

```

1. CREATE TABLE customer (
custno varchar(10) NOT NULL,
custname varchar(30) NOT NULL,
address varchar(30) NOT NULL,
Internal varchar(1) NOT NULL,
contact varchar(30) NOT NULL,
phone varchar(10) NOT NULL,
city varchar(15) NOT NULL,
state varchar(2) NOT NULL,
zip varchar(5) NOT NULL,
CONSTRAINT custno_ PRIMARY KEY (custno)
);

```

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Query Editor Query History

```

2  custno varchar(10) NOT NULL,
3  custname varchar(30) NOT NULL,
4  address varchar(30) NOT NULL,
5  Internal varchar(1) NOT NULL,
6  contact varchar(30) NOT NULL,
7  phone varchar(10) NOT NULL,
8  city varchar(15) NOT NULL,
9  state varchar(2) NOT NULL,
10 zip varchar(5) NOT NULL,
11 CONSTRAINT custno_ PRIMARY KEY (custno)
12 );
13

```

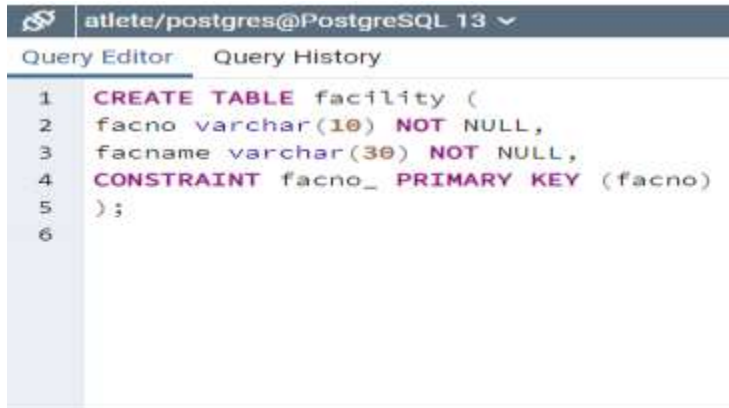
Data Output Explain Messages Notifications

CREATE TABLE

Query returned successfully in 71 msec.

<input type="checkbox"/> Name	Owner	Partitioned table?	Comment
<input type="checkbox"/> customer	postgres	<input type="button" value="False"/>	

```
2. CREATE TABLE facility (  
    facno varchar(10) NOT NULL,  
    facname varchar(30) NOT NULL,  
    CONSTRAINT facno_ PRIMARY KEY (facno)  
);
```



```
1 CREATE TABLE facility (  
2 facno varchar(10) NOT NULL,  
3 facname varchar(30) NOT NULL,  
4 CONSTRAINT facno_ PRIMARY KEY (facno)  
5 );  
6
```

Data Output Explain Messages Notifications

CREATE TABLE

Query returned successfully in 47 msec.

<input type="checkbox"/>	Name	Owner	Partitioned table?	Comment
<input type="checkbox"/>	customer	postgres	False	
<input checked="" type="checkbox"/>	facility	postgres	False	

```

3. CREATE TABLE location (
    locno varchar(10) NOT NULL,
    facno varchar(10) NOT NULL,
    locname varchar(30) NOT NULL,
    CONSTRAINT locno_ PRIMARY KEY (locno)
);

```

The screenshot shows a PostgreSQL Query Editor window with the following SQL code:

```

1 CREATE TABLE location (
2   locno varchar(10) NOT NULL,
3   facno varchar(10) NOT NULL,
4   locname varchar(30) NOT NULL,
5   CONSTRAINT locno_ PRIMARY KEY (locno)
6 );
7

```

Below the query editor, the 'Messages' tab is active, displaying the message: "CREATE TABLE" and "Query returned successfully in 54 msec."

At the bottom, a table list shows three tables: 'customer', 'facility', and 'location'. The 'location' table is selected, and its details are shown in the table below.

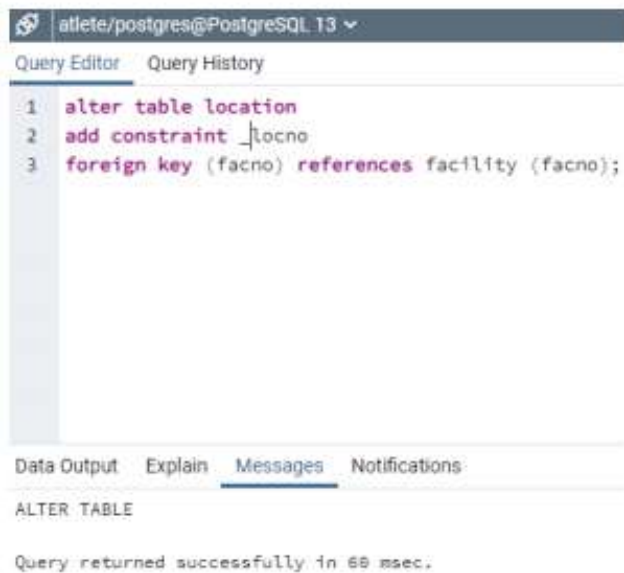
<input type="checkbox"/> Name	Owner	Partitioned table?	Comment
<input type="checkbox"/> customer	postgres	<input type="button" value="False"/>	
<input type="checkbox"/> facility	postgres	<input type="button" value="False"/>	
<input checked="" type="checkbox"/> location	postgres	<input type="button" value="False"/>	

4. Hanya ada satu tabel yang saling berhubungan. Table yang berhubungan adalah tabel facility dengan tabel location dimana table facility merupakan parent dari tabel location, karna tabel location mengambil data dari tabel facility.

5. alter table location

add constraint \_locno

foreign key (facno) references facility (facno);



The screenshot shows a PostgreSQL Query Editor window with the title 'atlete/postgres@PostgreSQL 13'. The 'Query Editor' tab is active, displaying a three-line SQL query:   
1 alter table location  
2 add constraint \_locno  
3 foreign key (facno) references facility (facno);  
The 'Messages' tab is selected at the bottom, showing the output:   
ALTER TABLE  
  
Query returned successfully in 68 msec.

6. Yang saya ketahui, null tidak boleh digunakan dalam foreign key. Saya ingin menjelaskan mengapa foreign key mungkin perlu nol atau mungkin perlu unik atau tidak unik. Pertama, ingat foreign key hanya mengharuskan nilai di bidang itu harus ada terlebih dahulu di tabel yang berbeda (tabel induk). Itu semua adalah definisi FK. Null menurut definisi bukanlah nilai. Null artinya kita belum tahu berapa nilainya.

## 7. alter table facility

Add constraint facilityname

Unique (facname);



The screenshot shows a PostgreSQL query editor interface. At the top, the connection is identified as 'atlete/postgres@PostgreSQL 13'. Below this, there are tabs for 'Query Editor' and 'Query History'. The 'Query Editor' tab is active, displaying a SQL command across three lines: '1 alter table facility', '2 add constraint facilityname', and '3 unique (facname);'. Below the query editor, there are tabs for 'Data Output', 'Explain', 'Messages', and 'Notifications'. The 'Messages' tab is selected, showing the output 'ALTER TABLE' and a status message: 'Query returned successfully in 51 msec.'

```
1 alter table facility
2 add constraint facilityname
3 unique (facname);
```

ALTER TABLE

Query returned successfully in 51 msec.

## Pengisian Data Customer

```
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Query Editor  Query History

1  INSERT INTO customer
2    (custno, custname, address, Internal, contact, phone, city, state, zip)
3    VALUES ('C100','Football','Box352200','Y','Mary Manager','6857100','Boulder','CO','
4
5  INSERT INTO customer
6    (custno, custname, address, Internal, contact, phone, city, state, zip)
7    VALUES ('C101','Men s Basketball','Box352400','Y','Sally Supervisor','5413700','Bou
8
9  INSERT INTO customer
10   (custno, custname, address, Internal, contact, phone, city, state, zip)
11   VALUES ('C103','Basebal','Box352020','Y','Bill Baseball','5431234','Boulder','CO','
12

Data Output  Explain  Messages  Notifications

INSERT @ 1

Query returned successfully in 51 msec.
```

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Query Editor Query History Scratch Pad

```
1 select * from customer;
```

Data Output Explain Messages Notifications

	<b>custno</b> [PK] character varying (10)	<b>custname</b> character varying (30)	<b>address</b> character varying (25)	<b>Internal</b> character varying (1)	<b>contact</b> character varying (30)	<b>phone</b> character varying (10)	<b>city</b> character varying (15)	<b>state</b> character
1	C100	Football	Box352200	Y	Mary Manager	6857100	Boulder	CO
2	C101	Men s Basketball	Box352400	Y	Sally Supervisor	5413700	Boulder	CO
3	C103	Basebal	Box352020	Y	Bill Baseball	5431234	Boulder	CO
4	C104	Women s Softbal	Box351200	Y	Sue Softball	5434321	Boulder	CO
5	C105	High School Football	123 AnyStreet	N	Coach Bob	4441234	Louisville	CT

## Pengisian Data Facility

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Query Editor   Query History

```
1  INSERT INTO facility
2      (facno, facname)
3      VALUES ('F100','Football stadium');
4
5
6  INSERT INTO facility
7      (facno, facname)
8      VALUES ('F101','Basketball arena');
9
10 INSERT INTO facility
11     (facno, facname)
12     VALUES ('F102','Basketball field');
```

Data Output   Explain   Messages   Notifications

INSERT @ 1

Query returned successfully in 43 msec.

Dashboard   Properties   SQL   Statistics   Dependencies   Dependents   atele/postgres...   atele/postgres...   atele/postgres...   < > 🔍

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Query Editor   Query History   Scratch Pad ✕

```
1  select * from facility;
```

Data Output   Explain   Messages   Notifications

facno	facname
(PK) character varying (10)	character varying (30)
1 : F100	Football stadium
2 : F101	Basketball arena
3 : F102	Basketball field
4 : F103	Recreation room

## Pengisian Data Location

```
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Query Editor  Query History

22      (locno, facno, locname)
23      VALUES ('L104', 'F100', 'Ticket Booth');
24
25
26  INSERT INTO location
27      (locno, facno, locname)
28      VALUES ('L105', 'F101', 'Gate');
29
30
31  INSERT INTO location
32      (locno, facno, locname)
33      VALUES ('L106', 'F100', 'Pedestrian gate');

Data Output  Explain  Messages  Notifications
INSERT 0 1

Query returned successfully in 48 msec.
```

Dashboard Properties SQL Statistics Dependencies Dependents atete/postgres... atete/postgres... atete/postgres...

Query Editor Query History Scratch Pad

```
1 select * from location
```

Data Output Explain Messages Notifications

	loans [N] character varying (10)	facno character varying (10)	locname character varying (30)
1	L100	F100	Locker room
2	L101	F100	Plaza
3	L102	F100	Vehicle gate
4	L103	F101	Locker room
5	L104	F100	Ticket Booth
6	L105	F101	Gate
7	L106	F100	Pedestrian gate