircraft_bai1830 a
3 JOIN certified_bai1830 c ON a.aid = c.aid
4 JOIN employees_bai1830 e ON c.eid = e.eid
5 WHERE a.cruisingrange > 1000
6 GROUP BY a.aid, a.aname;
7
```

aname	average_salary
Boeing	73333.33333333333
Jet01	57500
Airbus380	53333.33333333336

```
1 SELECT e.ename
2 FROM employees_bai1830 e
3 JOIN certified_bai1830 c ON e.eid = c.eid
4 JOIN aircraft_bai1830 a ON c.aid = a.aid
5 WHERE a.aname LIKE 'Boeing%';
6
```

4)

ename
Ajay
Ron
Ram

```
1 SELECT a.aid
2 FROM aircraft_bai1830 a
3 JOIN certified_bai1830 c ON a.aid = c.aid
4 JOIN flights_bai1830 f ON c.eid = f.flno
5 WHERE f.from_city = 'Los Angeles' AND f.to_city = 'Chicago';
6
7
```

5)

:

```

1 SELECT f.from_city, f.to_city
2 FROM flights_bai1830 f
3 WHERE NOT EXISTS (
4     SELECT *
5     FROM employees_bai1830 e
6     WHERE e.salary > 100000 AND NOT EXISTS (
7         SELECT *
8         FROM certified_bai1830 c
9         WHERE c.eid = e.eid AND c.aid = f.flno
10    )
11 );

```

6)

	from_city	to_city
	Bangalore	Mangalore
	Bangalore	Delhi
	Bangalore	Mumbai
	Delhi	Mumbai
	Delhi	Frankfurt
	Bangalore	Frankfurt
	Bangalore	Frankfurt

SQLite

```
1 SELECT e.ename
2 FROM employees_bai1830 e
3 JOIN certified_bai1830 c ON e.eid = c.eid
4 JOIN aircraft_bai1830 a ON c.aid = a.aid
5 WHERE a.cruisingrange > 3000 AND a.aname NOT LIKE 'Boeing%';
6
7
```

7)

ename
Ajay
Ajith
Ajay
Ajith
Harry

```
1 SELECT AVG(CASE WHEN eid IS NOT NULL THEN salary ELSE NULL END) - AVG(salary) AS salary_difference
2 FROM employees_bai1830;
3
4
5
```

8)

salary_difference
0

```
1 SELECT e.ename, e.salary
2 FROM employees_bai1830 e
3 WHERE e.eid NOT IN (
4     SELECT c.eid
5     FROM certified_bai1830 c
6 ) AND e.salary > (
7     SELECT AVG(salary)
8     FROM employees_bai1830
9     WHERE eid IN (
10        SELECT eid
11        FROM certified_bai1830
12    )
13 );
14
```

:

9)

```
1 SELECT e.ename
2 FROM employees_bai1830 e
3 JOIN certified_bai1830 c ON e.eid = c.eid
4 JOIN aircraft_bai1830 a ON c.aid = a.aid
5 WHERE a.cruisingrange > 1000
6 GROUP BY e.eid, e.ename
7 HAVING COUNT(DISTINCT a.aid) = (
8     SELECT COUNT(DISTINCT aid)
9     FROM aircraft_bai1830
10    WHERE cruisingrange > 1000
11 );
12
```

: ename

Ajay

10)

LAB 4 - Aggregate Views

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TABLE CREATION

```

29 INSERT INTO Customers_bai1830 (customer_id, cust_name, city, grade, salesman_id) VALUES (3003, 'James Hoog', 'New York', 'A', 5001)
30 INSERT INTO Customers_bai1830 (customer_id, cust_name, city, grade, salesman_id) VALUES (3001, 'Nick Rimando', 'New York', 'B', 5002)
31
32 CREATE TABLE Orders_bai1830 (
33     ord_no number(5),
34     purch_amt number(6,2),
35     ord_date date,
36     customer_id number(4),
37     salesman_id number(4)
38 );
39
40 INSERT INTO Orders_bai1830 (ord_no, purch_amt, ord_date, customer_id, salesman_id) VALUES (70001, 250.45, '2012-10-05', 3001, 5002)
41 INSERT INTO Orders_bai1830 (ord_no, purch_amt, ord_date, customer_id, salesman_id) VALUES (70009, 150.5, '2012-10-05', 3001, 5002)
42 INSERT INTO Orders_bai1830 (ord_no, purch_amt, ord_date, customer_id, salesman_id) VALUES (70002, 948.5, '2012-10-05', 3001, 5002)
43 INSERT INTO Orders_bai1830 (ord_no, purch_amt, ord_date, customer_id, salesman_id) VALUES (70004, 2400.6, '2012-10-05', 3001, 5002)
44 INSERT INTO Orders_bai1830 (ord_no, purch_amt, ord_date, customer_id, salesman_id) VALUES (70007, 3045.6, '2012-10-05', 3001, 5002)
45 INSERT INTO Orders_bai1830 (ord_no, purch_amt, ord_date, customer_id, salesman_id) VALUES (70005, 5760.0, '2012-10-05', 3001, 5002)
46 INSERT INTO Orders_bai1830 (ord_no, purch_amt, ord_date, customer_id, salesman_id) VALUES (70008, 2400.6, '2012-10-05', 3001, 5002)
47 INSERT INTO Orders_bai1830 (ord_no, purch_amt, ord_date, customer_id, salesman_id) VALUES (70010, 65.26, '2012-10-05', 3001, 5002)
48 INSERT INTO Orders_bai1830 (ord_no, purch_amt, ord_date, customer_id, salesman_id) VALUES (70003, 250.45, '2012-10-05', 3001, 5002)
49 INSERT INTO Orders_bai1830 (ord_no, purch_amt, ord_date, customer_id, salesman_id) VALUES (70012, 250.45, '2012-10-05', 3001, 5002)
50 INSERT INTO Orders_bai1830 (ord_no, purch_amt, ord_date, customer_id, salesman_id) VALUES (70011, 150.5, '2012-10-05', 3001, 5002)
51 INSERT INTO Orders_bai1830 (ord_no, purch_amt, ord_date, customer_id, salesman_id) VALUES (70013, 250.45, '2012-10-05', 3001, 5002)
52
53 select * from salesman_bai1830;
54 select * from Customers_bai1830;
55 select * from Orders_bai1830;

```

Output

5001 James Hoog New York 0.15
5002 Nick Rimando New York 100 5001
5005 Pit Alex London 0.11
5006 Mc Lyon Paris 0.14
5007 Paul Adam Rome 0.13
5003 Lauson Hen San Jose 0.12
3002 Brad Davis New York 200 5001
3005 Graham Zusi California 200 5002
3008 Julian Green London 300 5002
3004 Fabian Johnson Paris 300 5006
3009 Geoff Cameron Berlin 100 5003
3003 Jozy Altidore Moscow 200 5007
3001 Brad Guzan London 5005
70001 150.5 2012-10-05 3005 5002
70009 270.65 2012-09-10 3001 5005
70002 65.26 2012-10-05 3002 5001

1) 1

```

1 CREATE VIEW nysales AS
2 SELECT salesman_id, name, commission
3 FROM salesman_bai1830
4 WHERE city = 'New York' AND commission > 0.13;
5
6 SELECT * FROM nysales;
7

```

salesman_id	name	commission
5001	James Hoog	0.15

2)

```

1 CREATE VIEW order_details AS
2 SELECT o.ord_no, o.purch_amt, s.name AS salesman_name, c.cust_name
3 FROM Orders_bai1830 o
4 JOIN salesman_bai1830 s ON o.salesman_id = s.salesman_id
5 JOIN Customers_bai1830 c ON o.customer_id = c.customer_id;
6
7 SELECT * FROM order_details;

```

ord_no	purch_amt	salesman_name	cust_name
70002	65.26	James Hoog	Nick Rimando
70005	2400.6	James Hoog	Brad Davis
70008	5760	James Hoog	Nick Rimando
70013	3045.6	James Hoog	Nick Rimando
70001	150.5	Nail Knite	Graham Zusi
70007	948.5	Nail Knite	Graham Zusi
70012	250.45	Nail Knite	Julian Green

70007	348.5	Nail Knite	Graham Zusi
70012	250.45	Nail Knite	Julian Green
70009	270.65	Pit Alex	Brad Guzan
70010	1983.43	Mc Lyon	Fabian Johnson
70011	75.29	Paul Adam	Jozy Altidor
70003	2480.4	Lauson Hen	Geoff Cameron
70004	110.5	Lauson Hen	Geoff Cameron

```

1 CREATE VIEW salesman_count AS
2 SELECT city, COUNT(DISTINCT salesman_id) AS num_salesmen
3 FROM salesman_bai1830
4 GROUP BY city;
5
6 SELECT * FROM salesman_count;

```

3)

city	num_salesmen
London	1
New York	1
Paris	2
Rome	1
San Jose	1

4)

```

1 CREATE VIEW daily_order_summary AS
2 SELECT
3     COUNT(DISTINCT customer_id) AS num_customers,
4     COUNT(DISTINCT salesman_id) AS num_salesmen,
5     AVG(purch_amt) AS avg_order_amt,
6     SUM(purch_amt) AS total_order_amt
7 FROM Orders_bai1830;
8
9 SELECT * FROM daily_order_summary;

```

num_customers	num_salesmen	avg_order_amt	total_order_amt
8	6	1461.765	17541.18