

دستور کار سری 4 آزمایشگاه پایگاه داده

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```
mysql> show databases
-> ;
+-----+
| Database |
+-----+
| erfan    |
| information_schema |
| mysql    |
| performance_schema |
| sakila   |
| sys      |
| world    |
+-----+
7 rows in set (0.01 sec)
```

```
mysql> use erfan;
Database changed
```

```
mysql> CREATE TABLE VACCINE (VACCINE_ID INT UNSIGNED NOT NULL AUTO_INCREMENT, NAME VARCHAR(255) NOT NULL, COUNTRY VARCHAR(255) NOT NULL, QUANTITY INT NOT NULL, PRIMARY KEY(VACCINE_ID));
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> ALTER TABLE PERSON
-> ADD VACCINE_ID INT UNSIGNED;
Query OK, 0 rows affected (0.02 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> ALTER TABLE PERSON ADD FOREIGN KEY (VACCINE_ID) REFERENCES VACCINE(VACCINE_ID);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'REFERENCES VACCINE(VACCINE_ID)' at line 1
mysql> ALTER TABLE PERSON ADD FOREIGN KEY (VACCINE_ID) REFERENCES VACCINE(VACCINE_ID);
Query OK, 10 rows affected (0.03 sec)
Records: 10 Duplicates: 0 Warnings: 0
```

```
mysql> INSERT INTO VACCINE  
-> VALUES(1,"SINOPHARM","CHINA",5920300);  
Query OK, 1 row affected (0.00 sec)
```

```
mysql> INSERT INTO VACCINE  
-> VALUES(2,"PFIZER","GERMANY/USA",4013);  
Query OK, 1 row affected (0.00 sec)
```

```
mysql> INSERT INTO VACCINE  
-> VALUES(3,"ASTRAZENECA","UK/BELGIUM",234041);  
Query OK, 1 row affected (0.00 sec)
```

```
mysql> INSERT INTO VACCINE  
-> VALUES(4,"SPUTNIK","RUSSIA",1032);  
Query OK, 1 row affected (0.00 sec)
```

اپدیت کردن PERSON :

```
mysql> UPDATE PERSON  
-> SET VACCINE_ID=1 WHERE PERSON_ID=5;  
Query OK, 1 row affected (0.00 sec)  
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> UPDATE PERSON  
-> SET VACCINE_ID=2 WHERE PERSON_ID=1;  
Query OK, 1 row affected (0.00 sec)  
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> UPDATE PERSON  
-> SET VACCINE_ID=2 WHERE PERSON_ID=9;  
Query OK, 1 row affected (0.00 sec)  
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> UPDATE PERSON  
-> SET VACCINE_ID=3 WHERE PERSON_ID=10;  
Query OK, 1 row affected (0.00 sec)  
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> SELECT * FROM PERSON;
```

PERSON_ID	LAST_NAME	FIRST_NAME	BIRTH	DEATH	GENDER	VACCINE_ID
1	ALAVI	ALI	1990-11-12	NULL	MALE	2
2	MASUMI	FATEMEH	1986-05-21	NULL	FEMALE	NULL
3	RAFIEI	REZA	1967-01-08	2022-07-10	MALE	NULL
4	EHSANI	NAZANIN	2001-08-16	NULL	FEMALE	NULL
5	SOLEIMANI	MOHAMMAD	1995-03-01	NULL	MALE	1
6	SANAYI	SOLMAZ	2005-09-09	NULL	FEMALE	NULL
7	HOSSEINI	NASER	1974-12-26	NULL	MALE	NULL
8	JABBARI	HEDIYEH	1981-07-18	2020-04-03	FEMALE	NULL
9	OLADI	AMIR	2010-02-06	NULL	MALE	2
10	BASATI	ATOUSA	1996-10-28	NULL	FEMALE	3

10 rows in set (0.00 sec)

```
mysql> SELECT *
-> FROM PERSON LEFT JOIN VACCINE ON PERSON.VACCINE_ID=VACCINE.VACCINE_ID;
```

PERSON_ID	LAST_NAME	FIRST_NAME	BIRTH	DEATH	GENDER	VACCINE_ID	VACCINE_ID	NAME	COUNTRY	QUANTITY
1	ALAVI	ALI	1990-11-12	NULL	MALE	2	2	PFIZER	GERMANY/USA	4013
2	MASUMI	FATEMEH	1986-05-21	NULL	FEMALE	NULL	NULL	NULL	NULL	NULL
3	RAFIEI	REZA	1967-01-08	2022-07-10	MALE	NULL	NULL	NULL	NULL	NULL
4	EHSANI	NAZANIN	2001-08-16	NULL	FEMALE	NULL	NULL	NULL	NULL	NULL
5	SOLEIMANI	MOHAMMAD	1995-03-01	NULL	MALE	1	1	SINOPHARM	CHINA	5920300
6	SANAYI	SOLMAZ	2005-09-09	NULL	FEMALE	NULL	NULL	NULL	NULL	NULL
7	HOSSEINI	NASER	1974-12-26	NULL	MALE	NULL	NULL	NULL	NULL	NULL
8	JABBARI	HEDIYEH	1981-07-18	2020-04-03	FEMALE	NULL	NULL	NULL	NULL	NULL
9	OLADI	AMIR	2010-02-06	NULL	MALE	2	2	PFIZER	GERMANY/USA	4013
10	BASATI	ATOUSA	1996-10-28	NULL	FEMALE	3	3	ASTRAZENECA	UK/BELGIUM	234041

10 rows in set (0.00 sec)

```
mysql> SELECT *
-> FROM PERSON RIGHT JOIN VACCINE ON PERSON.VACCINE_ID=VACCINE.VACCINE_ID;
```

PERSON_ID	LAST_NAME	FIRST_NAME	BIRTH	DEATH	GENDER	VACCINE_ID	VACCINE_ID	NAME	COUNTRY	QUANTITY
5	SOLEIMANI	MOHAMMAD	1995-03-01	NULL	MALE	1	1	SINOPHARM	CHINA	5920300
1	ALAVI	ALI	1990-11-12	NULL	MALE	2	2	PFIZER	GERMANY/USA	4013
9	OLADI	AMIR	2010-02-06	NULL	MALE	2	2	PFIZER	GERMANY/USA	4013
10	BASATI	ATOUSA	1996-10-28	NULL	FEMALE	3	3	ASTRAZENECA	UK/BELGIUM	234041
NULL	NULL	NULL	NULL	NULL	NULL	NULL	4	SPUTNIK	RUSSIA	1032

5 rows in set (0.00 sec)

```
mysql> SELECT *
-> FROM PERSON INNER JOIN VACCINE ON PERSON.VACCINE_ID=VACCINE.VACCINE_ID;
```

PERSON_ID	LAST_NAME	FIRST_NAME	BIRTH	DEATH	GENDER	VACCINE_ID	VACCINE_ID	NAME	COUNTRY	QUANTITY
5	SOLEIMANI	MOHAMMAD	1995-03-01	NULL	MALE	1	1	SINOPHARM	CHINA	5920300
1	ALAVI	ALI	1990-11-12	NULL	MALE	2	2	PFIZER	GERMANY/USA	4013
9	OLADI	AMIR	2010-02-06	NULL	MALE	2	2	PFIZER	GERMANY/USA	4013
10	BASATI	ATOUSA	1996-10-28	NULL	FEMALE	3	3	ASTRAZENECA	UK/BELGIUM	234041

4 rows in set (0.00 sec)

```
mysql> SELECT PERSON.FIRST_NAME, PERSON.LAST_NAME, VACCINE.COUNTRY
-> FROM PERSON INNER JOIN VACCINE ON PERSON.VACCINE_ID=VACCINE.VACCINE_ID
-> WHERE PERSON.DEATH IS NOT NULL;
Empty set (0.00 sec)
```

```
mysql> SELECT PERSON.FIRST_NAME, PERSON.LAST_NAME, VACCINE.COUNTRY
-> FROM PERSON INNER JOIN VACCINE ON PERSON.VACCINE_ID=VACCINE.VACCINE_ID
-> WHERE PERSON.DEATH IS NULL;
```

FIRST_NAME	LAST_NAME	COUNTRY
ALI	ALAVI	GERMANY/USA
MOHAMMAD	SOLEIMANI	CHINA
AMIR	OLADI	GERMANY/USA
ATOUSA	BASATI	UK/BELGIUM

```
4 rows in set (0.00 sec)
```

```
mysql> SELECT VACCINE.NAME, COUNT(PERSON.VACCINE_ID) FROM PERSON INNER JOIN VACCINE ON PERSON.VACCINE_ID=VACCINE.VACCINE_ID GROUP BY PERSON.VACCINE_ID
-> ;
```

NAME	COUNT(PERSON.VACCINE_ID)
SINOPHARM	1
PFIZER	2
ASTRAZENECA	1

```
3 rows in set (0.00 sec)
```