```
mysql> SHOW DATABASES;
+----+
 Database
+----+
 collegedatabase
 companydatabase
 information schema
 moviedatabase
 mysql
 performance schema
 sakila
 sys
 world
+-----+
9 rows in set (0.03 sec)
mysql> CREATE DATABASE ORDERDATABASE;
Query OK, 1 row affected (0.01 sec)
mysql> SHOW DATABASES;
+----+
 Database
+----+
 collegedatabase
 companydatabase
 information schema
 moviedatabase
 mysql
 orderdatabase
 performance_schema
 sakila
 sys
 world
+----+
10 rows in set (0.00 sec)
mysql> USE ORDERDATABASE;
Database changed
mysql>
```

```
mysgl> CREATE TABLE SALESMAN
   -> (
   -> SALESMAN ID
                       INT,
   -> NAME
                       VARCHAR(20),
  -> CITY
                       VARCHAR(20),
  -> COMMISSION
                       VARCHAR(20),
  -> PRIMARY KEY (SALESMAN_ID)
  -> );
Query OK, 0 rows affected (0.08 sec)
mysql> DESCRIBE SALESMAN;
+----+
 Field
          Type
                    | Null | Key | Default | Extra |
SALESMAN ID | int
                    NO
                          PRI | NULL
 NAME
           varchar(20) | YES
                               NULL
 CITY
           varchar(20) YES
                               NULL
 COMMISSION | varchar(20) | YES
                              NULL
+----+
4 rows in set (0.00 sec)
mysql> CREATE TABLE CUSTOMER
   -> (
  -> CUSTOMER_ID
                       INT,
   -> CUST NAME
                       VARCHAR(20),
                       VARCHAR(20),
  -> CITY
  -> GRADE
                       INT,
  -> SALESMAN_ID
                      INT,
  -> PRIMARY KEY (CUSTOMER ID),
  -> FOREIGN KEY (SALESMAN ID) REFERENCES SALESMAN (SALESMAN ID) ON DELETE SET NULL
  -> );
Query OK, 0 rows affected (0.05 sec)
mysql> DESCRIBE CUSTOMER;
+----
 Field
          Type
                    | Null | Key | Default | Extra
CUSTOMER_ID | int
                    NO
                          PRI | NULL
 CUST NAME
           varchar(20) YES
                               NULL
 CITY
           varchar(20) YES
                               NULL
 GRADE
           int
                     YES
                              NULL
 SALESMAN ID | int
                    YES | MUL | NULL
+----+
5 rows in set (0.00 sec)
```

```
mysql> CREATE TABLE ORDERS
   -> (
   -> ORD ID
                        INT,
   -> PURCHASE AMT
                        DECIMAL(10,2),
   -> ORD DATE
                        DATE,
   -> CUSTOMER ID
                        INT.
   -> SALESMAN ID
                        INT,
   -> PRIMARY KEY (ORD ID),
   -> FOREIGN KEY (SALESMAN ID) REFERENCES SALESMAN (SALESMAN ID) ON DELETE CASCADE,
   -> FOREIGN KEY (CUSTOMER ID) REFERENCES CUSTOMER (CUSTOMER ID) ON DELETE CASCADE
   -> );
Query OK, 0 rows affected (0.09 sec)
mysql> DESCRIBE ORDERS;
+----+
 Field
                        | Null | Key | Default | Extra
 ORD ID
            int
                               PRI | NULL
 PURCHASE AMT | decimal(10,2) | YES
                                   NULL
 ORD DATE
                         YES
             date
                                   NULL
 CUSTOMER ID
            int
                         YES
                             MUL NULL
 SALESMAN ID | int
                        YES | MUL | NULL
+----+
5 rows in set (0.00 sec)
mysql> SHOW TABLES;
+----+
 Tables in orderdatabase
+-----
 customer
 orders
 salesman
+----+
3 rows in set (0.01 sec)
mysql>
```

```
mysql> INSERT INTO SALESMAN VALUES
    -> ('101', 'RICHARD', 'LOS ANGELES', '18%');
Query OK, 1 row affected (0.00 sec)
mysql> INSERT INTO SALESMAN VALUES
    -> ('103', 'GEORGE', 'NEWYORK', '32%');
Query OK, 1 row affected (0.00 sec)
mysql> INSERT INTO SALESMAN VALUES
    -> ('110', 'CHARLES', 'BANGALORE', '54%');
Query OK, 1 row affected (0.00 sec)
mysql> INSERT INTO SALESMAN VALUES
    -> ('122', 'ROWLING', 'PHILADELPHIA', '46%');
Query OK, 1 row affected (0.00 sec)
mysql> INSERT INTO SALESMAN VALUES
    -> ('126', 'KURT', 'CHICAGO', '52%');
Query OK, 1 row affected (0.00 sec)
mysql> INSERT INTO SALESMAN VALUES
    -> ('132', 'EDWIN', 'PHOENIX', '41%');
Query OK, 1 row affected (0.00 sec)
mysql> SELECT * FROM SALESMAN;
 SALESMAN_ID | NAME | CITY
                                        COMMISSION
          101 | RICHARD | LOS ANGELES
                                       18%
                                        32%
               GEORGE
                        NEWYORK
          103
               CHARLES | BANGALORE
                                        54%
          110
          122
               ROWLING
                        PHILADELPHIA
                                       46%
          126 | KURT
                         CHICAGO
                                        52%
          132 EDWIN
                        PHOENIX
                                        41%
6 rows in set (0.00 sec)
```

```
mysql> INSERT INTO CUSTOMER VALUES
   -> ('501', 'SMITH', 'LOS ANGELES', '10', '103');
Query OK, 1 row affected (0.00 sec)
mysql> INSERT INTO CUSTOMER VALUES
   -> ('510', 'BROWN', 'ATLANTA', '14', '122');
Query OK, 1 row affected (0.01 sec)
mysql> INSERT INTO CUSTOMER VALUES
   -> ('522','LEWIS','BANGALORE','10','132');
Query OK, 1 row affected (0.00 sec)
mysgl> INSERT INTO CUSTOMER VALUES
   -> ('534', 'PHILIPS', 'BOSTON', '17', '103');
Query OK, 1 row affected (0.00 sec)
mysal> INSERT INTO CUSTOMER VALUES
   -> ('543', 'EDWARD', 'BANGALORE', '14', '110');
Query OK, 1 row affected (0.00 sec)
mysql> INSERT INTO CUSTOMER VALUES
   -> ('550', 'PARKER', 'ATLANTA', '19', '126');
Query OK, 1 row affected (0.00 sec)
mysql> SELECT * FROM CUSTOMER;
+-----
 CUSTOMER ID | CUST NAME | CITY
                                      GRADE | SALESMAN ID
         501 | SMITH
                          LOS ANGELES
                                                      103
         510 | BROWN
                          ATLANTA
                                                      122
         522 | LEWIS
                          BANGALORE
                                                      132
         534 | PHILIPS
                          BOSTON
                                                      103
         543 | EDWARD
                          BANGALORE
                                          14
                                                      110
         550 PARKER
                         ATLANTA
                                          19
                                                      126
6 rows in set (0.00 sec)
```

```
mysql> INSERT INTO ORDERS VALUES
   -> ('1','1000', '2017-05-04','501','103');
Query OK, 1 row affected (0.01 sec)
mysql> INSERT INTO ORDERS VALUES
   -> ('2','4000','2017-01-20','522','132');
Query OK, 1 row affected (0.01 sec)
mysql> INSERT INTO ORDERS VALUES
   -> ('3','2500', '2017-02-24','550','126');
Query OK, 1 row affected (0.01 sec)
mysql> INSERT INTO ORDERS VALUES
   -> ('5','6000','2017-04-13','522','103');
Query OK, 1 row affected (0.01 sec)
mysql> INSERT INTO ORDERS VALUES
   -> ('6','7000', '2017-03-09','550','126');
Query OK, 1 row affected (0.01 sec)
mysql> INSERT INTO ORDERS VALUES
   -> ('7', '3400', '2017-01-20', '501', '122');
Ouery OK, 1 row affected (0.01 sec)
mysql> SELECT * FROM ORDERS;
+-----
 ORD ID | PURCHASE AMT | ORD DATE
                                  CUSTOMER_ID | SALESMAN_ID
              1000.00 | 2017-05-04
                                           501
                                                        103
      2 |
              4000.00 | 2017-01-20
                                           522
                                                        132
              2500.00 | 2017-02-24
                                           550
                                                        126
      5
              6000.00 | 2017-04-13
                                           522
                                                        103
      6
               7000.00 | 2017-03-09
                                           550
                                                        126
               3400.00 | 2017-01-20
                                           501
                                                         122
6 rows in set (0.00 sec)
```

mysql> DESCRIBE SALESMAN;

Туре	Null	Key	Default	Extra
int	NO	PRI	NULL	
varchar(20)	YES		NULL	
varchar(20)	YES		NULL	
varchar(20)	YES		NULL	
	int varchar(20) varchar(20)	int NO varchar(20) YES varchar(20) YES	int NO PRI varchar(20) YES varchar(20) YES	int NO PRI NULL varchar(20) YES NULL varchar(20) YES NULL

4 rows in set (0.00 sec)

mysql> SELECT * FROM SALESMAN;

SALESMAN_ID	NAME	CITY	COMMISSION
+	+		
101	RICHARD	LOS ANGELES	18%
103	GEORGE	NEWYORK	32%
110	CHARLES	BANGALORE	54%
122	ROWLING	PHILADELPHIA	46%
126	KURT	CHICAGO	52%
132	EDWIN	PHOENIX	41%

6 rows in set (0.00 sec)

mysql> DESCRIBE CUSTOMER;

Field	Type	Null	Key	Default	Extra
CUSTOMER_ID	int	NO NO	PRI	NULL	
CUST_NAME	varchar(20)	YES		NULL	
CITY	varchar(20)	YES	1	NULL	
GRADE	int	YES		NULL	
SALESMAN ID	int	YES	MUL	NULL	İ

5 rows in set (0.00 sec)

mysql> SELECT * FROM CUSTOMER;

CUSTOMER_ID	CUST_NAME	CITY	GRADE	SALESMAN_ID
501	SMITH	LOS ANGELES	10	103
510	BROWN	ATLANTA	14	122
522	LEWIS	BANGALORE	10	132
534	PHILIPS	BOSTON	17	103
543	EDWARD	BANGALORE	14	110
550	PARKER	ATLANTA	19	126

6 rows in set (0.00 sec)

ORD ID	lint	-		l NO	PRI	NULL	i	Ī
PURCHASE	AMT dec	imal	(10,2)	YES		NULL	i	i
ORD DATE			, , ,	YES	i	NULL	i	İ
CUSTOMER		Ė		YES	MUL	NULL	İ	İ
SALESMAN	_ID int	Ė		YES	MUL	NULL	İ	İ
+	ECT * FROM			ATE	CUSTON	MER_ID	+ SALESMAN_	_II
ORD_ID	PURCHASE_	_AMT	ORD_D		CUSTON		+	
ORD_ID	PURCHASE_	_AMT	ORD_D/	05-04	CUSTON	501	1	10
ORD_ID	PURCHASE_ 1006 4006	_AMT 0.00	ORD_D/	05-04 01-20	CUSTON	501 522	 1 1	LØ:
ORD_ID	PURCHASE_ 1000 4000 2500	_AMT	ORD_D/ 2017-0 2017-0 2017-0	05-04	CUSTO	501	1 1 1	_II
ORD_ID 1 2 3	PURCHASE_ 1000 4000 2500 6000	AMT	ORD_D/ 2017-(2017-(2017-(2017-(05-04 01-20 02-24	CUSTO	501 522 550	1 1 1 1	LØ:

```
+----
 CUSTOMER_ID | CUST_NAME | CITY
                             GRADE | SALESMAN_ID
       501 | SMITH
                    LOS ANGELES
                                          103
       510 | BROWN
                    ATLANTA
                                          122
       522 | LEWIS
                    BANGALORE
                                         132
       534 | PHILIPS
                    BOSTON
                                         103
       543 | EDWARD
                    BANGALORE
                                         110
       550 PARKER
                    ATLANTA
                                19
                                          126
+----+
6 rows in set (0.00 sec)
nysql> SELECT GRADE, COUNT (CUSTOMER_ID)
   -> FROM CUSTOMER
  -> GROUP BY GRADE
  -> HAVING GRADE >
  -> (SELECT AVG (GRADE)
  -> FROM CUSTOMER
  -> WHERE CITY = 'BANGALORE');
+-----
 GRADE | COUNT (CUSTOMER_ID)
+----+
   14
   17
   19
3 rows in set (0.00 sec)
mysql>
```

mysql> SELECT * FROM CUSTOMER;

```
SALESMAN ID | NAME
                               COMMISSION
       101 | RICHARD |
                   LOS ANGELES
                               18%
                   NEWYORK
                               32%
       103
            GEORGE
            CHARLES
                   BANGALORE
                               54%
       110
       122
            ROWLING
                   PHILADELPHIA
                               46%
       126 | KURT
                   CHICAGO
                               52%
                   PHOENIX
                               41%
       132 | EDWIN
+----+
6 rows in set (0.00 sec)
mysql> SELECT S.SALESMAN ID, NAME
   -> FROM CUSTOMER AS C, SALESMAN AS S
   -> WHERE S.SALESMAN ID = C.SALESMAN ID
   -> GROUP BY C.SALESMAN ID
   -> HAVING COUNT (*) > 1;
+-----
 SALESMAN ID NAME
+----+
       103 GEORGE
+----+
```

mysql> SELECT * FROM SALESMAN;

1 row in set (0.00 sec)

mysql>

+----+

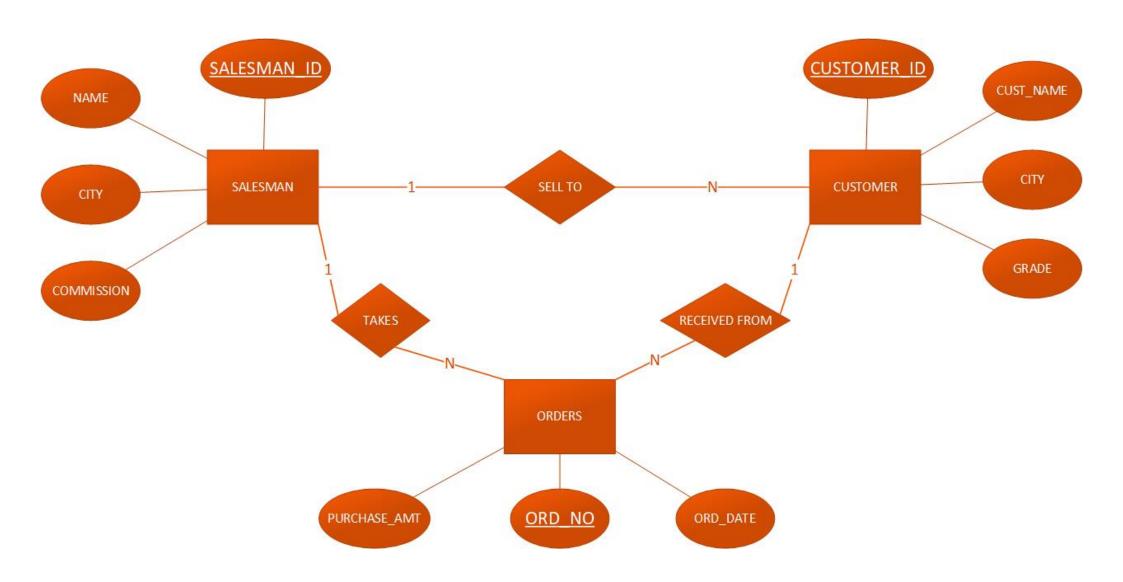
```
mysql> SELECT * FROM SALESMAN;
+----+
 SALESMAN_ID | NAME | CITY
                               COMMISSION
+-----
       101 | RICHARD | LOS ANGELES
                               18%
                   NEWYORK
                               32%
       103 | GEORGE
       110 | CHARLES | BANGALORE
                               54%
       122 | ROWLING | PHILADELPHIA | 46%
       126 | KURT
                   CHICAGO
                               52%
       132 | EDWIN
                  PHOENIX
                               41%
6 rows in set (0.00 sec)
mysql> (SELECT S.SALESMAN ID, NAME, C.CUST NAME, COMMISSION
   -> FROM SALESMAN AS S, CUSTOMER AS C
   -> WHERE S.CITY = C.CITY)
   -> UNION
   -> (SELECT SALESMAN_ID, NAME, 'NO MATCH', COMMISSION
   -> FROM SALESMAN
  -> WHERE NOT CITY = ANY
  -> (SELECT CITY
  -> FROM CUSTOMER)
   -> ORDER BY 2 DESC);
+-----
 SALESMAN_ID | NAME
                  CUST_NAME | COMMISSION
       101 | RICHARD | SMITH
                             18%
       110 | CHARLES | LEWIS
                             54%
       110 | CHARLES | EDWARD
                            54%
       103 | GEORGE
                            32%
                   NO MATCH
                             46%
       122 | ROWLING | NO MATCH
       126 | KURT
                            52%
                   NO MATCH
       132 | EDWIN
                  NO MATCH
                            41%
+----+
7 rows in set (0.00 sec)
```

```
+----+
 ORD ID | PURCHASE AMT | ORD DATE | CUSTOMER ID | SALESMAN ID
1000.00 | 2017-05-04
                                     501
                                                103
            4000.00 | 2017-01-20
                                     522
                                                132
            2500.00 | 2017-02-24
                                     550
                                                126
            6000.00 | 2017-04-13
                                     522
                                                103
     6
            7000.00 | 2017-03-09
                                     550
                                                126
            3400.00 | 2017-01-20
                                     501
                                                122
6 rows in set (0.00 sec)
mysql> CREATE VIEW VW_ELITE_SALESMAN AS
   -> SELECT A.SALESMAN ID, A.NAME, B.ORD DATE
   -> FROM SALESMAN AS A, ORDERS AS B
   -> WHERE A.SALESMAN ID = B.SALESMAN ID AND B.PURCHASE AMT = (SELECT MAX(PURCHASE AMT)
   -> FROM ORDERS AS C
   -> WHERE C.ORD DATE = B.ORD DATE);
Query OK, 0 rows affected (0.01 sec)
mvsal> SELECT * FROM VW ELITE SALESMAN:
+----+
 SALESMAN ID | NAME | ORD DATE
+----+
       103 | GEORGE | 2017-05-04
       132 | EDWIN
                   2017-01-20
       126 | KURT
                   2017-02-24
       103 | GEORGE | 2017-04-13
       126 | KURT
                  2017-03-09
5 rows in set (0.00 sec)
mysql>
```

mvsal> SELECT * FROM ORDERS:

```
mysql> SELECT * FROM SALESMAN;
+-----
 SALESMAN ID | NAME
                               COMMISSION
+----+
       101 | RICHARD | LOS ANGELES
                               18%
                   NEWYORK
                                32%
       103 | GEORGE
            CHARLES | BANGALORE
                                54%
       110
                               46%
       122 | ROWLING | PHILADELPHIA
        126 | KURT
                    CHICAGO
                                52%
       132 | EDWIN
                   | PHOENIX
                               41%
6 rows in set (0.00 sec)
mysql> SELECT * FROM ORDERS;
+-----
 ORD ID | PURCHASE_AMT | ORD_DATE | CUSTOMER_ID | SALESMAN_ID
+----
            1000.00 | 2017-05-04
                                                103
     2
            4000.00 | 2017-01-20
                                    522
                                               132
     3
                                    550
            2500.00 | 2017-02-24
                                               126
            6000.00 | 2017-04-13
                                    522
                                               103
     6
            7000.00 | 2017-03-09
                                    550
                                               126
                                    501
                                               122
            3400.00 | 2017-01-20
6 rows in set (0.00 sec)
mysal> # INSTEAD OF DELETING SALESMAN HAVING ID = '1000', I AM DELETING THE SALESMAN HAVING THE ID = '110';
mysql> DELETE FROM SALESMAN WHERE SALESMAN ID = 110;
Query OK, 1 row affected (0.00 sec)
mysql> SELECT * FROM SALESMAN;
 SALESMAN_ID | NAME | CITY
                               COMMISSION
       101 | RICHARD | LOS ANGELES
                               18%
                   NEWYORK
                               32%
       103 GEORGE
       122 | ROWLING | PHILADELPHIA
                               46%
                               52%
       126 | KURT
                   CHICAGO
       132 | EDWIN | PHOENIX
```

5 rows in set (0.00 sec)



SALESMAN

