

به نام خدا

گزارش شماره ۱

آزمایشگاه پایگاه داده ها

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۹۲۳۱۰۳۱

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۹۲۳۱۰۷۵

ابتدا جداول مورد نظر در سوال را درست کردیم. این بار این کار را با Query های SQL انجام دادیم

The screenshot displays the Microsoft SQL Server Management Studio Express interface. The main window shows a SQL query that has been executed successfully. The query creates three tables: `sailor`, `boat`, and `reserve`. The `sailor` table has a primary key on `sailor_name` and a foreign key to the `reserve` table. The `boat` table has a primary key on `boat_name` and a foreign key to the `reserve` table. The `reserve` table has a primary key on `(sailor_name, boat_name)` and foreign keys to both the `sailor` and `boat` tables.

The Object Explorer on the left shows the database structure, including the `TEMP40.DB_93_8` database and its tables. The Messages pane at the bottom shows the command(s) completed successfully. The Properties pane on the right shows the current query window options, including the status, execution time, rows returned, server, SPID, user, and version.

```
create table sailor(
sailor_name int identity (300,1) not null primary key,
sailor_rank int
)
create table boat(
boat_name varchar(300) not null primary key,
boat_color varchar(30) ,
boat_rank int constraint rank_limit check (boat_rank > 70 AND boat_rank < 150)
)
create table reserve(
sailor_name int identity(300 , 1) not null,
boat_name varchar(300) not null,
weekday varchar(30) ,
primary key(sailor_name, boat_name),
foreign key (sailor_name) references sailor(sailor_name),
foreign key (boat_name) references boat(boat_name)
)
```

Command(s) completed successfully.

Current Status: Query executed successfully

Execution Time: 00:00:00

Rows Returned: 0

Server: TEMP40

SPID: 61

User: db_93_8

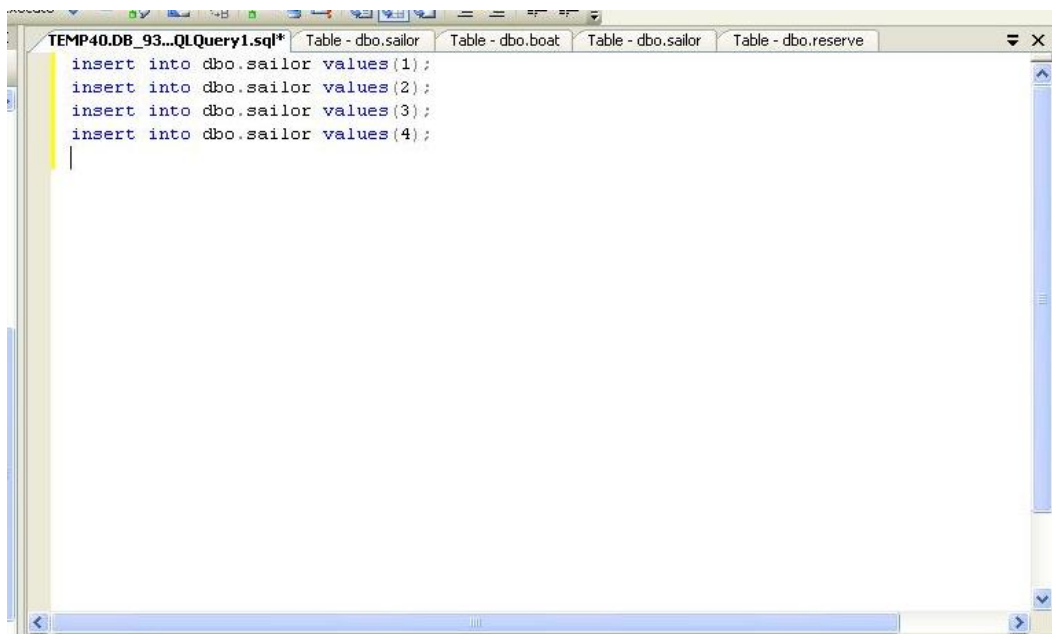
Version: 09.00.1399

Query executed successfully. TEMP40 (9.0 RTM) db_93_8 (61) DB_93_8 00:00:00 0 rows

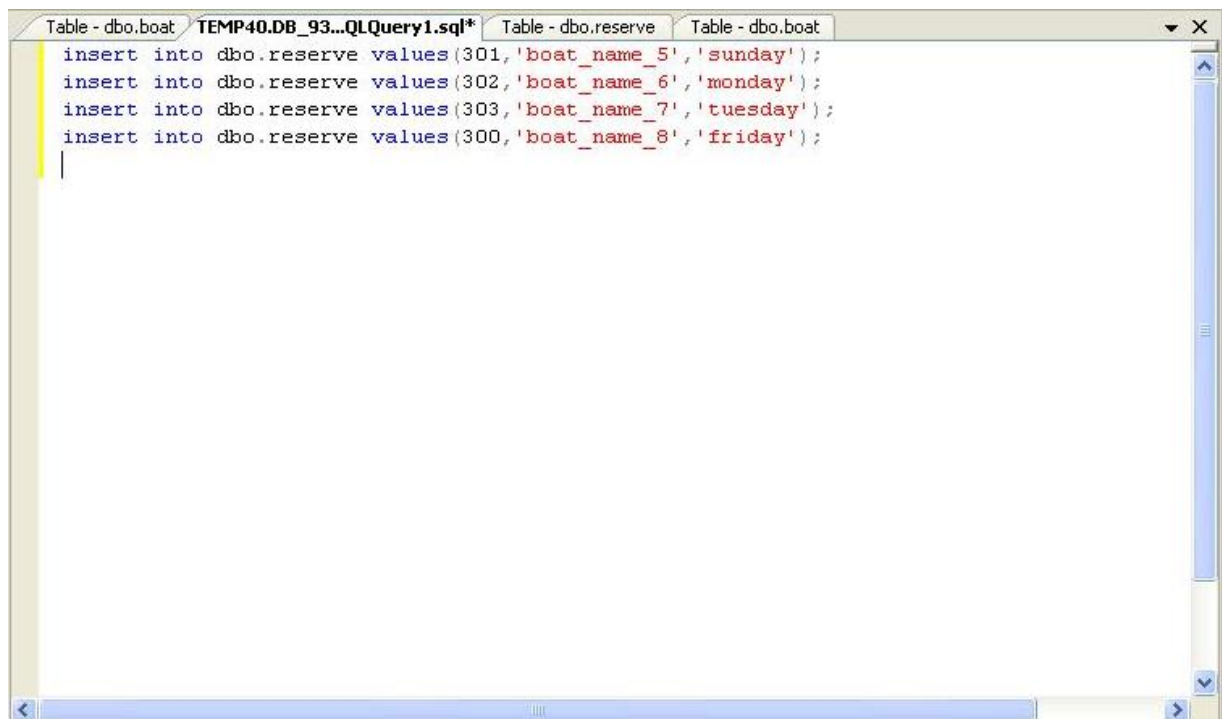
سپس این جداول را با Query مقدار دهی کردیم. از دستور insert برای اینکار استفاده کردیم



```
Table - dbo.boat | Table - dbo.sailor | Table - dbo.reserve | Table - dbo.boat | TEMP40.DB_93...QLQuery1.sql*
insert into dbo.boat values('boat_name_8','green',71);
insert into dbo.boat values('boat_name_5','blue',72);
insert into dbo.boat values('boat_name_7','green',73);
insert into dbo.boat values('boat_name_6','blue',78);
```



```
TEMP40.DB_93...QLQuery1.sql* | Table - dbo.sailor | Table - dbo.boat | Table - dbo.sailor | Table - dbo.reserve
insert into dbo.sailor values(1);
insert into dbo.sailor values(2);
insert into dbo.sailor values(3);
insert into dbo.sailor values(4);
```



The screenshot shows a SQL query editor window with three tabs: 'Table - dbo.boat', 'TEMP40.DB_93...QLQuery1.sql*', and 'Table - dbo.reserve'. The active tab is 'TEMP40.DB_93...QLQuery1.sql*'. It contains the following SQL code:

```
insert into dbo.reserve values (301, 'boat_name_5', 'sunday');  
insert into dbo.reserve values (302, 'boat_name_6', 'monday');  
insert into dbo.reserve values (303, 'boat_name_7', 'tuesday');  
insert into dbo.reserve values (300, 'boat_name_8', 'friday');
```

سپس به ترتیب Query های مربوط به درخواست سوال را نوشتیم.

Table - dbo.sailor Table - dbo.reserve Table - dbo.boat TEMP40.DB_93...QLQuery1.sql* Table - dbo.reserve

```
select sailor_name from dbo.reserve where weekday like 'sunday' --shanbe = sunday!
```

Results Messages

	sailor_name
1	301

ecute

Table - dbo.sailor Table - dbo.reserve Table - dbo.boat TEMP40.DB_93...SQLQuery1.sql Table - dbo.reserve

```
create view v2 as
    select sailor_name, boat_color, boat.boat_name from reserve, boat
        where reserve.boat_name = boat.boat_name;

select * from v2;
```

Results Messages

	sailor_name	boat_color	boat_name
1	300	green	boat_name_8
2	301	blue	boat_name_5
3	302	blue	boat_name_6
4	303	green	boat_name_7

Table - dbo.sailorTable - dbo.reserveTable - dbo.boatTEMP40.DB_93...SQLQuery1.sqlTable - dbo.reserve

```
select boat_rank from boat;
```

ResultsMessages

	boat_rank
1	72
2	78
3	73
4	71

Table - dbo.sailor Table - dbo.reserve Table - dbo.boat TEMP40.DB_93...SQLQuery1.sql Table - dbo.reserve

```
select boat_name from reserve where weekday = 'sunday' OR weekday = 'monday';  
--shanbe = sunday , doshanbe = monday
```

Results Messages

	boat_name
1	boat_name_5
2	boat_name_6

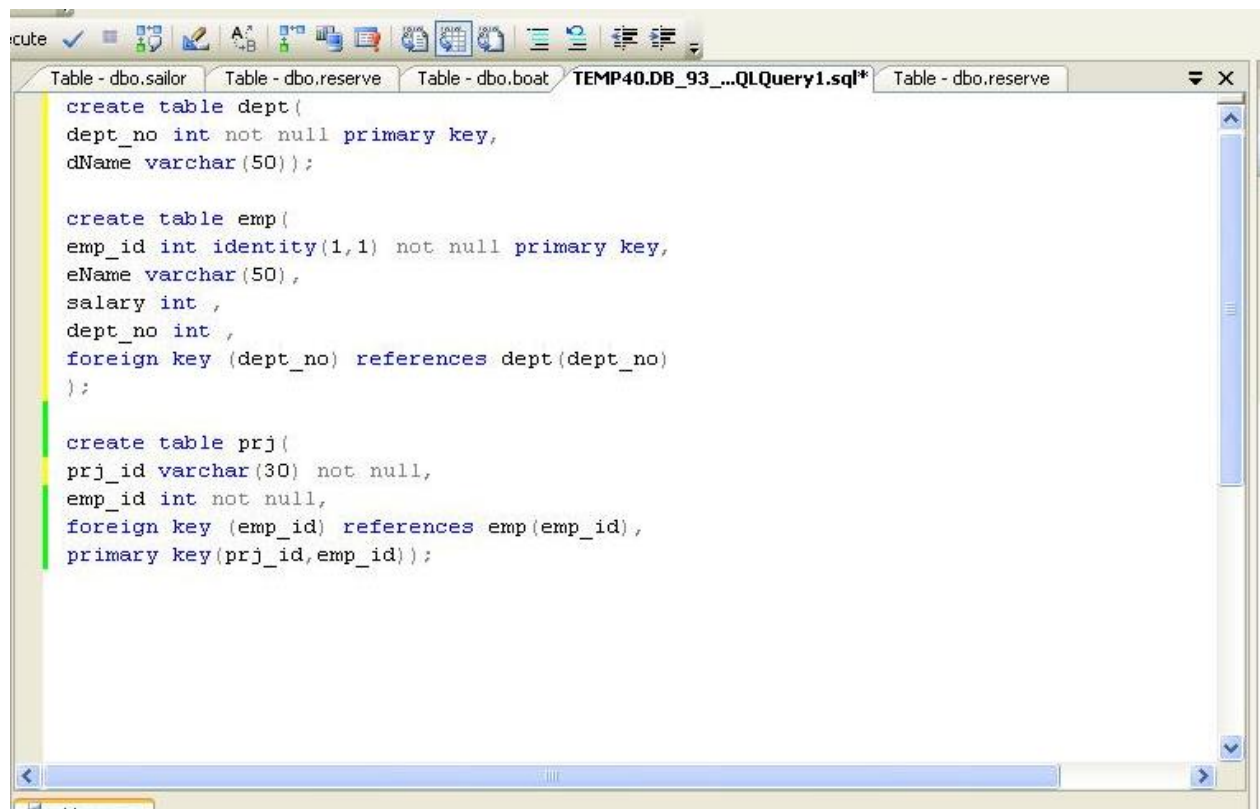
Table - dbo.sailor Table - dbo.reserve Table - dbo.boat TEMP40.DB_93_...QLQuery1.sql* Table - dbo.reserve

```
select boat_color from boat, reserve where boat.boat_name = reserve.boat_name
AND reserve.weekday like 's%';
```

Results Messages

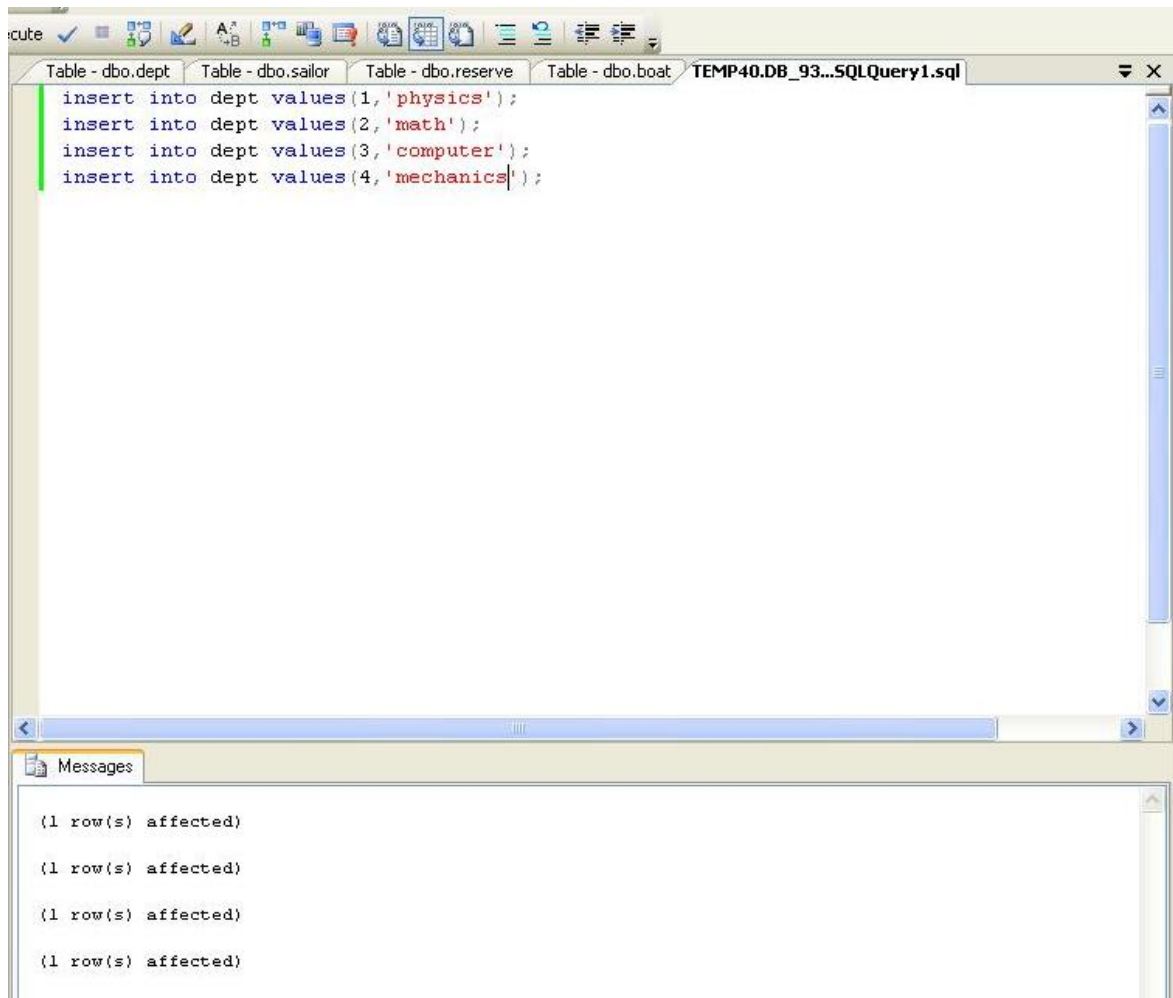
	boat_color
1	blue

در بخش دوم، از جدول دیگری استفاده شده بود. بنابراین جدول جدید را ساختیم



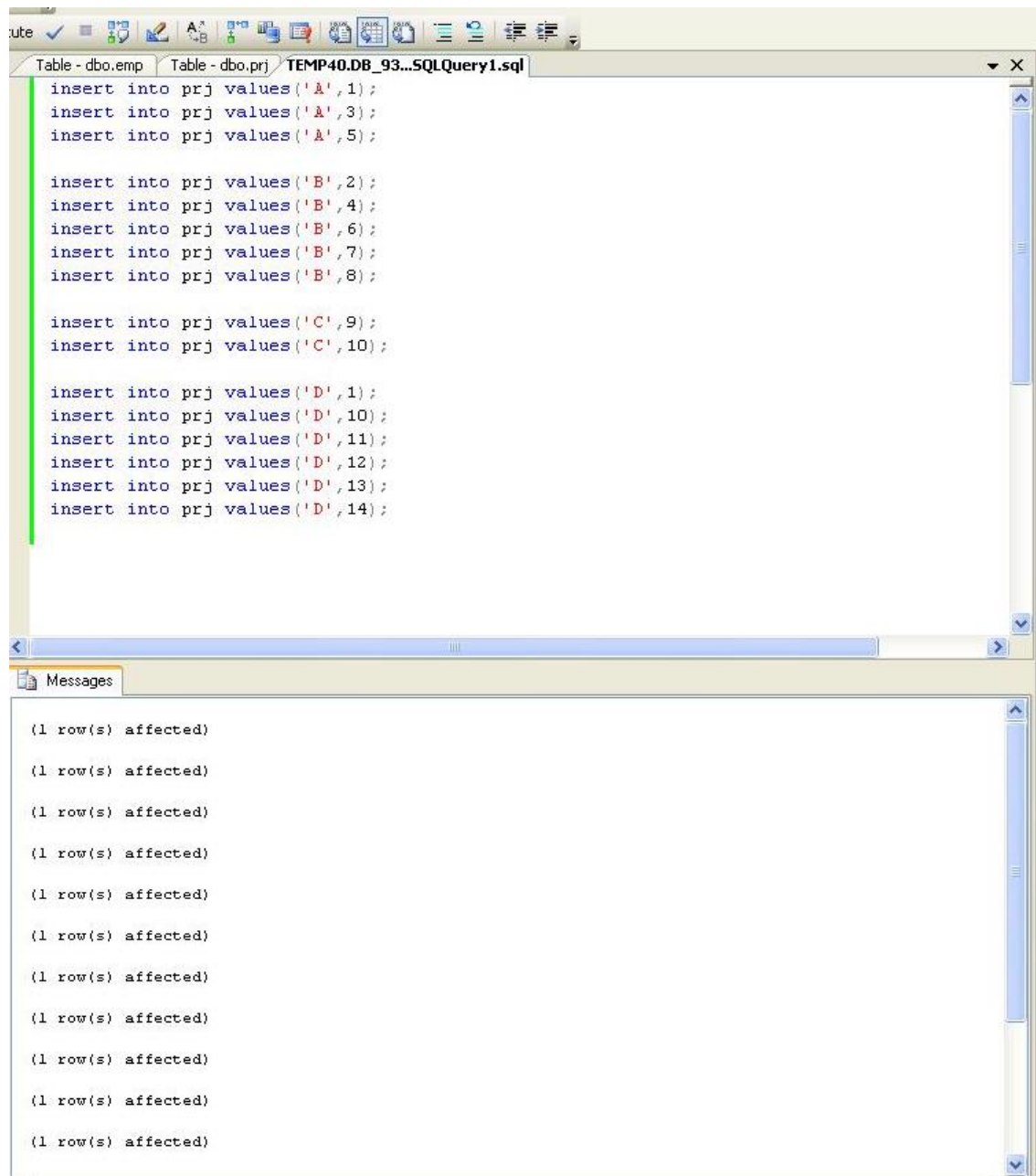
```
create table dept(  
dept_no int not null primary key,  
dName varchar(50));  
  
create table emp(  
emp_id int identity(1,1) not null primary key,  
eName varchar(50),  
salary int ,  
dept_no int ,  
foreign key (dept_no) references dept(dept_no)  
);  
  
create table prj(  
prj_id varchar(30) not null,  
emp_id int not null,  
foreign key (emp_id) references emp(emp_id),  
primary key(prj_id,emp_id));
```

مطابق سوال قبل، جداول را مقدار دهی کردیم



```
insert into emp values ('manager', 100, 1);
insert into emp values ('a', 100, 2);
insert into emp values ('b', 100, 2);
insert into emp values ('c', 100, 3);
insert into emp values ('o', 100, 2);
insert into emp values ('d', 100, 3);
insert into emp values ('e', 100, 2);
insert into emp values ('b', 100, 1);
insert into emp values ('a', 100, 1);
insert into emp values ('f', 100, 2);
insert into emp values ('h', 100, 3);
insert into emp values ('i', 100, 4);
insert into emp values ('g', 100, 2);
insert into emp values ('k', 100, 3);
```

[illegible]



سپس درخواست های Query سوال را انجام دادیم

ecute

Table - dbo.prj Table - dbo.emp Table - dbo.prj TEMP40.DB_93...SQLQuery1.sql

```
select prj_id from prj group by prj_id having (count(emp_id) < 4);
```

Results Messages

	prj_id
1	A
2	C

ecute

Table - dbo.dept Table - dbo.prj Table - dbo.emp Table - dbo.prj TEMP40.DB_93...SQLQuery1.sql

```
select dName, eName, prj_id from prj, dept, emp
where emp.dept_no = dept.dept_no AND emp.emp_id = prj.emp_id
```

Results Messages

	dName	eName	prj_id
1	physics	manager	A
2	math	b	A
3	math	o	A
4	math	a	B
5	computer	c	B
6	computer	d	B
7	math	e	B
8	physics	b	B
9	physics	a	C
10	math	f	C
11	physics	manager	D
12	math	f	D
13	computer	h	D
14	mechanics	i	D
15	math	g	D
16	computer	k	D

ecute

Table - dbo.dept Table - dbo.prj Table - dbo.emp TEMP40.DB_93...SQLQuery1.sql

```
select sum(salary) from emp, prj
where prj.emp_id = emp.emp_id AND prj.prj_id = 'B'
```

Results Messages

	(No column name)
1	500

execute

Table - dbo.dept Table - dbo.prj Table - dbo.emp TEMP40.DB_93...SQLQuery1.sql

```
select avg(salary),prj_id from emp, prj
where prj.emp_id = emp.emp_id group by prj_id
```

Results Messages

	(No column name)	prj_id
1	100	A
2	100	B
3	100	C
4	100	D

ecute ✓

Table - dbo.dept Table - dbo.prj Table - dbo.emp TEMP40.DB_93...SQLQuery1.sql

```
select prj_id from emp, prj
where prj.emp_id = emp.emp_id and emp.eName = 'manager'
```

Results Messages

	prj_id
1	A
2	D