

```
SQL> DROP TABLE Agent;
```

```
Table dropped.
```

```
SQL> DROP TABLE Orders;
```

```
Table dropped.
```

```
SQL> --Q1
```

```
SQL> SET LINESIZE 100;
```

```
SQL> SET PAGESIZE 20;
```

```
SQL> CREATE TABLE Agent(Agent_code varchar(5), Agent_name varchar(10), Working_area varchar(10), commision number(2,2), Phone_no number, country varchar(10) null);
```

```
Table created.
```

```
SQL> CREATE TABLE Orders(Ord_num varchar(3), Ord_amount number, Advance_amount number, Ord_date date, Cust_code varchar(4), Agent_code varchar(5), Ord_Description varchar(20) null);
```

```
Table created.
```

```
SQL> INSERT INTO Agent VALUES('Ac001','Ramesh','Bangalore',0.15,0331234567,'India');
```

```
1 row created.
```

```
SQL> INSERT INTO Agent VALUES('Ac002','Dinesh','Bangalore',0.25,0331234568,'India');
```

```
1 row created.
```

```
SQL> INSERT INTO Agent VALUES('Ac003','Suresh','Mumbai',0.35,0331234569,'London');
```

```
1 row created.
```

```
SQL> INSERT INTO Agent VALUES('Ac004','Kamlesh','Newjersey',0.68,0331234564,'London');
```

```
1 row created.
```

```
SQL> INSERT INTO Agent VALUES('Ac005','Kartik','Chennai',0.73,0331234563,'India');
```

```
1 row created.
```

SQL> INSERT INTO Agent VALUES('Ac005','Kartik','Chennai',0.73,0331234563,'India');

1 row created.

SQL> INSERT INTO Orders VALUES('004', 200, 3000, '15-aug-2020','C004','Ac001','Masala kulcha');

1 row created.

SQL> INSERT INTO Orders VALUES('007', 600, 5000, '17-sep-2020','C006','Ac003','Biriyani');

1 row created.

SQL> INSERT INTO Orders VALUES('008', 700, 100, '19-feb-2019','C007','Ac005','');

1 row created.

SQL> INSERT INTO Orders VALUES('009', 10000, 600, '21-march-2010','C009','Ac004','Masala dosa');

1 row created.

SQL> INSERT INTO Orders VALUES('010', 20, 600, '21-april-2012','C006','Ac002','');

1 row created.

SQL> SELECT * FROM Agent;

AGENT	AGENT_NAME	WORKING_AR	COMMISSION	PHONE_NO	COUNTRY
Ac001	Ramesh	Bangalore	.15	331234567	India
Ac002	Dinesh	Bangalore	.25	331234568	India
Ac003	Suresh	Mumbai	.35	331234569	London
Ac004	Kamlesh	Newjersey	.68	331234564	London
Ac005	Kartik	Chennai	.73	331234563	India

SQL> SELECT * FROM Orders;

ORD	ORD_AMOUNT	ADVANCE_AMOUNT	ORD_DATE	CUST	AGENT	ORD_DESCRIPTION
004	200	3000	15-AUG-20	C004	Ac001	Masala kulcha
007	600	5000	17-SEP-20	C006	Ac003	Biriyani

SQL> SELECT * FROM Agent;

AGENT	AGENT_NAME	WORKING_AR	COMMISSION	PHONE_NO	COUNTRY
Ac001	Ramesh	Bangalore	.15	331234567	India
Ac002	Dinesh	Bangalore	.25	331234568	India
Ac003	Suresh	Mumbai	.35	331234569	London
Ac004	Kamlesh	Newjersey	.68	331234564	London
Ac005	Kartik	Chennai	.73	331234563	India

SQL> SELECT * FROM Orders;

ORD	ORD_AMOUNT	ADVANCE_AMOUNT	ORD_DATE	CUST	AGENT	ORD_DESCRIPTION
004	200	3000	15-AUG-20	C004	Ac001	Masala kulcha
007	600	5000	17-SEP-20	C006	Ac003	Biriyani
008	700	100	19-FEB-19	C007	Ac005	
009	10000	600	21-MAR-10	C009	Ac004	Masala dosa
010	20	600	21-APR-12	C006	Ac002	

SQL> ALTER TABLE Agent ADD CONSTRAINT Agent_pk PRIMARY KEY(Agent_code);

Table altered.

SQL> SELECT * FROM Agent;

AGENT	AGENT_NAME	WORKING_AR	COMMISSION	PHONE_NO	COUNTRY
Ac001	Ramesh	Bangalore	.15	331234567	India
Ac002	Dinesh	Bangalore	.25	331234568	India
Ac003	Suresh	Mumbai	.35	331234569	London
Ac004	Kamlesh	Newjersey	.68	331234564	London
Ac005	Kartik	Chennai	.73	331234563	India

SQL> ALTER TABLE Orders ADD CONSTRAINT Orders_fk FOREIGN KEY(Agent_code) REFERENCES Agent(Agent_code);

Table altered.

SQL> --a)
SQL> SELECT ord_num, ord_amount, ord_date, cust_code, agent_code FROM Orders WHERE agent_code IN


```
SQL> --a)
SQL> SELECT ord_num, ord_amount, ord_date, cust_code, agent_code FROM Orders WHERE agent_code IN
  2 (SELECT agent_code FROM Agent WHERE
  3 country IN (SELECT country FROM Agent GROUP BY country HAVING count(country)>1)
  4 OR
  5 working_area IN (SELECT working_area FROM Agent GROUP BY working_area HAVING count(working_area)>1));
```

ORD	ORD_AMOUNT	ORD_DATE	CUST	AGENT
004	200	15-AUG-20	C004	Ac001
007	600	17-SEP-20	C006	Ac003
008	700	19-FEB-19	C007	Ac005
009	10000	21-MAR-10	C009	Ac004
010	20	21-APR-12	C006	Ac002

```
SQL> --b)
SQL> SELECT Ord_num, Ord_amount, Cust_code, Agent_code FROM Orders WHERE Agent_code IN (SELECT Agent_code from Agent WHERE Working_area LIKE '%a%');
```

ORD	ORD_AMOUNT	CUST	AGENT
004	200	C004	Ac001
007	600	C006	Ac003
008	700	C007	Ac005
010	20	C006	Ac002

```
SQL> --Q2
SQL> DROP TABLE employees;
```

Table dropped.

```
SQL> CREATE TABLE employees(employee_id number(3,0), first_name varchar(10), last_name varchar(10), email varchar(15), phone_number varchar(10), hire_date date, job_id varchar(5), salary number, manager_id number, department_id number,
  2 CONSTRAINT Employee_pk PRIMARY KEY(employee_id));
```

Table created.

```
SQL> INSERT INTO employees VALUES( '700', 'Hasmukh', 'Patel', 'hp@gmail.com', 7003216160, '15-aug-2020', 'Hp003', 7000, '', 90);
```

1 row created.

```
SQL> INSERT INTO employees VALUES( '800', 'Kamlesh', 'Paul', 'kp@gmail.com', 7003216170, '17-feb-2020', 'Kp004', 8000, '506', 90);
```



```

SQL> --Q2
SQL> DROP TABLE employees;

Table dropped.

SQL> CREATE TABLE employees(employee_id number(3,0), first_name varchar(10), last_name varchar(10), email varchar(15), phone_number varchar(10), hire_date date, job_id varchar(5), salary number, manager_id number, department_id number,
2  CONSTRAINT Employee_pk PRIMARY KEY(employee_id));

Table created.

SQL> INSERT INTO employees VALUES( '700', 'Hasmukh', 'Patel', 'hp@gmail.com', 7003216160, '15-aug-2020', 'Hp003', 7000, '', 90);

1 row created.

SQL> INSERT INTO employees VALUES( '800', 'Kamlesh', 'Paul', 'kp@gmail.com', 7003216170, '17-feb-2020', 'Kp004', 8000, '506', 90);

1 row created.

SQL> INSERT INTO employees VALUES( '900', 'Dinesh', 'Gandhi', 'dp@yahoo', 9136278563, '19-mar-2101', 'Dg006', 20000, '508', 80);

1 row created.

SQL> INSERT INTO employees VALUES( '701', 'Suresh', 'Modi', 'sm@dg.com', 9187653294, '20-april-2015', 'Sp003', 15000, '', 80);

1 row created.

SQL>
SQL> SELECT employee_id, manager_id, first_name, last_name FROM employees WHERE manager_id IS NULL AND salary<(SELECT avg(salary) FROM employees WHERE last_name LIKE '%P');

no rows selected

SQL>
SQL> --Q3
SQL> DROP TABLE Orders;

Table dropped.

SQL> DROP TABLE salesman;

```

```
SQL>
SQL> --Q3
SQL> DROP TABLE Orders;

Table dropped.

SQL> DROP TABLE salesman;

Table dropped.

SQL> CREATE TABLE salesman(salesman_id varchar(8), name varchar(15),city varchar(15),commision float,
 2  CONSTRAINT salesman_pk PRIMARY KEY(salesman_id));

Table created.

SQL> CREATE TABLE Orders(ord_no number, purch_amt number, ord_date date, customer_id varchar(5), salesman_id varchar(8),
 2  CONSTRAINT Orders_fk FOREIGN KEY(salesman_id) REFERENCES salesman(salesman_id) ON DELETE SET NULL, CONSTRAINT Orders_pk PRIMARY KEY(ord_no));

Table created.

SQL> INSERT INTO salesman VALUES('si123@06', 'Lakshmi', 'Kolkata', 0.5);

1 row created.

SQL> INSERT INTO salesman VALUES('si123@09', 'Ganesh', 'London', 0.6);

1 row created.

SQL> INSERT INTO salesman VALUES('si123@90', 'Dinesh', 'London', 0.3);

1 row created.

SQL> INSERT INTO salesman VALUES('si123@10', 'Joseph', 'Chennai', 0.6);

1 row created.

SQL> INSERT INTO salesman VALUES('si123@19', 'Mahesh', 'Hyderabad', 0.65);

1 row created.
```



```
SQL> INSERT INTO salesman VALUES('si123@19', 'Mahesh', 'Hyderabad', 0.65);

1 row created.

SQL> INSERT INTO salesman VALUES('si123@26', 'Paul Adam', 'London', 0.1);

1 row created.

SQL> INSERT INTO salesman VALUES('si123@67', 'Rahul', 'Delhi', 0.4);

1 row created.

SQL> INSERT INTO Orders VALUES('123', 600, '20-aug-2010', '003cd', 'si123@19');

1 row created.

SQL> INSERT INTO Orders VALUES('576', 750, '20-feb-2018', '004cd', 'si123@19');

1 row created.

SQL> INSERT INTO Orders VALUES('579', 800, '20-may-2012', '004cd', 'si123@26');

1 row created.

SQL> INSERT INTO Orders VALUES('600', 60000, '20-jan-2021', '006cd', 'si123@10');

1 row created.

SQL> INSERT INTO Orders VALUES('700', 745, '26-jan-2021', '007cd', 'si123@09');

1 row created.

SQL> INSERT INTO Orders VALUES('800', 860, '29-jan-2019', '007cd', 'si123@26');

1 row created.

SQL> --a)
SQL> SELECT ord_no, purch_amt, ord_date, customer_id FROM Orders WHERE
 2 salesman_id in
 3 (SELECT a.salesman_id FROM salesman a WHERE a.commission > (SELECT avg(b.commission) FROM salesman b WHERE a.city=b.city GROUP BY city));
```

```
SQL> --a)
SQL> SELECT ord_no, purch_amt, ord_date, customer_id FROM Orders WHERE
  2  salesman_id in
  3  (SELECT a.salesman_id FROM salesman a WHERE a.commission > (SELECT avg(b.commission) FROM salesman b WHERE a.city=b.city GROUP BY city));
```

ORD_NO	PURCH_AMT	ORD_DATE	CUSTO
700	745	26-JAN-21	007cd

```
SQL> --b)
SQL> DELETE FROM salesman WHERE commission > 0.2;
```

6 rows deleted.

```
SQL>
SQL>
SQL> ALTER TABLE Orders
  2  DISABLE CONSTRAINT Orders_fk;
```

Table altered.

```
SQL>
SQL> UPDATE Orders SET salesman_id = 'NA' WHERE salesman_id is NULL;
```

4 rows updated.

```
SQL> SELECT * FROM salesman;
```

SALESMAN NAME	CITY	COMMISSION
si123@26 Paul Adam	London	.1

```
SQL> SELECT * FROM Orders;
```

ORD_NO	PURCH_AMT	ORD_DATE	CUSTO	SALESMAN
123	600	20-AUG-10	003cd	NA
576	750	20-FEB-18	004cd	NA
579	800	20-MAY-12	004cd	si123@26
600	60000	20-JAN-21	006cd	NA


```

ORD_NO  PURCH_AMT  ORD_DATE  CUSTO
-----  -
700      745  26-JAN-21  007cd

```

```

SQL> --b)
SQL> DELETE FROM salesman WHERE commision > 0.2;

```

6 rows deleted.

```

SQL>
SQL>
SQL> ALTER TABLE Orders
2  DISABLE CONSTRAINT Orders_fk;

```

Table altered.

```

SQL>
SQL> UPDATE Orders SET salesman_id = 'NA' WHERE salesman_id is NULL;

```

4 rows updated.

```

SQL> SELECT * FROM salesman;

```

```

SALESMAN NAME          CITY          COMMISSION
-----
si123@26 Paul Adam      London          .1

```

```

SQL> SELECT * FROM Orders;

```

```

ORD_NO  PURCH_AMT  ORD_DATE  CUSTO  SALESMAN
-----
123      600  20-AUG-10  003cd  NA
576      750  20-FEB-18  004cd  NA
579      800  20-MAY-12  004cd  si123@26
600     60000  20-JAN-21  006cd  NA
700      745  26-JAN-21  007cd  NA
800      860  29-JAN-19  007cd  si123@26

```

6 rows selected.

```

SQL>

```