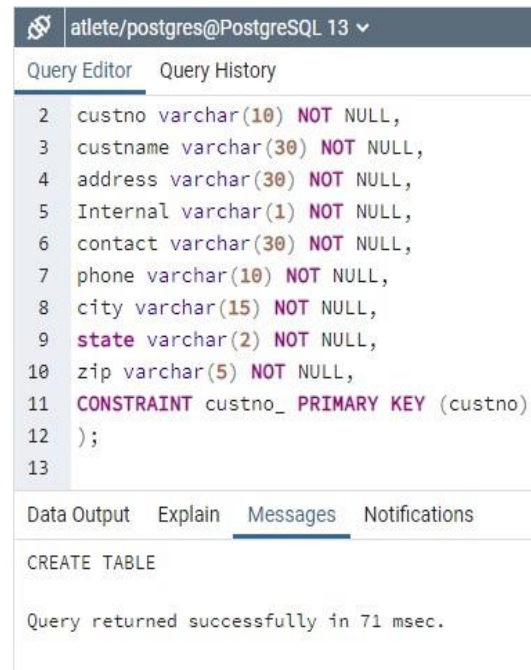


Nama : Dimas Ridian Supardi

NIM : 181402027

Matkul : Data Warehouse dan Bisnis Intelligence

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)  
);



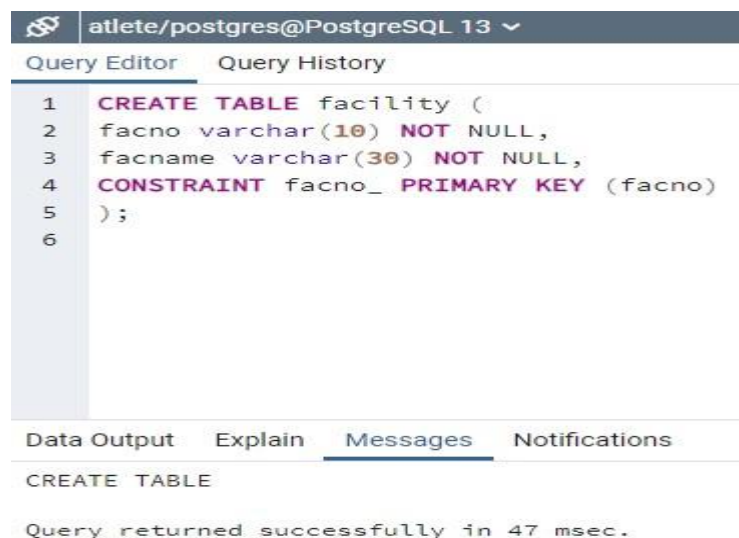
The screenshot shows the PostgreSQL Query Editor interface. The top bar indicates the user is 'atlete/postgres@PostgreSQL 13'. The 'Query Editor' tab is active, displaying the SQL query for creating the 'customer' table. The query is as follows:

```
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
```

Below the query editor, the 'Messages' tab is active, showing the message: 'Query returned successfully in 71 msec.'

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

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



The screenshot shows the PostgreSQL Query Editor interface. The top bar indicates the user is 'atlete/postgres@PostgreSQL 13'. The 'Query Editor' tab is active, displaying the SQL query for creating the 'facility' table. The query is as follows:

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

Below the query editor, the 'Messages' tab is active, showing the message: 'Query returned successfully in 47 msec.'

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

```

atlete/postgres@PostgreSQL 13
Query Editor  Query History
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

Data Output  Explain  Messages  Notifications
CREATE TABLE
Query returned successfully in 54 msec.

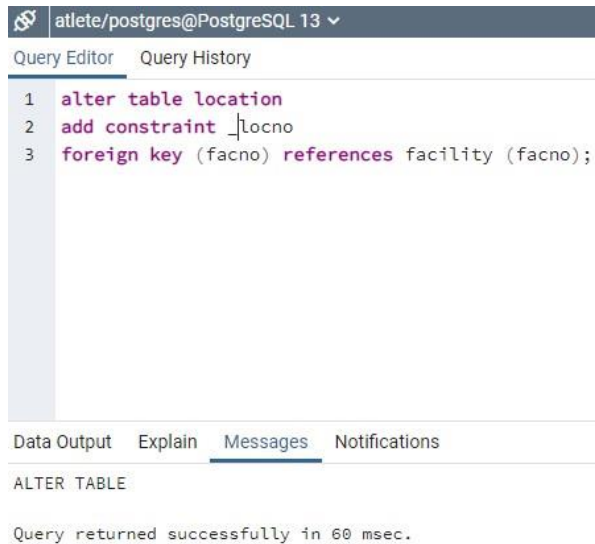
```

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

<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, yaitu tabel facility dengan tabel location yang dimana tabel 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 interface. At the top, the connection is 'atlete/postgres@PostgreSQL 13'. Below the connection bar are tabs for 'Query Editor' and 'Query History'. The 'Query Editor' tab is active, displaying a SQL query with three lines: '1 alter table location', '2 add constraint \_locno', and '3 foreign key (facno) references facility (facno);'. Below the query editor 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 60 msec.'

```
1 alter table location
2 add constraint _locno
3 foreign key (facno) references facility (facno);
```

ALTER TABLE

Query returned successfully in 60 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 'atlete/postgres@PostgreSQL 13'. Below the connection bar are tabs for 'Query Editor' and 'Query History'. The 'Query Editor' tab is active, displaying a SQL query with three lines: '1 alter table facility', '2 add constraint facilityname', and '3 unique (facname);'. Below the query editor 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

atlete/postgres@PostgreSQL 13

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 0 1

Query returned successfully in 51 msec.

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Query Editor Query History

```
1 select * from customer
```

Scratch Pad

Data Output Explain Messages Notifications

	custno	custname	address	internal	contact	phone	city	state
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 Softball	Box351200	Y	Sue Softball	5434321	Boulder	CO
5	C105	High School Football	123 AnyStreet	N	Coach Bob	4441234	Louisville	CO

## Pengisian Data Facility

atlete/postgres@PostgreSQL 13 ▾

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 0 1

Query returned successfully in 43 msec.

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atlete/postgres@PostgreSQL 13 ▾

Query Editor Query History

```
1 select * from facility
```

Scratch Pad

Data Output Explain Messages Notifications

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

Windows Taskbar: 17:56

## Pengisian Data Location

atlete/postgres@PostgreSQL 13 ▾

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.

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atlete/postgres@PostgreSQL 13 ▾

Query Editor   Query History   Scratch Pad

```
1 select * from location
```

Data Output   Explain   Messages   Notifications

locno	facno	locname
[PK] character varying (10)	character varying (10)	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