



ICT Final project

Student name: Zhakupov Karim

Group : TS 1902

Topic: Smart House

1 TASK:

The theme of my project is "Smart Home".

I defined relationships in the smart home system database

Only 7 tables:

Specialist - User - Gadget - Usage Time (Hereinafter "time") - Access - Status - Smart Home Devices

(hereinafter "functions").

The specialist owns information about users, their gadgets and the time they use the system's devices.

One specialist has many users

One user has one gadget

One gadget gives only one type of access to the system

Access informs about status and

Also Access gives us access to devices

About the user I need to know the ID, name, phone number, gadget ID

About the gadget - the name of the gadget (the full brand of the phone) and its ID.

About usage time - the date and time of the last login to the system and its ID.

About the specialist - name, ID, user ID and time of his login.

About access - ID, access category and price.

About status - ID and "status name" (does the family member have access to the system)

About devices - ID and name of devices

2 TASK:

Create TABLE Specialist (

S_id DECIMAL (24) NOT NULL,

S_name VARCHAR (255) NOT NULL,

User_name VARCHAR (255),

$$);$$

SELECT*FROM Users;

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Query Editor

```
1 Create TABLE Specialist (  
2   S_id DECIMAL (24) NOT NULL,  
3   S_name VARCHAR (255) NOT NULL,  
4   User_name VARCHAR (255),  
5   User_id INT NOT NULL,  
6   Date_id INT NOT NULL,  
7   CONSTRAINT pk_spes PRIMARY KEY (S_id),  
8   CONSTRAINT fk_us FOREIGN KEY (User_id) REFERENCES Users(User_id),  
9   CONSTRAINT fk_time FOREIGN KEY (Date_id) REFERENCES Date(Date_id)  
10  ON DELETE CASCADE  
11  ON UPDATE CASCADE  
12 );  
13 SELECT * FROM Specialist;  
14  
15  
16  
17 CREATE TABLE Users(  
18   User_id DECIMAL (24) NOT NULL ,  
19   User_name VARCHAR (255) NOT NULL ,  
20   User_phone INT NOT NULL ,  
21   Gadget_name VARCHAR (255) ,  
22   Gadget_id INT NOT NULL,  
23   CONSTRAINT pk_us PRIMARY KEY (User_id) ,  
24   CONSTRAINT fk_gad FOREIGN KEY (Gadget_id) REFERENCES Gadgets(Gadget_id)  
25   ON DELETE CASCADE  
26   ON UPDATE CASCADE  
27 );  
28 SELECT*FROM Users;  
29  
30  
31
```

Data Output

	user_id [PK] numeric	user_name character varying (255)	user_phone integer	gadget_name character varying (255)
--	-------------------------	--------------------------------------	-----------------------	--

Data Output Explain Messages Notifications

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Create TABLE Gadgets (

Gadget_id DECIMAL (24) NOT NULL,

Gadget_name VARCHAR (255) NOT NULL,

User_id INT NOT NULL,

Access_id INT NOT NULL,

CONSTRAINT pk_gad PRIMARY KEY (Gadget_id),

CONSTRAINT fk_acs FOREIGN KEY (Access_id) REFERENCES Access(Access_id)

ON DELETE CASCADE

ON UPDATE CASCADE

);

SELECT * FROM Gadgets;

Query Editor

```
8      CONSTRAINT fk_us FOREIGN KEY (User_id) REFERENCES Users(User_id),
9      CONSTRAINT fk_time FOREIGN KEY (Date_id) REFERENCES Date(Date_id)
10     ON DELETE CASCADE
11     ON UPDATE CASCADE
12   );
13   SELECT * FROM Specialist;
14
15
16
17   CREATE TABLE Users(
18     User_id DECIMAL (24) NOT NULL ,
19     User_name VARCHAR (255) NOT NULL ,
20     User_phone INT NOT NULL ,
21     Gadget_name VARCHAR (255) ,
22     Gadget_id INT NOT NULL,
23     CONSTRAINT pk_us PRIMARY KEY (User_id) ,
24     CONSTRAINT fk_gad FOREIGN KEY (Gadget_id) REFERENCES Gadgets(Gadget_id)
25     ON DELETE CASCADE
26     ON UPDATE CASCADE
27   );
28   SELECT * FROM Users;
29
30
31
32   Create TABLE Gadgets (
33     Gadget_id DECIMAL (24) NOT NULL,
34     Gadget_name VARCHAR (255) NOT NULL,
35     User_id INT NOT NULL,
36     Access_id INT NOT NULL,
37     CONSTRAINT pk_gad PRIMARY KEY (Gadget_id),
38     CONSTRAINT fk_acs FOREIGN KEY (Access_id) REFERENCES Access(Access_id)
39     ON DELETE CASCADE
40     ON UPDATE CASCADE
41   );
42   SELECT * FROM Gadgets;
43
44
```

Data Output

Please

	gadget_id	gadget_name	user_id	access_id
	[PK] numeric (24)	character varying (255)	integer	integer

Data Output Explain Messages Notifications

CREATE TABLE Date (

User_id int not null,





Date_id DECIMAL (24) NOT NULL,

Hire_date Date NOT NULL,

CONSTRAINT pk_time PRIMARY KEY (Date_id)

);

SELECT *FROM Date;

Data Output			
 user_id integer		date_id [PK] numeric (24)	
		hire_date date	

Data Output
Explain
Messages
Notifications

```
CREATE TABLE Access(  
    Access_id DECIMAL (24) NOT NULL,  
    A_category VARCHAR (255) NOT NULL,  
    A_price REAL NOT NULL,  
    Status_id INT NOT NULL,  
    D_id INT NOT NULL,  
    CONSTRAINT pk_acs PRIMARY KEY (Access_id),  
    CONSTRAINT fk_stt FOREIGN KEY (Status_id) REFERENCES Status(Status_id),  
    CONSTRAINT fk_dev FOREIGN KEY (D_id) REFERENCES Device(D_id)  
    ON DELETE CASCADE  
    ON UPDATE CASCADE  
);  
  
SELECT * FROM Access;
```

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Please click [here](#) for m

Query Editor

```

36 Access_id INT NOT NULL,
37 CONSTRAINT pk_gad PRIMARY KEY (Gadget_id),
38 CONSTRAINT fk_acs FOREIGN KEY (Access_id) REFERENCES Access(Access_id)
39 ON DELETE CASCADE
40 ON UPDATE CASCADE
41 );
42 SELECT * FROM Gadgets;
43
44
45
46 CREATE TABLE Date (
47 User_id int not null,
48 Date_id DECIMAL (24) NOT NULL,
49 Hire_date Date NOT NULL,
50 CONSTRAINT pk_time PRIMARY KEY (Date_id)
51 );
52
53 SELECT *FROM Date;
54
55 CREATE TABLE Access(
56 Access_id DECIMAL (24) NOT NULL,
57 A_category VARCHAR (255) NOT NULL,
58 A_price REAL NOT NULL,
59 Status_id INT NOT NULL,
60 D_id INT NOT NULL,
61 CONSTRAINT pk_acs PRIMARY KEY (Access_id),
62 CONSTRAINT fk_stt FOREIGN KEY (Status_id) REFERENCES Status(Status_id),
63 CONSTRAINT fk_dev FOREIGN KEY (D_id) REFERENCES Device(D_id)
64 ON DELETE CASCADE
65 ON UPDATE CASCADE
66 );
67 SELECT * FROM Access;

```

Data Output

access_id	a_category	a_price	status_id
[PK] numeric (24)	character varying (255)	real	integer

Data Output Explain Messages Notifications

CREATE TABLE Status(

Status_id DECIMAL (24) NOT NULL,

Status_name VARCHAR (255) NOT NULL,

CONSTRAINT pk_stt PRIMARY KEY (Status_id)

);

SELECT * FROM Status;

Query Editor

```
44
45
46 CREATE TABLE Date (
47     User_id int not null,
48     Date_id DECIMAL (24) NOT NULL,
49     Hire_date Date NOT NULL,
50     CONSTRAINT pk_time PRIMARY KEY (Date_id)
51 );
52
53 SELECT *FROM Date;
54
55 CREATE TABLE Access(
56     Access_id DECIMAL (24) NOT NULL,
57     A_category VARCHAR (255) NOT NULL,
58     A_price REAL NOT NULL,
59     Status_id INT NOT NULL,
60     D_id INT NOT NULL,
61     CONSTRAINT pk_acs PRIMARY KEY (Access_id),
62     CONSTRAINT fk_stt FOREIGN KEY (Status_id) REFERENCES Status(Status_id),
63     CONSTRAINT fk_dev FOREIGN KEY (D_id) REFERENCES Device(D_id)
64     ON DELETE CASCADE
65     ON UPDATE CASCADE
66 );
67 SELECT * FROM Access;
68
69 CREATE TABLE Status(
70     Status_id DECIMAL (24) NOT NULL,
71     Status_name VARCHAR (255) NOT NULL,
72     CONSTRAINT pk_stt PRIMARY KEY (Status_id)
73 );
74
75 SELECT * FROM Status;
```

Notes: the column
Please click [here](#) for

Data Output

status_id	status_name
[PK] numeric (24)	character varying (255)

Data Output Explain Messages Notifications

```
CREATE TABLE Device(  
    D_id DECIMAL (24) NOT NULL,  
    D_name VARCHAR (255) NOT NULL,  
    CONSTRAINT pk_dev PRIMARY KEY (D_id)  
);  
  
SELECT * FROM Device;
```

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Query Editor

```
51 );
52
53 SELECT *FROM Date;
54
55 CREATE TABLE Access(
56     Access_id DECIMAL (24) NOT NULL,
57     A_category VARCHAR (255) NOT NULL,
58     A_price REAL NOT NULL,
59     Status_id INT NOT NULL,
60     D_id INT NOT NULL,
61     CONSTRAINT pk_acs PRIMARY KEY (Access_id),
62     CONSTRAINT fk_stt FOREIGN KEY (Status_id) REFERENCES Status(Status_id),
63     CONSTRAINT fk_dev FOREIGN KEY (D_id) REFERENCES Device(D_id)
64     ON DELETE CASCADE
65     ON UPDATE CASCADE
66 );
67 SELECT * FROM Access;
68
69 CREATE TABLE Status(
70     Status_id DECIMAL (24) NOT NULL,
71     Status_name VARCHAR (255) NOT NULL,
72     CONSTRAINT pk_stt PRIMARY KEY (Status_id)
73
74 );
75 SELECT * FROM Status;
76
77 CREATE TABLE Device(
78     D_id DECIMAL (24) NOT NULL,
79     D_name VARCHAR (255) NOT NULL,
80     CONSTRAINT pk_dev PRIMARY KEY (D_id)
81 );
82 SELECT * FROM Device;
```

Data Output

d_id	d_name
[PK] numeric (24)	character varying (255)

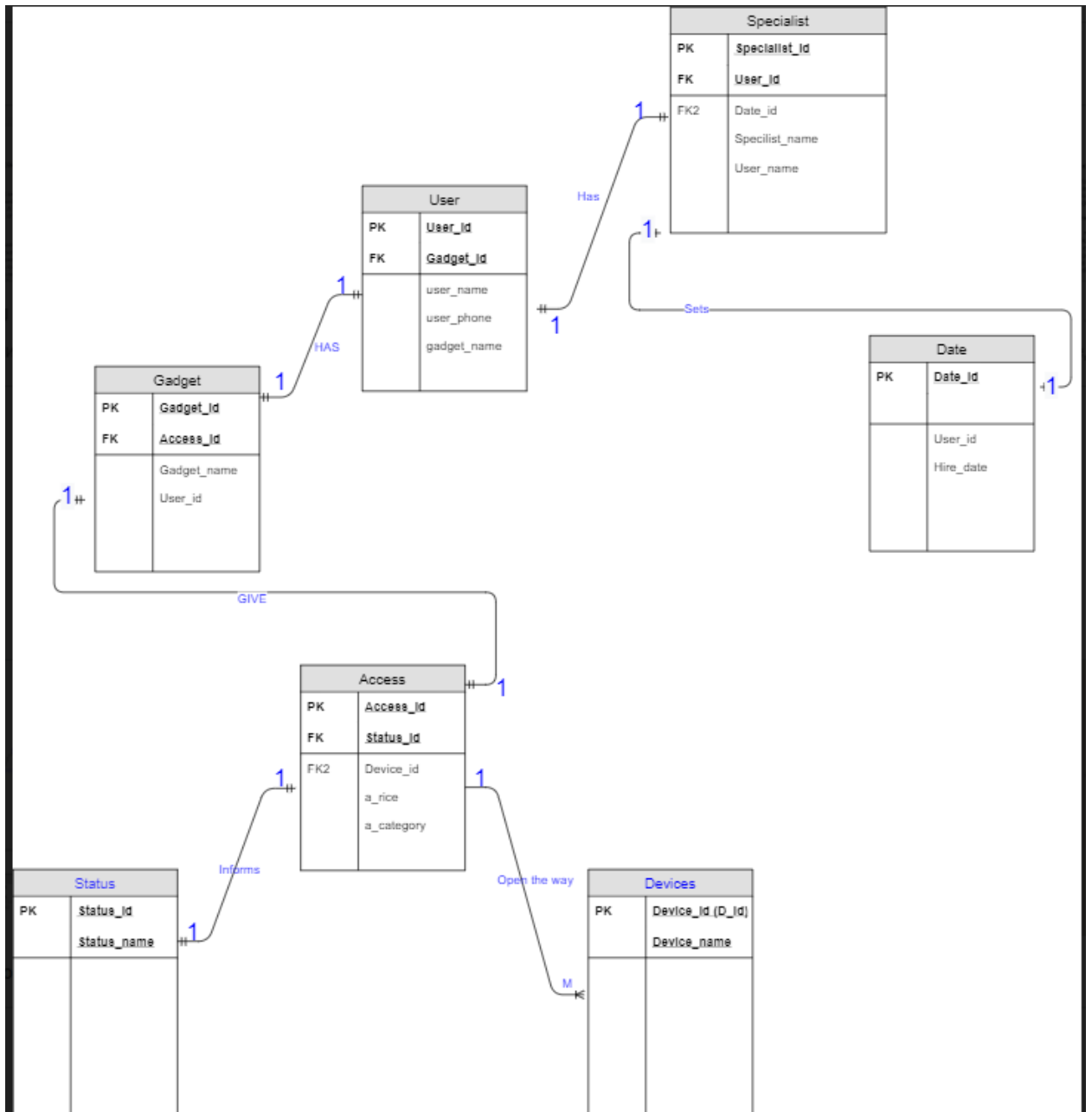
Data Output

Explain

Messages

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3 TASK:



4 TASK:

ALTER TABLE Users RENAME TO Us;

SELECT * FROM Us;

ALTER TABLE Us ADD column User_lname VARCHAR (255);

SELECT * FROM Us;

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Query Editor

```

63     CONSTRAINT fk_dev FOREIGN KEY (D_id) REFERENCES Device(D_id)
64     ON DELETE CASCADE
65     ON UPDATE CASCADE
66 );
67 SELECT * FROM Access;
68
69 CREATE TABLE Status(
70     Status_id DECIMAL (24) NOT NULL,
71     Status_name VARCHAR (255) NOT NULL,
72     CONSTRAINT pk_stt PRIMARY KEY (Status_id)
73 );
74
75 SELECT * FROM Status;
76
77 CREATE TABLE Device(
78     D_id DECIMAL (24) NOT NULL,
79     D_name VARCHAR (255) NOT NULL,
80     CONSTRAINT pk_dev PRIMARY KEY (D_id)
81 );
82 SELECT * FROM Device;
83
84
85 -----
86 4 task
87 ALTER TABLE Users RENAME TO Us;
88 SELECT * FROM Us;
89
90 ALTER TABLE Us ADD column User_lname VARCHAR (255);

```

Data Output

user_id	user_name	user_phone	gadget_name	gadget_id	user_lname
[PK] numeric	character varying (255)	integer	character varying (255)	integer	character varying (255)

Data Output Explain Messages Notifications

You are currently running however the current version is 12.1. Please click [here](#) for more information.

ALTER TABLE Us DROP column User_lname;

SELECT * FROM Us;

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Query Editor

```

63     CONSTRAINT fk_dev FOREIGN KEY (D_id) REFERENCES Device(D_id)
64     ON DELETE CASCADE
65     ON UPDATE CASCADE
66 );
67 SELECT * FROM Access;
68
69 CREATE TABLE Status(
70     Status_id DECIMAL (24) NOT NULL,
71     Status_name VARCHAR (255) NOT NULL,
72     CONSTRAINT pk_stt PRIMARY KEY (Status_id)
73 );
74
75 SELECT * FROM Status;
76
77 CREATE TABLE Device(
78     D_id DECIMAL (24) NOT NULL,
79     D_name VARCHAR (255) NOT NULL,
80     CONSTRAINT pk_dev PRIMARY KEY (D_id)
81 );
82 SELECT * FROM Device;
83
84
85 -----
86 4 task
87 ALTER TABLE Users RENAME TO Us;
88 SELECT * FROM Us;
89
90 ALTER TABLE Us ADD column User_lname VARCHAR (255);
91 SELECT * FROM Us;
92
93 ALTER TABLE Us DROP column User_lname;
94 SELECT * FROM Us;

```

Data Output

user_id	user_name	user_phone	gadget_name	gadget_id
[PK] numeric	character varying (255)	integer	character varying (255)	integer

Data Output Explain Messages Notifications

5 TASK:

INSERT INTO Specialist VALUES(01,'Jarim25',101,81),

(02,'Karim',102,82),

(04,'Sarim',104,84),

(03,'Kerim',103,83);

SELECT * FROM Specialist;

UPDATE Specialist SET S_id = s_id + 10.00

WHERE S_name = 'Karim' ;

SELECT *FROM Specialist;

DELETE FROM Specialist WHERE User_id = 104;

SELECT *FROM Specialist;

```
ALTER TABLE Us ADD column User_name VARCHAR (255);
SELECT * FROM Us;
|
ALTER TABLE Us DROP column User_name;
SELECT * FROM Us;
-----
5 task
INSERT INTO Specialist VALUES(01,'Jarim25','Karim',101,81),
(02,'Karim','ErmeK',102,82),
(04,'Sarim','Daulet',104,84),
(03,'Kerim','Marat',103,83);
SELECT * FROM Specialist;
UPDATE Specialist SET S_id = s_id + 10.00
WHERE S_name = 'Karim' ;
SELECT *FROM Specialist;
DELETE FROM Specialist WHERE User_id = 104;
SELECT *FROM Specialist;
```

Data Output					
	s_id [PK] numeric (24)	s_name character varying (255)	user_name character varying (255)	user_id integer	date_id integer
1	1	Jarim25	Karim	101	81
2	2	Karim	ErmeK	102	82
3	4	Sarim	Daulet	104	84
4	3	Kerim	Marat	103	83

[Data Output](#) [Explain](#) [Messages](#) [Notifications](#)

```
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Query Editor
89
90 ALTER TABLE Us ADD column User_name VARCHAR (255);
91 SELECT * FROM Us;
92
93 ALTER TABLE Us DROP column User_name;
94 SELECT * FROM Us;
95 -----
96 5 task
97 INSERT INTO Specialist VALUES(01,'Jarim25','Karim',101,81),
98 (02,'Karim','ErmeK',102,82),
99 (04,'Sarim','Daulet',104,84),
100 (03,'Kerim','Marat',103,83);
101 SELECT * FROM Specialist;
102 UPDATE Specialist SET S_id = s_id + 10.00
103 WHERE S_name = 'Karim' ;
104 SELECT *FROM Specialist;
105 DELETE FROM Specialist WHERE User_id = 104;
106 SELECT *FROM Specialist;
107
```

Data Output					
	s_id [PK] numeric (24)	s_name character varying (255)	user_name character varying (255)	user_id integer	date_id integer
1	1	Jarim25	Karim	101	81
2	4	Sarim	Daulet	104	84
3	3	Kerim	Marat	103	83
4	12	Karim	ErmeK	102	82

[Data Output](#) [Explain](#) [Messages](#) [Notifications](#)

```
ALTER TABLE Us ADD column User_name VARCHAR (255);
SELECT * FROM Us;

ALTER TABLE Us DROP column User_name;
SELECT * FROM Us;
-----
5 task
INSERT INTO Specialist VALUES(01,'Jarim25','Karim',101,81),
(02,'Karim','ErmeK',102,82),
(04,'Sarim','Daulet',104,84),
(03,'Kerim','Marat',103,83);
SELECT * FROM Specialist;
UPDATE Specialist SET S_id = s_id + 10.00
WHERE S_name = 'Karim' ;
SELECT *FROM Specialist;
DELETE FROM Specialist WHERE User_id = 104;
SELECT *FROM Specialist;
```

Data Output					
	s_id [PK] numeric (24)	s_name character varying (255)	user_name character varying (255)	user_id integer	date_id integer
1	1	Jarim25	Karim	101	81
2	3	Kerim	Marat	103	83
3	12	Karim	ErmeK	102	82

[Data Output](#) [Explain](#) [Messages](#) [Notifications](#)

INSERT INTO Us VALUES(101,'Karim',111111,201),

(102,'Ermek',555555,202),

(104,'Daulet',444444,204),

(103,'Marat',666666,203);

SELECT * FROM Us;

UPDATE Us SET User_phone = 877616

WHERE User_name = 'Karim';

SELECT * FROM Us;

DELETE FROM Us WHERE User_name = 'Daulet';

SELECT * FROM Us;

Query Editor

Please click [here](#) fo

```
89
90 ALTER TABLE Us ADD column User_name VARCHAR (255);
91 SELECT * FROM Us;
92
93 ALTER TABLE Us DROP column User_name;
94 SELECT * FROM Us;
95 -----
96 5 task
97 INSERT INTO Specialist VALUES(01,'Jarim25','Karim',101,81),
98 (02,'Karim','Ermek',102,82),
99 (04,'Sarim','Daulet',104,84),
00 (03,'Kerim','Marat',103,83);
01 SELECT * FROM Specialist;
02 UPDATE Specialist SET S_id = s_id + 10.00
03 WHERE S_name = 'Karim' ;
04 SELECT *FROM Specialist;
05 DELETE FROM Specialist WHERE User_id = 104;
06 SELECT *FROM Specialist;
07
08
09 INSERT INTO Us VALUES(101,'Karim',111111,'Iphone6',201),
10 (102,'Ermek',555555,'Huaweip20',202),
11 (104,'Daulet',444444,'OPPO',204),
12 (103,'Marat',666666,'Nokia10',203);
13 SELECT * FROM Us;
```

Data Output

	user_id [PK] numeric	user_name character varying (255)	user_phone integer	gadget_name character varying (255)	gadget_id integer
1	101	Karim	111111	Iphone6	201
2	102	Ermek	555555	Huaweip20	202
3	104	Daulet	444444	OPPO	204
4	103	Marat	666666	Nokia10	203

Data Output Explain Messages Notifications

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Query Editor

```

89
90 ALTER TABLE Us ADD column User_lname VARCHAR (255);
91 SELECT * FROM Us;
92
93 ALTER TABLE Us DROP column User_lname;
94 SELECT * FROM Us;
95
96 5 task
97 INSERT INTO Specialist VALUES(01,'Jarim25','Karim',101,81),
98 (02,'Karim','Ermek',102,82),
99 (04,'Sarim','Daulet',104,84),
100 (03,'Kerim','Marat',103,83);
101 SELECT * FROM Specialist;
102 UPDATE Specialist SET S_id = s_id + 10.00
103 WHERE S_name = 'Karim' ;
104 SELECT *FROM Specialist;
105 DELETE FROM Specialist WHERE User_id = 104;
106 SELECT *FROM Specialist;
107
108
109 INSERT INTO Us VALUES(101,'Karim',111111,'Iphone6',201),
110 (102,'Ermek',555555,'Huaweip20',202),
111 (104,'Daulet',444444,'OPPO',204),
112 (103,'Marat',666666,'Nokia10',203);
113 SELECT * FROM Us;
114 UPDATE Us SET User_phone = 877616
115 WHERE User_name = 'Karim';
116 SELECT * FROM Us;

```

Data Output

	user_id [PK] numeric	user_name character varying (255)	user_phone integer	gadget_name character varying (255)	gadget_id integer
1	102	Ermek	555555	Huaweip20	202
2	104	Daulet	444444	OPPO	204
3	103	Marat	666666	Nokia10	203
4	101	Karim	877616	Iphone6	201

Data Output Explain Messages Notifications

You are currently running a query, however the current view is not updated.
Please click [here](#) for more information.

Query Editor

```

89
90 ALTER TABLE Us ADD column User_lname VARCHAR (255);
91 SELECT * FROM Us;
92
93 ALTER TABLE Us DROP column User_lname;
94 SELECT * FROM Us;
95
96 5 task
97 INSERT INTO Specialist VALUES(01,'Jarim25','Karim',101,81),
98 (02,'Karim','Ermek',102,82),
99 (04,'Sarim','Daulet',104,84),
100 (03,'Kerim','Marat',103,83);
101 SELECT * FROM Specialist;
102 UPDATE Specialist SET S_id = s_id + 10.00
103 WHERE S_name = 'Karim' ;
104 SELECT *FROM Specialist;
105 DELETE FROM Specialist WHERE User_id = 104;
106 SELECT *FROM Specialist;
107
108
109 INSERT INTO Us VALUES(101,'Karim',111111,'Iphone6',201),
110 (102,'Ermek',555555,'Huaweip20',202),
111 (104,'Daulet',444444,'OPPO',204),
112 (103,'Marat',666666,'Nokia10',203);
113 SELECT * FROM Us;
114 UPDATE Us SET User_phone = 877616
115 WHERE User_name = 'Karim';
116 SELECT * FROM Us;
117 DELETE FROM Us WHERE User_name = 'Daulet';
118 SELECT * FROM Us;

```

Data Output

	user_id [PK] numeric	user_name character varying (255)	user_phone integer	gadget_name character varying (255)	gadget_id integer
1	102	Ermek	555555	Huaweip20	202
2	103	Marat	666666	Nokia10	203
3	101	Karim	877616	Iphone6	201

Data Output Explain Messages Notifications

Please click [here](#) for more information.

INSERT INTO Gadgets VALUES(201,'Iphone6',301),

(202,'Huaweip20',302),

(204,'OPPO',304),

(203,'Nokia10',303);

SELECT * FROM Gadgets;

UPDATE Gadgets SET Gadget_name = 'HuaweiP20'

WHERE Gadget_name = 'Huaweip20';

SELECT * FROM Gadgets;

DELETE FROM Gadgets WHERE Gadget_name = 'OPPO';

SELECT * FROM Gadgets;

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Query Editor

```
89
90 ALTER TABLE Us ADD column User_lname VARCHAR (255);
91 SELECT * FROM Us;
92
93 ALTER TABLE Us DROP column User_lname;
94 SELECT * FROM Us;
95 -----
96 5 task
97 INSERT INTO Specialist VALUES(01,'Jarim25','Karim',101,81),
98 (02,'Karim','Ermek',102,82),
99 (04,'Sarim','Daulet',104,84),
100 (03,'Kerim','Marat',103,83);
101 SELECT * FROM Specialist;
102 UPDATE Specialist SET S_id = s_id + 10.00
103 WHERE S_name = 'Karim' ;
104 SELECT *FROM Specialist;
105 DELETE FROM Specialist WHERE User_id = 104;
106 SELECT *FROM Specialist;
107
108
109 INSERT INTO Us VALUES(101,'Karim',111111,'Iphone6',201),
110 (102,'Ermek',555555,'Huaweip20',202),
111 (104,'Daulet',444444,'OPPO',204),
112 (103,'Marat',666666,'Nokia10',203);
113 SELECT * FROM Us;
114 UPDATE Us SET User_phone = 877616
115 WHERE User_name = 'Karim';
116 SELECT * FROM Us;
117 DELETE FROM Us WHERE User_name = 'Daulet';
118 SELECT * FROM Us;
119
120 INSERT INTO Gadgets VALUES(201,'Iphone6',101,301),
121 (202,'Huaweip20',102,302),
122 (204,'OPPO',104,304),
123 (203,'Nokia10',103,303);
124 SELECT * FROM Gadgets;
```

Data Output

	gadget_id [PK] numeric (24)	gadget_name character varying (255)	user_id integer	access_id integer
1	201	Iphone6	101	301
2	202	Huaweip20	102	302
3	204	OPPO	104	304
4	203	Nokia10	103	303

Data Output Explain Messages Notifications

```

ALTER TABLE Us DROP column User_lname;
SELECT * FROM Us;

-----

5 task
INSERT INTO Specialist VALUES(01,'Jarim25','Karim',101,81),
(02,'Karim','Ermek',102,82),
(04,'Sarim','Daulet',104,84),
(03,'Kerim','Marat',103,83);
SELECT * FROM Specialist;
UPDATE Specialist SET S_id = s_id + 10.00
WHERE S_name = 'Karim';
SELECT *FROM Specialist;
DELETE FROM Specialist WHERE User_id = 104;
SELECT *FROM Specialist;

INSERT INTO Us VALUES(101,'Karim',111111,'Iphone6',201),
(102,'Ermek',555555,'HuaweiP20',202),
(104,'Daulet',444444,'OPPO',204),
(103,'Marat',666666,'Nokia10',203);
SELECT * FROM Us;
UPDATE Us SET User_phone = 877616
WHERE User_name = 'Karim';
SELECT * FROM Us;
DELETE FROM Us WHERE User_name = 'Daulet';
SELECT * FROM Us;

INSERT INTO Gadgets VALUES(201,'Iphone6',101,301),
(202,'HuaweiP20',102,302),
(204,'OPPO',104,304),
(203,'Nokia10',103,303);
SELECT * FROM Gadgets;
UPDATE Gadgets SET Gadget_name = 'HuaweiP20'
WHERE Gadget_name = 'HuaweiP20';
SELECT * FROM Gadgets;

```

Data Output				
	gadget_id [PK] numeric (24)	gadget_name character varying (255)	user_id integer	access_id integer
1	201	Iphone6	101	301
2	204	OPPO	104	304
3	203	Nokia10	103	303
4	202	HuaweiP20	102	302

Data Output
Explain
Messages
Notifications

Query Editor

```

UPDATE Specialist SET S_id = s_id + 10.00
WHERE S_name = 'Karim';
SELECT *FROM Specialist;
DELETE FROM Specialist WHERE User_id = 104;
SELECT *FROM Specialist;

INSERT INTO Us VALUES(101,'Karim',111111,'Iphone6',201),
(102,'Ermek',555555,'HuaweiP20',202),
(104,'Daulet',444444,'OPPO',204),
(103,'Marat',666666,'Nokia10',203);
SELECT * FROM Us;
UPDATE Us SET User_phone = 877616
WHERE User_name = 'Karim';
SELECT * FROM Us;
DELETE FROM Us WHERE User_name = 'Daulet';
SELECT * FROM Us;

INSERT INTO Gadgets VALUES(201,'Iphone6',101,301),
(202,'HuaweiP20',102,302),
(204,'OPPO',104,304),
(203,'Nokia10',103,303);
SELECT * FROM Gadgets;
UPDATE Gadgets SET Gadget_name = 'HuaweiP20'
WHERE Gadget_name = 'HuaweiP20';
SELECT * FROM Gadgets;
DELETE FROM Gadgets WHERE Gadget_name = 'OPPO';
SELECT * FROM Gadgets;

```

Data Output				
	gadget_id [PK] numeric (24)	gadget_name character varying (255)	user_id integer	access_id integer
1	201	Iphone6	101	301
2	203	Nokia10	103	303
3	202	HuaweiP20	102	302

Data Output
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Insert INTO Date VALUES(101,81,'2019-12-05'),

(102,82,'2019-12-05'),

(104,84,'2019-12-05'),

(103,83,'2019-12-05');

SELECT * FROM Date;

UPDATE Date SET Hire_date = '2019-12-04'

WHERE User_id = 104;

SELECT * FROM Date;

DELETE FROM Date WHERE User_id = 104;

SELECT * FROM Date;

Query Editor

```

L11 (104,'Daulet',444444,'OPPO',204),
L12 (103,'Marat',666666,'Nokia10',203);
L13 SELECT * FROM Us;
L14 UPDATE Us SET User_phone = 877616
L15 WHERE User_name = 'Karim';
L16 SELECT * FROM Us;
L17 DELETE FROM Us WHERE User_name = 'Daulet';
L18 SELECT * FROM Us;
L19
L20 INSERT INTO Gadgets VALUES(201,'Iphone6',101,301),
L21 (202,'HuaweiP20',102,302),
L22 (204,'OPPO',104,304),
L23 (203,'Nokia10',103,303);
L24 SELECT * FROM Gadgets;
L25 UPDATE Gadgets SET Gadget_name = 'HuaweiP20'
L26 WHERE Gadget_name = 'HuaweiP20';
L27 SELECT * FROM Gadgets;
L28 DELETE FROM Gadgets WHERE Gadget_name = 'OPPO';
L29 SELECT * FROM Gadgets;
L30
L31 Insert INTO Date VALUES(101,81,'2019-12-05'),
L32 (102,82,'2019-12-06'),
L33 (104,84,'2019-12-05'),
L34 (103,83,'2019-12-07');

```

Data Output

	user_id integer	date_id [PK] numeric (24)	hire_date date
1	101	81	2019-12-05
2	102	82	2019-12-06
3	104	84	2019-12-05
4	103	83	2019-12-07

Data Output Explain Messages Notifications

```

(104,'Daulet',444444,'OPPO',204),
(103,'Marat',666666,'Nokia10',203);
SELECT * FROM Us;
UPDATE Us SET User_phone = 877616
WHERE User_name = 'Karim';
SELECT * FROM Us;
DELETE FROM Us WHERE User_name = 'Daulet';
SELECT * FROM Us;

INSERT INTO Gadgets VALUES(201,'Iphone6',101,301),
(202,'HuaweiP20',102,302),
(204,'OPPO',104,304),
(203,'Nokia10',103,303);
SELECT * FROM Gadgets;
UPDATE Gadgets SET Gadget_name = 'HuaweiP20'
WHERE Gadget_name = 'HuaweiP20';
SELECT * FROM Gadgets;
DELETE FROM Gadgets WHERE Gadget_name = 'OPPO';
SELECT * FROM Gadgets;

Insert INTO Date VALUES(101,81,'2019-12-05'),
(102,82,'2019-12-06'),
(104,84,'2019-12-05'),
(103,83,'2019-12-07');
SELECT * FROM Date;
UPDATE Date SET Hire_date = '2019-12-05'
WHERE User_id = 104;
SELECT * FROM Date;

```

Data Output

	user_id integer	date_id [PK] numeric (24)	hire_date date
1	101	81	2019-12-05
2	102	82	2019-12-06
3	103	83	2019-12-07
4	104	84	2019-12-05

Data Output Explain Messages Notifications

```
(104, 'Daulet', 444444, 'OPPO', 204),
(103, 'Marat', 666666, 'Nokia10', 203);
SELECT * FROM Us;
UPDATE Us SET User_phone = 877616
WHERE User_name = 'Karim';
SELECT * FROM Us;
DELETE FROM Us WHERE User_name = 'Daulet';
SELECT * FROM Us;

INSERT INTO Gadgets VALUES(201, 'Iphone6', 101, 301),
(202, 'HuaweiP20', 102, 302),
(204, 'OPPO', 104, 304),
(203, 'Nokia10', 103, 303);
SELECT * FROM Gadgets;
UPDATE Gadgets SET Gadget_name = 'HuaweiP20'
WHERE Gadget_name = 'HuaweiP20';
SELECT * FROM Gadgets;
DELETE FROM Gadgets WHERE Gadget_name = 'OPPO';
SELECT * FROM Gadgets;

Insert INTO Date VALUES(101, 81, '2019-12-05'),
(102, 82, '2019-12-06'),
(104, 84, '2019-12-05'),
(103, 83, '2019-12-07');
SELECT * FROM Date;
UPDATE Date SET Hire_date = '2019-12-05'
WHERE User_id = 104;
SELECT * FROM Date;
DELETE FROM Date WHERE User_id = 104;
SELECT * FROM Date;
```

Data Output

	user_id integer	date_id [PK] numeric (24)	hire_date date	
1	101	81	2019-12-05	
2	102	82	2019-12-06	
3	103	83	2019-12-07	

Data Output Explain Messages Notifications

INSERT INTO Access VALUES(301, 'A', 20.45 , 401, 501),

(302, 'B', 15.00 , 402, 502),

(304, "", 0 , 404, 504),

(303, 'A-', 17.55 , 403, 503);

SELECT * FROM Access ;

UPDATE Access SET A_category = 'F'

WHERE A_category = '';

SELECT * FROM Access ;

DELETE FROM Access WHERE A_category = 'F';

SELECT * FROM Access ;

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Query Editor

however the cur

Please click [her](#)

```
113 SELECT * FROM Us;
114 UPDATE Us SET User_phone = 877616
115 WHERE User_name = 'Karim';
116 SELECT * FROM Us;
117 DELETE FROM Us WHERE User_name = 'DauLet';
118 SELECT * FROM Us;
119
120 INSERT INTO Gadgets VALUES(201,'Iphone6',101,301),
121 (202,'HuaweiP20',102,302),
122 (204,'OPPO',104,304),
123 (203,'Nokia10',103,303);
124 SELECT * FROM Gadgets;
125 UPDATE Gadgets SET Gadget_name = 'HuaweiP20'
126 WHERE Gadget_name = 'HuaweiP20';
127 SELECT * FROM Gadgets;
128 DELETE FROM Gadgets WHERE Gadget_name = 'OPPO';
129 SELECT * FROM Gadgets;
130
131 Insert INTO Date VALUES(101,81,'2019-12-05'),
132 (102,82,'2019-12-06'),
133 (104,84,'2019-12-05'),
134 (103,83,'2019-12-07');
135 SELECT * FROM Date;
136 UPDATE Date SET Hire_date = '2019-12-05'
137 WHERE User_id = 104;
138 SELECT * FROM Date;
139 DELETE FROM Date WHERE User_id = 104;
140 SELECT * FROM Date;
141
142 INSERT INTO Access VALUES(301,'A',20.45 , 401,501),
143 (302,'B',15.00 ,402,502),
144 (304,'',0 ,404,504),
145 (303,'A-',17.55 ,403,503);
146 SELECT * FROM Access ;
```

Data Output

	access_id [PK] numeric (24)	a_category character varying (255)	a_price real	status_id integer	d_id integer	
1	301	A	20.45		401	501
2	302	B	15		402	502
3	304	A-	0		404	504
4	303	A-	17.55		403	503

Data Output

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Query Editor

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```
114 UPDATE Us SET User_phone = 877616
115 WHERE User_name = 'Karim';
116 SELECT * FROM Us;
117 DELETE FROM Us WHERE User_name = 'DauLet';
118 SELECT * FROM Us;
119
120 INSERT INTO Gadgets VALUES(201,'Iphone6',101,301),
121 (202,'HuaweiP20',102,302),
122 (204,'OPPO',104,304),
123 (203,'Nokia10',103,303);
124 SELECT * FROM Gadgets;
125 UPDATE Gadgets SET Gadget_name = 'HuaweiP20'
126 WHERE Gadget_name = 'HuaweiP20';
127 SELECT * FROM Gadgets;
128 DELETE FROM Gadgets WHERE Gadget_name = 'OPPO';
129 SELECT * FROM Gadgets;
130
131 Insert INTO Date VALUES(101,81,'2019-12-05'),
132 (102,82,'2019-12-06'),
133 (104,84,'2019-12-05'),
134 (103,83,'2019-12-07');
135 SELECT * FROM Date;
136 UPDATE Date SET Hire_date = '2019-12-05'
137 WHERE User_id = 104;
138 SELECT * FROM Date;
139 DELETE FROM Date WHERE User_id = 104;
140 SELECT * FROM Date;
141
142 INSERT INTO Access VALUES(301,'A',20.45 , 401,501),
143 (302,'B',15.00 ,402,502),
144 (304,'',0 ,404,504),
145 (303,'A-',17.55 ,403,503);
146 SELECT * FROM Access ;
147 UPDATE Access SET A_category = 'F'
148 WHERE A_category = '';
149 SELECT * FROM Access ;
```

Data Output

	access_id [PK] numeric (24)	a_category character varying (255)	a_price real	status_id integer	d_id integer	
1	301	A	20.45		401	501
2	302	B	15		402	502
3	303	A-	17.55		403	503
4	304	F	0		404	504

Data Output

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Query Editor

```

117 DELETE FROM Us WHERE User_name = 'DauLet';
118 SELECT * FROM Us;
119
120 INSERT INTO Gadgets VALUES(201,'Iphone6',101,301),
121 (202,'HuaweiP20',102,302),
122 (204,'OPPO',104,304),
123 (203,'Nokia10',103,303);
124 SELECT * FROM Gadgets;
125 UPDATE Gadgets SET Gadget_name = 'HuaweiP20'
126 WHERE Gadget_name = 'HuaweiP20';
127 SELECT * FROM Gadgets;
128 DELETE FROM Gadgets WHERE Gadget_name = 'OPPO';
129 SELECT * FROM Gadgets;
130
131 Insert INTO Date VALUES(101,81,'2019-12-05'),
132 (102,82,'2019-12-06'),
133 (104,84,'2019-12-05'),
134 (103,83,'2019-12-07');
135 SELECT * FROM Date;
136 UPDATE Date SET Hire_date = '2019-12-05'
137 WHERE User_id = 104;
138 SELECT * FROM Date;
139 DELETE FROM Date WHERE User_id = 104;
140 SELECT * FROM Date;
141
142 INSERT INTO Access VALUES(301,'A',20.45 , 401,501),
143 (302,'B',15.00 ,402,502),
144 (304,'',0 ,404,504),
145 (303,'A-',17.55 ,403,503);
146 SELECT * FROM Access ;
147 UPDATE Access SET A_category = 'F'
148 WHERE A_category = '';
149 SELECT * FROM Access ;
150 DELETE FROM Access WHERE A_category = 'F';
151 SELECT * FROM Access ;

```

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Data Output

	access_id [PK] numeric (24)	a_category character varying (255)	a_price real	status_id integer	d_id integer	
1	301	A	20.45	401	501	
2	302	B	15	402	502	
3	303	A-	17.55	403	503	

Data Output

Explain

Messages

Notifications

INSERT INTO Status VALUES(401,'online'),

(402,'online'),

(404,'offline'),

(403,'online');

SELECT * FROM Status;

UPDATE Status SET Status_name = 'work'

WHERE Status_name = 'online';

SELECT * FROM Status;

DELETE FROM Status WHERE Status_name = 'offline';

SELECT * FROM Status;

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Query Editor

```
124 SELECT * FROM Gadgets;
125 UPDATE Gadgets SET Gadget_name = 'HuaweiP20'
126 WHERE Gadget_name = 'HuaweiP20';
127 SELECT * FROM Gadgets;
128 DELETE FROM Gadgets WHERE Gadget_name = 'OPPO';
129 SELECT * FROM Gadgets;
130
131 Insert INTO Date VALUES(101,81,'2019-12-05'),
132 (102,82,'2019-12-06'),
133 (104,84,'2019-12-05'),
134 (103,83,'2019-12-07');
135 SELECT * FROM Date;
136 UPDATE Date SET Hire_date = '2019-12-05'
137 WHERE User_id = 104;
138 SELECT * FROM Date;
139 DELETE FROM Date WHERE User_id = 104;
140 SELECT * FROM Date;
141
142 INSERT INTO Access VALUES(301,'A',20.45 , 401,501),
143 (302,'B',15.00 ,402,502),
144 (304,'',0 ,404,504),
145 (303,'A-',17.55 ,403,503);
146 SELECT * FROM Access ;
147 UPDATE Access SET A_category = 'F'
148 WHERE A_category = '';
149 SELECT * FROM Access ;
150 DELETE FROM Access WHERE A_category = 'F';
151 SELECT * FROM Access ;
152
153 INSERT INTO Status VALUES(401,'online'),
154 (402,'online'),
155 (404,'offline'),
156 (403,'online');
157 SELECT * FROM Status;
```

Data Output

	status_id [PK] numeric (24)	status_name character varying (255)
1	401	online
2	402	online
3	404	offline
4	403	online

Data Output

Explain

Messages

Notifications

```

127 SELECT * FROM Gadgets;
128 DELETE FROM Gadgets WHERE Gadget_name = 'OPPO';
129 SELECT * FROM Gadgets;
130
131 Insert INTO Date VALUES(101,81,'2019-12-05'),
132 (102,82,'2019-12-06'),
133 (104,84,'2019-12-05'),
134 (103,83,'2019-12-07');
135 SELECT * FROM Date;
136 UPDATE Date SET Hire_date = '2019-12-05'
137 WHERE User_id = 104;
138 SELECT * FROM Date;
139 DELETE FROM Date WHERE User_id = 104;
140 SELECT * FROM Date;
141
142 INSERT INTO Access VALUES(301,'A',20.45 , 401,501),
143 (302,'B',15.00 ,402,502),
144 (304,'',0 ,404,504),
145 (303,'A-',17.55 ,403,503);
146 SELECT * FROM Access ;
147 UPDATE Access SET A_category = 'F'
148 WHERE A_category = '';
149 SELECT * FROM Access ;
150 DELETE FROM Access WHERE A_category = 'F';
151 SELECT * FROM Access ;
152
153 INSERT INTO Status VALUES(401,'online'),
154 (402,'online'),
155 (404,'offline'),
156 (403,'online');
157 SELECT * FROM Status;
158 UPDATE Status SET Status_name = 'work'
159 WHERE Status_name = 'online';
160 SELECT * FROM Status;

```

Data Output

	status_id [PK] numeric (24)	status_name character varying (255)
1	404	offline
2	401	work
3	402	work
4	403	work

Data Output Explain Messages Notifications

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Query Editor

```

127 SELECT * FROM Gadgets;
128 DELETE FROM Gadgets WHERE Gadget_name = 'OPPO';
129 SELECT * FROM Gadgets;
130
131 Insert INTO Date VALUES(101,81,'2019-12-05'),
132 (102,82,'2019-12-06'),
133 (104,84,'2019-12-05'),
134 (103,83,'2019-12-07');
135 SELECT * FROM Date;
136 UPDATE Date SET Hire_date = '2019-12-05'
137 WHERE User_id = 104;
138 SELECT * FROM Date;
139 DELETE FROM Date WHERE User_id = 104;
140 SELECT * FROM Date;
141
142 INSERT INTO Access VALUES(301,'A',20.45 , 401,501),
143 (302,'B',15.00 ,402,502),
144 (304,'',0 ,404,504),
145 (303,'A-',17.55 ,403,503);
146 SELECT * FROM Access ;
147 UPDATE Access SET A_category = 'F'
148 WHERE A_category = '';
149 SELECT * FROM Access ;
150 DELETE FROM Access WHERE A_category = 'F';
151 SELECT * FROM Access ;
152
153 INSERT INTO Status VALUES(401,'online'),
154 (402,'online'),
155 (404,'offline'),
156 (403,'online');
157 SELECT * FROM Status;
158 UPDATE Status SET Status_name = 'work'
159 WHERE Status_name = 'online';
160 SELECT * FROM Status;
161 DELETE FROM Status WHERE Status_name = 'offline';
162 SELECT * FROM Status;
163

```

Data Output

	status_id [PK] numeric (24)	status_name character varying (255)
1	401	work
2	402	work
3	403	work

Data Output Explain Messages Notifications

INSERT INTO Device VALUES(501,'Climate,cinema,water,doors'),

(502,'Climate,doors'),

(504,'-'),

(503,'Climate,cinema,water');

SELECT * FROM Device;

UPDATE Device SET D_name = 'Nothing'

WHERE D_name = '-';

SELECT * FROM Device;

DELETE FROM Device

WHERE D_name = 'Nothing';

SELECT * FROM Device;

Query Editor

```

143 (302,'B',15.00 ,402,502),
144 (304,'',0 ,404,504),
145 (303,'A-',17.55 ,403,503);
146 SELECT * FROM Access ;
147 UPDATE Access SET A_category = 'F'
148 WHERE A_category = '';
149 SELECT * FROM Access ;
150 DELETE FROM Access WHERE A_category = 'F';
151 SELECT * FROM Access ;
152
153 INSERT INTO Status VALUES(401,'online'),
154 (402,'online'),
155 (404,'offline'),
156 (403,'online');
157 SELECT * FROM Status;
158 UPDATE Status SET Status_name = 'work'
159 WHERE Status_name = 'online';
160 SELECT * FROM Status;
161 DELETE FROM Status WHERE Status_name = 'offline';
162 SELECT * FROM Status;
163
164 INSERT INTO Device VALUES(501,'Climate,cinema,water,doors'),
165 (502,'Climate,doors'),
166 (504,'-'),
167 (503,'Climate,cinema,water');
168 SELECT * FROM Device;

```

Data Output

	d_id [PK] numeric (24)	d_name character varying (255)
1	501	Climate,cinema,water,doors
2	502	Climate,doors
3	504	-
4	503	Climate,cinema,water

Data Output Explain Messages Notifications

Query Editor

```

143 (302,'B',15.00 ,402,502),
144 (304,'',0 ,404,504),
145 (303,'A-',17.55 ,403,503);
146 SELECT * FROM Access ;
147 UPDATE Access SET A_category = 'F'
148 WHERE A_category = '';
149 SELECT * FROM Access ;
150 DELETE FROM Access WHERE A_category = 'F';
151 SELECT * FROM Access ;
152
153 INSERT INTO Status VALUES(401,'online'),
154 (402,'online'),
155 (404,'offline'),
156 (403,'online');
157 SELECT * FROM Status;
158 UPDATE Status SET Status_name = 'work'
159 WHERE Status_name = 'online';
160 SELECT * FROM Status;
161 DELETE FROM Status WHERE Status_name = 'offline';
162 SELECT * FROM Status;
163
164 INSERT INTO Device VALUES(501,'Climate,cinema,water,doors'),
165 (502,'Climate,doors'),
166 (504,'-'),
167 (503,'Climate,cinema,water');
168 SELECT * FROM Device;
169 UPDATE Device SET D_name = 'Nothing'
170 WHERE D_name = '-';
171 SELECT * FROM Device;

```

Data Output

	d_id [PK] numeric (24)	d_name character varying (255)
1	501	Climate,cinema,water,doors
2	502	Climate,doors
3	503	Climate,cinema,water
4	504	Nothing

Data Output Explain Messages Notifications

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Query Editor

```

143 (302,'B',15.00 ,402,502),
144 (304,'',0 ,404,504),
145 (303,'A-',17.55 ,403,503);
146 SELECT * FROM Access ;
147 UPDATE Access SET A_category = 'F'
148 WHERE A_category = '';
149 SELECT * FROM Access ;
150 DELETE FROM Access WHERE A_category = 'F';
151 SELECT * FROM Access ;
152
153 INSERT INTO Status VALUES(401,'online'),
154 (402,'online'),
155 (404,'offline'),
156 (403,'online');
157 SELECT * FROM Status;
158 UPDATE Status SET Status_name = 'work'
159 WHERE Status_name = 'online';
160 SELECT * FROM Status;
161 DELETE FROM Status WHERE Status_name = 'offline';
162 SELECT * FROM Status;
163
164 INSERT INTO Device VALUES(501,'Climate,cinema,water,doors'),
165 (502,'Climate,doors'),
166 (504,'-'),
167 (503,'Climate,cinema,water');
168 SELECT * FROM Device;
169 UPDATE Device SET D_name = 'Nothing'
170 WHERE D_name = '-';
171 SELECT * FROM Device;
172 DELETE FROM Device
173 WHERE D_name = 'Nothing';
174 SELECT * FROM Device;

```

Data Output

	d_id [PK] numeric (24)	d_name character varying (255)
1	501	Climate,cinema,water,doors
2	502	Climate,doors
3	503	Climate,cinema,water

Data Output Explain Messages Notifications

6 task

1NF

Specialist_id	S_name	User_id	U_name	U_phone	Gadget_id	G_name
2	Karim	1	Karim	87761636477	201	Iphone6
1	Jarim25	2	Ermek	87055736069	203	HuaweiP20
3	Kerim	3	Daulet	87001009899	202	Nokia10

Access_id	A_category	A_price	Device_id	D_name	Status_id	St_name
401	A	45.83	41	Climate,cinema,doors, water.	51	Online
402	B	30.25	42	Cinema , doors.	52	Online
403	A-	28.67	43	Climate , water,doors.	53	Online

Date_id	Hire_date
101	'2017-12-01'
102	'2017-12-05'

103	'2017-12-07'
-----	--------------

1NF: FD1=[S_id, U_id, G_id, A_id, D_id, S_id, D_id]—(S_name), (U_name, U_phone) , (G_name), (A_category,A_price), (D_name), (S_name), (Hire_date)

=>Partial dependence.

Anomalies:

- 1) We can't delete specialist Jarim, else we lost data about user Ermek.
- 2) We can't update data of Marat, else we have to update Kerim .
- 3) We can't insert new specialist , whose on this time doesn't have users.

2NF:

Specialist_id	User_id	User_name	User_phone	Gadget_name
01	101	Karim	8776163	Iphone6
02	102	Daulet	666666	IphoneXS
02	103	Ermek	333333	HuaweiP20

User_ID	User_name	User_phone	Gadget_name
101		8776163	Iphone6
102		666666	IphoneXS
103		333333	HuaweiP20

Specialist_id	S_name
1	Orthopaedic
2	Oncology
3	Urology

Doctor_ID	Nurse_id	N_name	N_date_of_birth	N_works_year
	1	Tom Cruise	1945-07-23	6
	2	John Travolta	1968-11-01	10
	3	Steve Martin	1985-01-05	1
	4	Johnny Depp	1952-01-05	4

Specialist_id	User_id	Gadget_id	Date_id
---------------	---------	-----------	---------

Specialist_id	User_id	Gadget_id
---------------	---------	-----------

Gadget_id	Access_id	

2fd1(transitivity): {s_id}->{user_id}->{date_id}

2Fd2(transitivity): {user_id}->{gadget_id}

2Fd3(transitivity): Specialist_id->User_id->u_name, user_phone, gadget_name,date_id}

2FD4(transitivity):_id->Gadget_id_id->G_name,User_id

2FD SpecilistId->-user + date + gadget

2FD (full): specialist_id->specialist_name

Anomalies:

- 1) We can't insert new user
- 2) We can't update IphoneXS, otherwise we have to update to rows
- 3) We can't delete user Daulet else we also delete Kerim

3nF:

S_id	S_name
1	Jarim
3	Sarim
2	Karim

U_id	U_name	U_phone
101	Karim	877613
102	Daulet	444444
103	Ernek	666666

G_id	G_name
201	Iphone6
12	OPPO
13	Nokia10

A_id	A_category	A_price
Access_id	A_category	A_price
31	A	20.45
32	B	15.00
33	A-	17.45

Device_id	D_name
41	
42	
43	

Status_id	S_name
1	Online
2	Online
3	Online

Date_id	Hire_date
01	'2017-12-05'
02	'2017-12-05'
03	'2017-12-05'

Specialist_id	User_id	Gadget_id	Date_id
Gadget_id	Access_id		
Access_id	Status_id	Device_id	

3FD1 = S_id => S_name

3FD2 = User_id => User_name, User_phone

3fd3 = Gadget_id => Gadget_name

3fd4 = A_id => A_category + A_price

3fd5 = D_id => d_name

3fd6 = St_id => St_name

3fd7 = Date_id => Hire_date + D_time

3fd8 = S_id => U_id + G_id + D_id

3fd9 = G_id => A_id + St_id 3fd10 = A_id => Device_id

We can make changes(UPDATE,DELETE,INSERT) in the database without anomalies in the 3NF

7 TASK:

```
SELECT User_name , User_phone , Gadget_name  
  
FROM Us WHERE Gadget_name LIKE '%Iphone%'  
  
ORDER BY User_name ASC,  
  
User_name ASC;
```

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Query Editor

```
152  
153 INSERT INTO Status VALUES(401,'online'),  
154 (402,'online'),  
155 (404,'offline'),  
156 (403,'online');  
157 SELECT * FROM Status;  
158 UPDATE Status SET Status_name = 'work'  
159 WHERE Status_name = 'online';  
160 SELECT * FROM Status;  
161 DELETE FROM Status WHERE Status_name = 'offline';  
162 SELECT * FROM Status;  
163  
164 INSERT INTO Device VALUES(501,'Climate,cinema,water,doors'  
165 (502,'Climate,doors'),  
166 (504,'-'),  
167 (503,'Climate,cinema,water');  
168 SELECT * FROM Device;  
169 UPDATE Device SET D_name = 'Nothing'  
170 WHERE D_name = '-';  
171 SELECT * FROM Device;  
172 DELETE FROM Device  
173 WHERE D_name = 'Nothing';  
174 SELECT * FROM Device;  
175  
176 -----  
177 7 TASK  
178 SELECT User_name , User_phone , Gadget_name  
179 FROM Us WHERE Gadget_name LIKE '%Iphone%'  
180 ORDER BY User_name ASC,  
181 User_name ASC;
```

Data Output

	user_name character varying (255)	user_phone integer	gadget_name character varying (255)
1	Karim	877616	Iphone6

Data Output Explain Messages Notifications

SELECT max (DISTINCT a_price) AS max_price FROM Access;

```
52
53 INSERT INTO Status VALUES(401,'online'),
54 (402,'online'),
55 (404,'offline'),
56 (403,'online');
57 SELECT * FROM Status;
58 UPDATE Status SET Status_name = 'work'
59 WHERE Status_name = 'online';
60 SELECT * FROM Status;
61 DELETE FROM Status WHERE Status_name = 'offline';
62 SELECT * FROM Status;
63
64 INSERT INTO Device VALUES(501,'Climate,cinema,water,doors
65 (502,'Climate,doors'),
66 (504,'-'),
67 (503,'Climate,cinema,water');
68 SELECT * FROM Device;
69 UPDATE Device SET D_name = 'Nothing'
70 WHERE D_name = '-';
71 SELECT * FROM Device;
72 DELETE FROM Device
73 WHERE D_name = 'Nothing';
74 SELECT * FROM Device;
75
76 -----
77 7 TASK
78 SELECT User_name , User_phone , Gadget_name
79 FROM Us WHERE Gadget_name LIKE '%Iphone%'
80 ORDER BY User_name ASC,
81 User_name ASC;
82
83 SELECT max (DISTINCT a_price) AS max_price FROM Access;
```

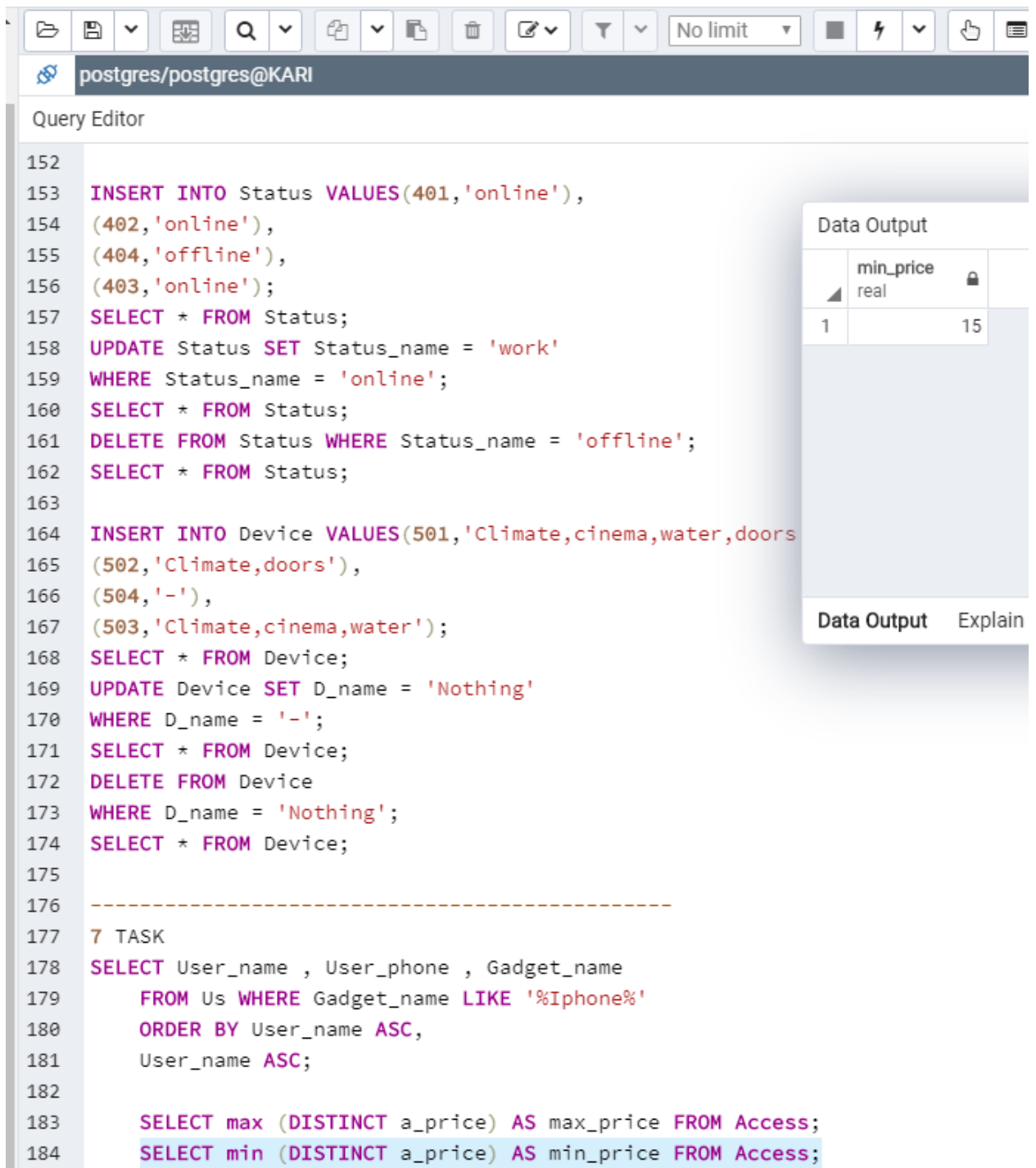
Data Output

	max_price real	
1	20.45	

Data Output

Explai

SELECT min (DISTINCT a_price) AS min_price FROM Access;



The screenshot shows a PostgreSQL query editor window titled "postgres/postgres@KARI". The interface includes a toolbar with icons for file operations, search, and execution. The main area is a "Query Editor" containing SQL code. The code includes several INSERT, UPDATE, DELETE, and SELECT statements for tables named Status, Device, and Access. A "Data Output" window is open on the right, displaying the result of a query. The output table has two columns: "min_price" (type: real) and an unlabeled column. The first row shows the value "15". Below the output table are buttons for "Data Output" and "Explain".

```
152
153 INSERT INTO Status VALUES(401,'online'),
154 (402,'online'),
155 (404,'offline'),
156 (403,'online');
157 SELECT * FROM Status;
158 UPDATE Status SET Status_name = 'work'
159 WHERE Status_name = 'online';
160 SELECT * FROM Status;
161 DELETE FROM Status WHERE Status_name = 'offline';
162 SELECT * FROM Status;
163
164 INSERT INTO Device VALUES(501,'Climate,cinema,water,doors
165 (502,'Climate,doors'),
166 (504,'-'),
167 (503,'Climate,cinema,water');
168 SELECT * FROM Device;
169 UPDATE Device SET D_name = 'Nothing'
170 WHERE D_name = '-';
171 SELECT * FROM Device;
172 DELETE FROM Device
173 WHERE D_name = 'Nothing';
174 SELECT * FROM Device;
175
176 -----
177 7 TASK
178 SELECT User_name , User_phone , Gadget_name
179 FROM Us WHERE Gadget_name LIKE '%Iphone%'
180 ORDER BY User_name ASC,
181 User_name ASC;
182
183 SELECT max (DISTINCT a_price) AS max_price FROM Access;
184 SELECT min (DISTINCT a_price) AS min_price FROM Access;
```

Data Output

	min_price real	
1		15

Data Output Explain

SELECT avg (DISTINCT a_price) AS avr_price FROM Access;

postgres/postgres@KARI

Query Editor

```
53 INSERT INTO Status VALUES(401,'online'),
54 (402,'online'),
55 (404,'offline'),
56 (403,'online');
57 SELECT * FROM Status;
58 UPDATE Status SET Status_name = 'work'
59 WHERE Status_name = 'online';
60 SELECT * FROM Status;
61 DELETE FROM Status WHERE Status_name = 'offline';
62 SELECT * FROM Status;
63
64 INSERT INTO Device VALUES(501,'Climate,cinema,water,doors
65 (502,'Climate,doors'),
66 (504,'-'),
67 (503,'Climate,cinema,water');
68 SELECT * FROM Device;
69 UPDATE Device SET D_name = 'Nothing'
70 WHERE D_name = '-';
71 SELECT * FROM Device;
72 DELETE FROM Device
73 WHERE D_name = 'Nothing';
74 SELECT * FROM Device;
75
76 -----
77 7 TASK
78 SELECT User_name , User_phone , Gadget_name
79 FROM Us WHERE Gadget_name LIKE '%Iphone%'
80 ORDER BY User_name ASC,
81 User_name ASC;
82
83 SELECT max (DISTINCT a_price) AS max_price FROM Access;
84 SELECT min (DISTINCT a_price) AS min_price FROM Access;
85 SELECT avg (DISTINCT a_price) AS avr_price FROM Access;
```

Data Output

	avr_price double precision	
1	17.666666666666667	

Data Output Explain Messages

SELECT sum (DISTINCT a_price) AS sum_price FROM Access;

Query Editor

```

153 INSERT INTO Status VALUES(401,'online'),
154 (402,'online'),
155 (404,'offline'),
156 (403,'online');
157 SELECT * FROM Status;
158 UPDATE Status SET Status_name = 'work'
159 WHERE Status_name = 'online';
160 SELECT * FROM Status;
161 DELETE FROM Status WHERE Status_name = 'offline';
162 SELECT * FROM Status;
163
164 INSERT INTO Device VALUES(501,'Climate,cinema,water,doors
165 (502,'Climate,doors'),
166 (504,'-'),
167 (503,'Climate,cinema,water');
168 SELECT * FROM Device;
169 UPDATE Device SET D_name = 'Nothing'
170 WHERE D_name = '-';
171 SELECT * FROM Device;
172 DELETE FROM Device
173 WHERE D_name = 'Nothing';
174 SELECT * FROM Device;
175
176 -----
177 7 TASK
178 SELECT User_name , User_phone , Gadget_name
179 FROM Us WHERE Gadget_name LIKE '%Iphone%'
180 ORDER BY User_name ASC,
181 User_name ASC;
182
183 SELECT max (DISTINCT a_price) AS max_price FROM Access;
184 SELECT min (DISTINCT a_price) AS min_price FROM Access;
185 SELECT avg (DISTINCT a_price) AS avr_price FROM Access;
186 SELECT sum (DISTINCT a_price) AS sum_price FROM Access;
187

```

Data Output

	sum_price	
	real	
1		53

Data Output Explain Messages Notifications

SELECT User_name, Gadget_name , User_id

FROM Us

WHERE Gadget_name

IN ('Iphone6','IphoneXS')

ORDER BY User_name;

The screenshot shows a PostgreSQL query editor with the following SQL code:

```
183 User_name ASC;  
184  
185 SELECT max (DISTINCT a_price) AS max_price FROM A  
186 SELECT min (DISTINCT a_price) AS min_price FROM A  
187 SELECT avg (DISTINCT a_price) AS avr_price FROM A  
188 SELECT sum (DISTINCT a_price) AS sum_price FROM A  
189  
190 SELECT User_name, Gadget_name , User_id  
191 FROM Us  
192 WHERE Gadget_name  
193 IN ('Iphone6', 'IphoneXS')  
194 ORDER BY User_name;  
195  
196  
197
```

The Data Output window displays the following results:

	user_name character varying (255)	gadget_name character varying (255)	user_id [PK] numeric (24)
1	Karim	Iphone6	101

Below the table are tabs for Data Output, Explain, Messages, and Notifications.

SELECT User_id,Gadget_name

FROM Us

Where (User_id Between 103 and 104);

The screenshot shows a PostgreSQL query editor with the following SQL code:

```
183 User_name ASC;  
184  
185 SELECT max (DISTINCT a_price) AS max_price FROM A  
186 SELECT min (DISTINCT a_price) AS min_price FROM A  
187 SELECT avg (DISTINCT a_price) AS avr_price FROM A  
188 SELECT sum (DISTINCT a_price) AS sum_price FROM A  
189  
190 SELECT User_name, Gadget_name , User_id  
191 FROM Us  
192 WHERE Gadget_name  
193 IN ('Iphone6', 'IphoneXS')  
194 ORDER BY User_name;  
195  
196  
197  
198  
199 SELECT User_id,Gadget_name  
200 FROM Us  
201 Where (User_id Between 103 and 104);  
202
```

The Data Output window displays the following results:

	user_id [PK] numeric (24)	gadget_name character varying (255)
1	103	Nokia10

Below the table are tabs for Data Output, Explain, Messages, and Notifications.

SELECT User_id,Gadget_name

FROM Us

Where User_id >= 102 AND User_id <=105 ;

SELECT User_name,Gadget_name

FROM Us

Where Gadget_id = 202 OR Gadget_id = 204;

Dashboard Properties SQL Statistics Dependencies Dependents postgres/postgres@KARI *

postgres/postgres@KARI

Query Editor

```
183 User_name ASC;
184
185 SELECT max (DISTINCT a_price) AS max_price FROM A
186 SELECT min (DISTINCT a_price) AS min_price FROM A
187 SELECT avg (DISTINCT a_price) AS avr_price FROM A
188 SELECT sum (DISTINCT a_price) AS sum_price FROM A
189
190 SELECT User_name, Gadget_name , User_id
191 FROM Us
192 WHERE Gadget_name
193 IN ('Iphone6','IphoneXS')
194 ORDER BY User_name;
195
196
197
198
199 SELECT User_id,Gadget_name
200 FROM Us
201 Where (User_id Between 103 and 104);
202
203 SELECT User_id,Gadget_name
204 FROM Us
205 Where User_id >= 102 AND User_id <=105 ;
206
207 SELECT User_name,Gadget_name
208 FROM Us
209 Where Gadget_id = 202 OR Gadget_id = 204;
```

Data Output

	user_name character varying (255)	gadget_name character varying (255)
1	Ernek	Huaweip20

Data Output Explain Messages Notifications

postgres/postgres@KARI

Query Editor

```
83 User_name ASC;
84
85 SELECT max (DISTINCT a_price) AS max_price FROM A
86 SELECT min (DISTINCT a_price) AS min_price FROM A
87 SELECT avg (DISTINCT a_price) AS avr_price FROM A
88 SELECT sum (DISTINCT a_price) AS sum_price FROM A
89
90 SELECT User_name, Gadget_name , User_id
91 FROM Us
92 WHERE Gadget_name
93 IN ('Iphone6','IphoneXS')
94 ORDER BY User_name;
95
96
97
98
99 SELECT User_id,Gadget_name
100 FROM Us
101 Where (User_id Between 103 and 104);
102
103 SELECT User_id,Gadget_name
104 FROM Us
105 Where User_id >= 102 AND User_id <=105 ;
106
```

Data Output

	user_id [PK] numeric (24)	gadget_name character varying (255)
1	102	Huaweip20
2	103	Nokia10

Data Output Explain Messages Notifications

SELECT * FROM Specialist

INNER JOIN Us

ON Specialist.User_id = Us.User_id;

postgres/postgres@KARI

Query Editor

33 User_name ASC;

34

35 SELECT max (DISTINCT a_price) AS max_price FROM A

36 SELECT min (DISTINCT a_price) AS min_price FROM A

37 SELECT avg (DISTINCT a_price) AS avr_price FROM A

38 SELECT sum (DISTINCT a_price) AS sum_price FROM A

39

40 SELECT User_name, Gadget_name , User_id

41 FROM Us

42 WHERE Gadget_name

43 IN ('iPhone6','iPhoneXS')

44 ORDER BY User_name;

45

46

47

48

49 SELECT User_id,Gadget_name

50 FROM Us

51 Where (User_id Between 103 and 104);

52

53 SELECT User_id,Gadget_name

54 FROM Us

55 Where User_id >= 102 AND User_id <=105 ;

56

57 SELECT User_name,Gadget_name

58 FROM Us

59 Where Gadget_id = 202 OR Gadget_id = 204;

60

61

62 SELECT * FROM Specialist

63 INNER JOIN Us

64 ON Specialist.User_id = Us.User_id;

65

Data Output

s_id	s_name	user_name	user_id	date_id	user_id	user_name
numeric (24)	character varying (255)	character varying (255)	integer	integer	numeric (24)	character va
1	1 Jarim25	Karim	101	81	101	Karim
2	3 Kerim	Marat	103	83	103	Marat
3	12 Karim	Ernek	102	82	102	Ernek

Data Output Explain Messages Notifications

SELECT gadget_name, a_category , a_price

FROM Access

LEFT JOIN Gadgets

ON Gadgets.access_id = Access.access_id;

The screenshot shows a PostgreSQL query editor interface with a query editor on the left and a data output window on the right. The query editor contains a multi-part SQL query. The data output window displays the results of the final SELECT statement, which is highlighted in blue in the query editor.

Query Editor:

```
185 SELECT max (DISTINCT a_price) AS max_price FROM A
186 SELECT min (DISTINCT a_price) AS min_price FROM A
187 SELECT avg (DISTINCT a_price) AS avr_price FROM A
188 SELECT sum (DISTINCT a_price) AS sum_price FROM A
189
190 SELECT User_name, Gadget_name , User_id
191 FROM Us
192 WHERE Gadget_name
193 IN ('Iphone6','IphoneXS')
194 ORDER BY User_name;
195
196
197
198
199 SELECT User_id,Gadget_name
200 FROM Us
201 Where (User_id Between 103 and 104);
202
203 SELECT User_id,Gadget_name
204 FROM Us
205 Where User_id >= 102 AND User_id <=105 ;
206
207 SELECT User_name,Gadget_name
208 FROM Us
209 Where Gadget_id = 202 OR Gadget_id = 204;
210
211
212 SELECT * FROM Specialist
213 INNER JOIN Us
214 ON Specialist.User_id = Us.User_id;
215
216
217 SELECT gadget_name, a_category , a_price
218 FROM Access
219 LEFT JOIN Gadgets
220 ON Gadgets.access_id = Access.access_id;
221
```

Data Output:

	gadget_name character varying (255)	a_category character varying (255)	a_price real
1	Iphone6	A	20.45
2	Nokia10	A-	17.55
3	HuaweiP20	B	15

SELECT *

FROM Date

FULL JOIN Specialist

ON Date.Date_id = Specialist.Date_id;

postgres/postgres@KARI

Query Editor

```

194 ORDER BY User_name;
195
196
197
198
199 SELECT User_id,Gadget_name
200 FROM Us
201 WHERE (User_id Between 103 and 104);
202
203 SELECT User_id,Gadget_name
204 FROM Us
205 WHERE User_id >= 102 AND User_id <=105 ;
206
207 SELECT User_name,Gadget_name
208 FROM Us
209 WHERE Gadget_id = 202 OR Gadget_id = 204;
210
211
212 SELECT * FROM Specialist
213 INNER JOIN Us
214 ON Specialist.User_id = Us.User_id;
215
216
217 SELECT gadget_name, a_category , a_price
218 FROM Access
219 LEFT JOIN Gadgets
220 ON Gadgets.access_id = Access.access_id;
221
222 SELECT *
223 FROM Date
224 FULL JOIN Specialist
225 ON Date.Date_id = Specialist.Date_id;
226

```

Data Output

	user_id integer	date_id numeric (24)	hire_date date	s_id numeric (24)	s_name character varying (255)	user_name character varying (255)	user_id integer	date integer
1	101	81	2019-12-05		Jarim25	Karim	101	
2	102	82	2019-12-06		Karim	Ernek	102	
3	103	83	2019-12-07		Kerim	Marat	103	

Data Output Explain Messages Notifications

8 task

SELECT User_name , User_id , Gadget_name

FROM Us

WHERE EXISTS (SELECT User_name,Gadget_name FROM Specialist WHERE Specialist.User_id = Us.User_id AND User_id >= 102)

ORDER BY User_id;

The screenshot shows a PostgreSQL query editor with a query that includes several SELECT statements and a final task statement. The query is as follows:

```
99 SELECT User_id,Gadget_name
00 FROM Us
01 Where (User_id Between 103 and 104);
02
03 SELECT User_id,Gadget_name
04 FROM Us
05 Where User_id >= 102 AND User_id <=105 ;
06
07 SELECT User_name,Gadget_name
08 FROM Us
09 Where Gadget_id = 202 OR Gadget_id = 204;
10
11
12 SELECT * FROM Specialist
13 INNER JOIN Us
14 ON Specialist.User_id = Us.User_id;
15
16
17 SELECT gadget_name, a_category , a_price
18 FROM Access
19 LEFT JOIN Gadgets
20 ON Gadgets.access_id = Access.access_id;
21
22 SELECT *
23 FROM Date
24 FULL JOIN Specialist
25 ON Date.Date_id = Specialist.Date_id;
26
27 -----
28 8 TASK
29 SELECT User_name , User_id , Gadget_name
30 FROM Us
31 WHERE EXISTS (SELECT User_name,Gadget_name FROM Specialist WHERE Specialist.User_id = Us.User_id AND User_id >= 102 )
32 ORDER BY User_id;
33
```

The Data Output window shows the following results:

	user_name character varying (255)	user_id [PK] numeric	gadget_name character varying (255)
1	Ermek	102	Huawei20
2	Marat	103	Nokia10

SELECT User_name , User_id , Gadget_name

FROM Us

WHERE NOT EXISTS (SELECT User_name,Gadget_name FROM Specialist WHERE Specialist.User_id = Us.User_id AND User_id >= 102)

ORDER BY User_id;

The screenshot shows a PostgreSQL query editor with a query that includes several SELECT statements and a final task query. The query editor is titled 'postgres/postgres@KARI'. The query is as follows:

```
202
203 SELECT User_id,Gadget_name
204 FROM Us
205 Where User_id >= 102 AND User_id <=105 ;
206
207 SELECT User_name,Gadget_name
208 FROM Us
209 Where Gadget_id = 202 OR Gadget_id = 204;
210
211
212 SELECT * FROM Specialist
213 INNER JOIN Us
214 ON Specialist.User_id = Us.User_id;
215
216
217 SELECT gadget_name, a_category , a_price
218 FROM Access
219 LEFT JOIN Gadgets
220 ON Gadgets.access_id = Access.access_id;
221
222 SELECT *
223 FROM Date
224 FULL JOIN Specialist
225 ON Date.Date_id = Specialist.Date_id;
226
227 -----
228 8 TASK
229 SELECT User_name , User_id , Gadget_name
230 FROM Us
231 WHERE EXISTS (SELECT User_name,Gadget_name FROM Specialist WHERE Specialist.User_id = Us.User_id AND User_id >= 102 )
232 ORDER BY User_id;
233
234 SELECT User_name , User_id , Gadget_name
235 FROM Us
236 WHERE NOT EXISTS (SELECT User_name,Gadget_name FROM Specialist WHERE Specialist.User_id = Us.User_id AND User_id >= 102 )
237 ORDER BY User_id;
```

The 'Data Output' window shows the results of the first query:

	user_name character varying (255)	user_id [PK] numeric	gadget_name character varying (255)
1	Karim	101	Iphone6

At the bottom right, a green status bar indicates 'Successfully ru'.

SELECT User_name, Gadget_name , User_id

FROM Us

WHERE Gadget_name

IN ('Iphone6','IphoneXS')

ORDER BY User_name;

postgres/postgres@KARI

Query Editor

```
13 INNER JOIN Us
14 ON Specialist.User_id = Us.User_id;
15
16
17 SELECT gadget_name, a_category , a_price
18 FROM Access
19 LEFT JOIN Gadgets
20 ON Gadgets.access_id = Access.access_id;
21
22 SELECT *
23 FROM Date
24 FULL JOIN Specialist
25 ON Date.Date_id = Specialist.Date_id;
26
27 -----
28 8 TASK
29 SELECT User_name , User_id , Gadget_name
30 FROM Us
31 WHERE EXISTS (SELECT User_name,Gadget_name FROM Specialist WHERE Specialist.User_id = Us.User_id AND User_id >= 102 )
32 ORDER BY User_id;
33
34 SELECT User_name , User_id , Gadget_name
35 FROM Us
36 WHERE NOT EXISTS (SELECT User_name,Gadget_name FROM Specialist WHERE Specialist.User_id = Us.User_id AND User_id >= 102 )
37 ORDER BY User_id;
38
39
40 SELECT User_name, Gadget_name , User_id
41 FROM Us
42 WHERE Gadget_name
43 IN ('Iphone6','IphoneXS')
44 ORDER BY User_name;
45
```

Data Output

	user_name character varying (255)	gadget_name character varying (255)	user_id [PK] numeric (24)
1	Karim	Iphone6	101

Data Output Explain Messages Notifications

SELECT * FROM Access

WHERE A_price >= ALL(SELECT A_price FROM Access);

postgres/postgres@KARI

Query Editor

```
218 FROM Access
219 LEFT JOIN Gadgets
220 ON Gadgets.access_id = Access.access_id;
221
222 SELECT *
223 FROM Date
224 FULL JOIN Specialist
225 ON Date.Date_id = Specialist.Date_id;
226
227 -----
228 8 TASK
229 SELECT User_name , User_id , Gadget_name
230 FROM Us
231 WHERE EXISTS (SELECT User_name,Gadget_name FROM Specialist WHERE Specialist.User_id = Us.User_id AND User_id >= 102 )
232 ORDER BY User_id;
233
234 SELECT User_name , User_id , Gadget_name
235 FROM Us
236 WHERE NOT EXISTS (SELECT User_name,Gadget_name FROM Specialist WHERE Specialist.User_id = Us.User_id AND User_id >= 102 )
237 ORDER BY User_id;
238
239
240 SELECT User_name, Gadget_name , User_id
241 FROM Us
242 WHERE Gadget_name
243 IN ('iPhone6','iPhoneXS')
244 ORDER BY User_name;
245
246
247 SELECT * FROM Access
248 WHERE A_price >= ALL(SELECT A_price FROM Access);
249
250
```

Data Output

	access_id [PK] numeric (24)	a_category character varying (255)	a_price real	status_id integer	d_id integer	
1	301	A	20.45		401	501

Data Output Explain Messages Notifications

SELECT a_category , a_price

FROM Access

WHERE a_price >ANY(SELECT a_price FROM Access)

ORDER BY a_category;

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ry Editor

```
ON Gadgets.access_id = Access.access_id;

SELECT *
FROM Date
FULL JOIN Specialist
ON Date.Date_id = Specialist.Date_id;

-----

8 TASK
SELECT User_name , User_id , Gadget_name
FROM Us
WHERE EXISTS (SELECT User_name,Gadget_name FROM
ORDER BY User_id;

SELECT User_name , User_id , Gadget_name
FROM Us
WHERE NOT EXISTS (SELECT User_name,Gadget_name FROM Specialist WHERE Specialist.User_id = Us.U
ORDER BY User_id;

SELECT User_name, Gadget_name , User_id
FROM Us
WHERE Gadget_name
IN ('Iphone6','IphoneXS')
ORDER BY User_name;

SELECT * FROM Access
WHERE A_price >= ALL(SELECT A_price FROM Access);

SELECT a_category , a_price
FROM Access
WHERE a_price >ANY(SELECT a_price FROM Access)
ORDER BY a_category;
```

Data Output

	a_category character varying (255)	a_price real
1	A	20.45
2	A-	17.55

Data Output Explain Messages Notifications