

TUGAS KELOMPOK BASIS DATA

**LAPORAN TAHAP I
IMPLEMENTASI BASIS DATA**



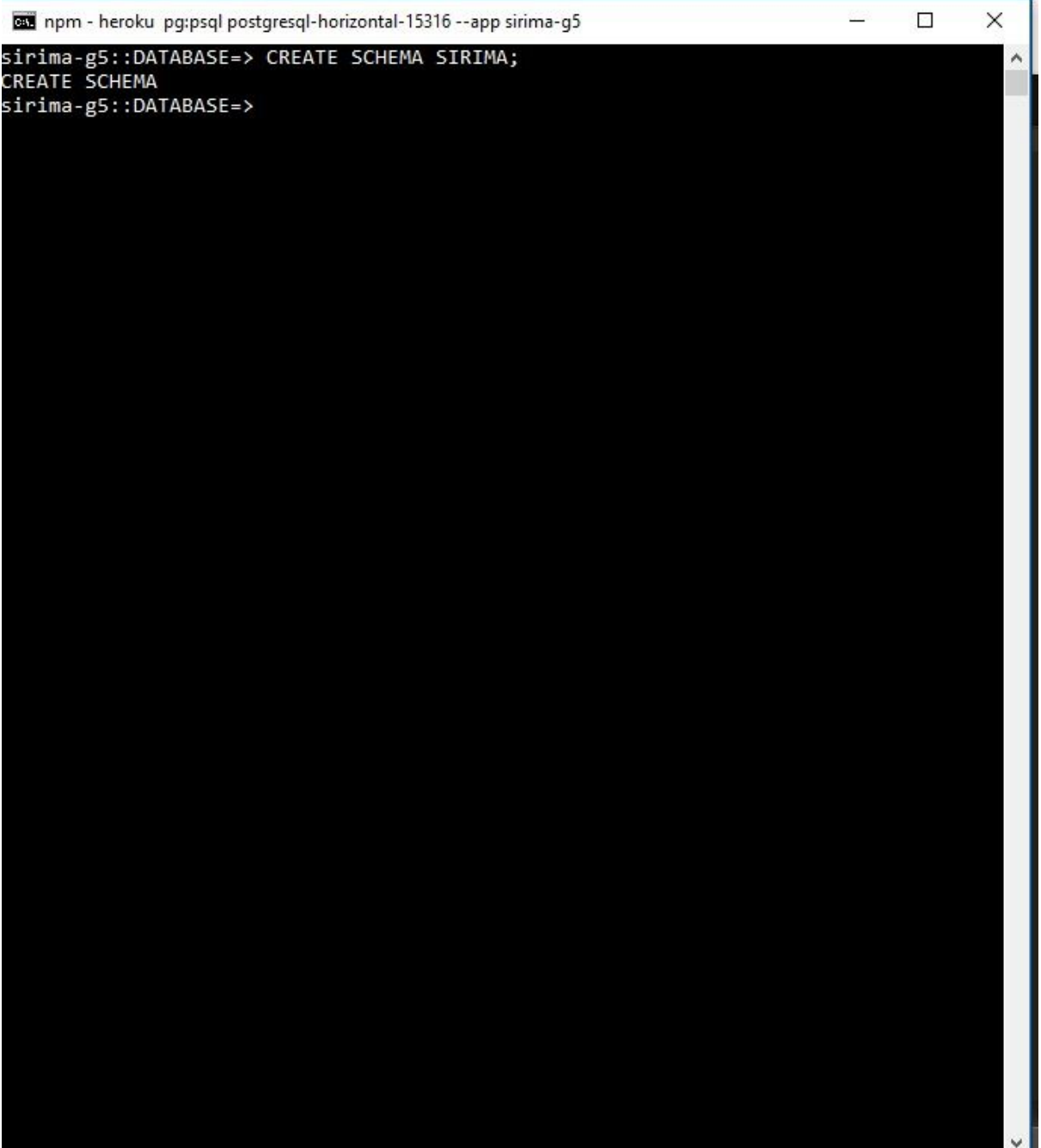
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| | |
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**Program Studi S1 Ekstensi Sistem Informasi
Fakultas Ilmu Komputer
Universitas Indonesia
2017**

A. DDL script table

CREATE SCHEMA SIRIMA;

A terminal window with a title bar that reads "npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5". The terminal has a black background with white text. The prompt "sirima-g5::DATABASE=>" is followed by the command "CREATE SCHEMA SIRIMA;". The next line shows the prompt "sirima-g5::DATABASE=>" again, indicating the command has been executed.

```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> CREATE SCHEMA SIRIMA;
CREATE SCHEMA
sirima-g5::DATABASE=>
```

SET search_path to SIRIMA;


```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> SET search_path to SIRIMA;
SET
sirima-g5::DATABASE=>
```

```
CREATE TABLE AKUN (  
  username VARCHAR(50) NOT NULL,  
  role BOOLEAN NOT NULL,  
  password VARCHAR(20) NOT NULL,  
  PRIMARY KEY (username)  
);
```



```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> CREATE TABLE AKUN (
sirima-g5::DATABASE(> username VARCHAR(50) NOT NULL,
sirima-g5::DATABASE(> role BOOLEAN NOT NULL,
sirima-g5::DATABASE(> password VARCHAR(20) NOT NULL,
sirima-g5::DATABASE(> PRIMARY KEY (username)
sirima-g5::DATABASE(> );
CREATE TABLE
sirima-g5::DATABASE=>
```

```
CREATE TABLE PERIODE_PENERIMAAN (
    nomor SMALLINT NOT NULL,
    tahun CHAR(4) NOT NULL,
    PRIMARY KEY (nomor, tahun)
);
```



```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> CREATE TABLE PERIODE_PENERIMAAN (
sirima-g5::DATABASE(> nomor SMALLINT NOT NULL,
sirima-g5::DATABASE(> tahun CHAR(4) NOT NULL,
sirima-g5::DATABASE(> PRIMARY KEY (nomor, tahun)
sirima-g5::DATABASE(> );
CREATE TABLE
sirima-g5::DATABASE=>
```

```
CREATE TABLE JENJANG (
    nama CHAR(2) NOT NULL,
    PRIMARY KEY (nama)
);
```

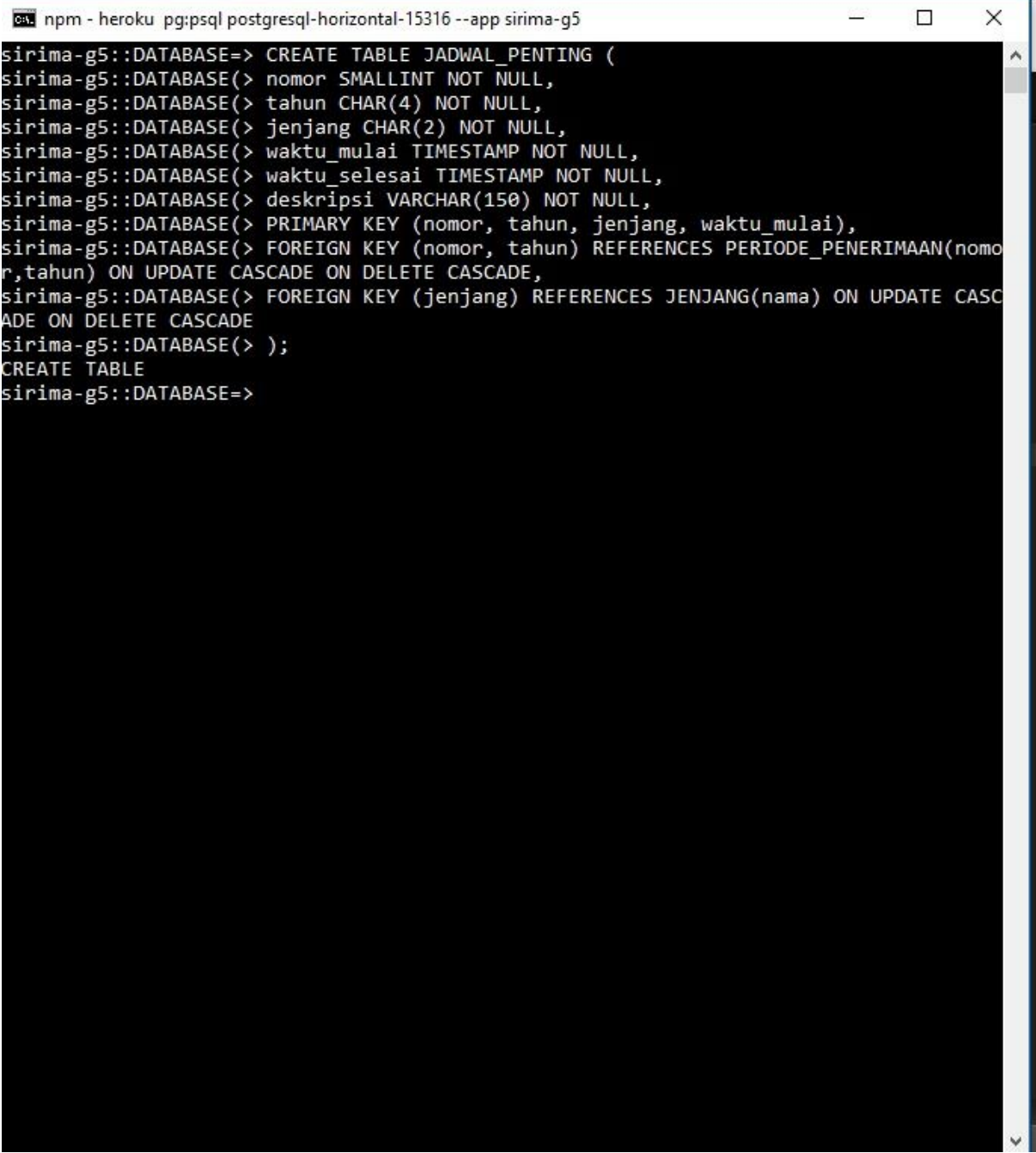


```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> CREATE TABLE JENJANG (
sirima-g5::DATABASE(> nama CHAR(2) NOT NULL,
sirima-g5::DATABASE(> PRIMARY KEY (nama)
sirima-g5::DATABASE(> );
CREATE TABLE
sirima-g5::DATABASE=>
```

```
CREATE TABLE JADWAL_PENTING (
    nomor SMALLINT NOT NULL,
    tahun CHAR(4) NOT NULL,
    jenjang CHAR(2) NOT NULL,
    waktu_mulai TIMESTAMP NOT NULL,
    waktu_selesai TIMESTAMP NOT NULL,
    deskripsi VARCHAR(150) NOT NULL,
    PRIMARY KEY (nomor, tahun, jenjang, waktu_mulai),
```


FOREIGN KEY (nomor, tahun) REFERENCES
PERIODE_PENERIMAAN(nomor, tahun) ON UPDATE CASCADE ON DELETE
CASCADE,

FOREIGN KEY (jenjang) REFERENCES JENJANG(nama) ON UPDATE
CASCADE ON DELETE CASCADE
);

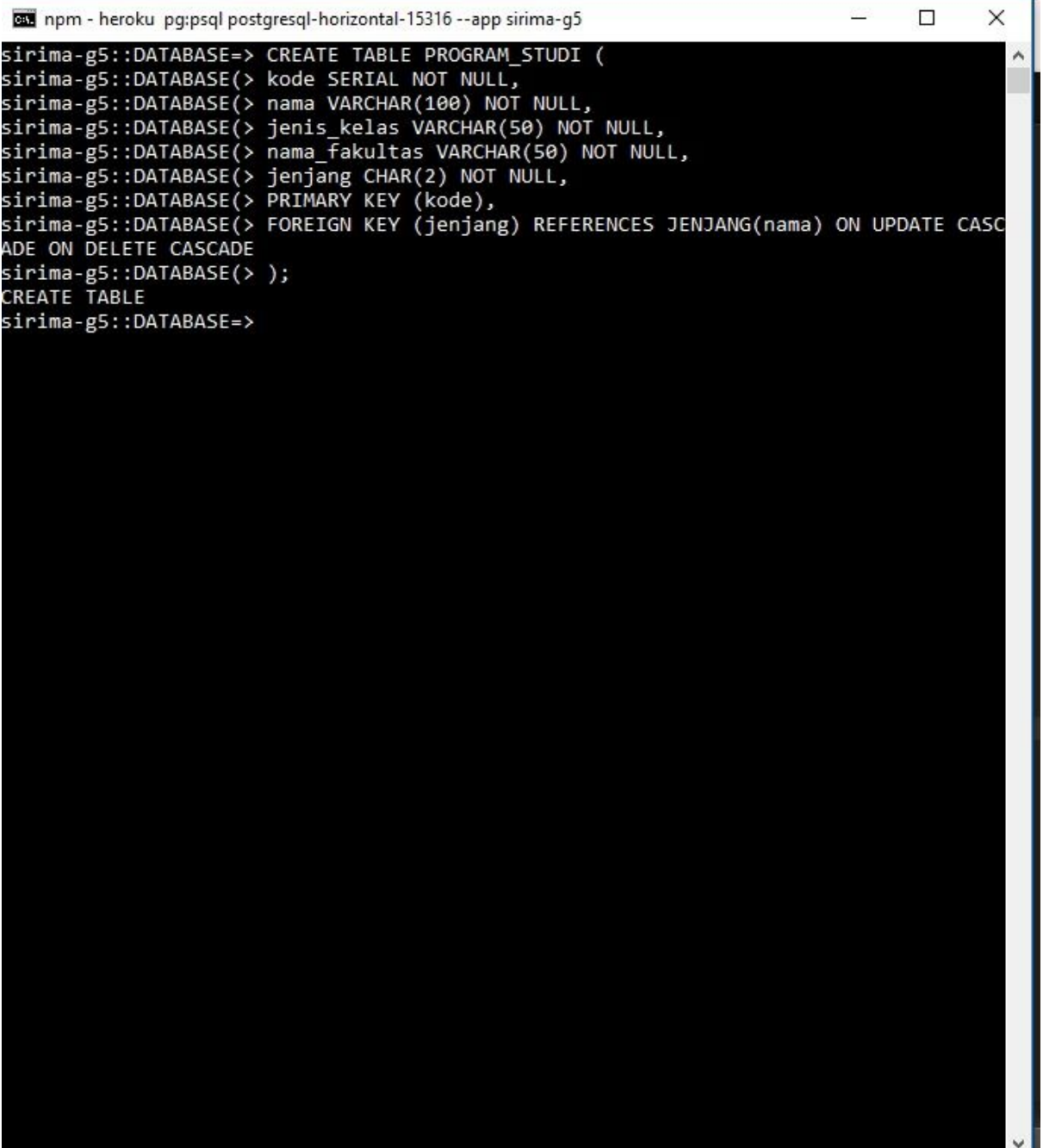


The screenshot shows a terminal window titled "npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5". The terminal displays the following commands and output:

```
sirima-g5::DATABASE=> CREATE TABLE JADWAL_PENTING (  
sirima-g5::DATABASE(> nomor SMALLINT NOT NULL,  
sirima-g5::DATABASE(> tahun CHAR(4) NOT NULL,  
sirima-g5::DATABASE(> jenjang CHAR(2) NOT NULL,  
sirima-g5::DATABASE(> waktu_mulai TIMESTAMP NOT NULL,  
sirima-g5::DATABASE(> waktu_selesai TIMESTAMP NOT NULL,  
sirima-g5::DATABASE(> deskripsi VARCHAR(150) NOT NULL,  
sirima-g5::DATABASE(> PRIMARY KEY (nomor, tahun, jenjang, waktu_mulai),  
sirima-g5::DATABASE(> FOREIGN KEY (nomor, tahun) REFERENCES PERIODE_PENERIMAAN(nom  
r,tahun) ON UPDATE CASCADE ON DELETE CASCADE,  
sirima-g5::DATABASE(> FOREIGN KEY (jenjang) REFERENCES JENJANG(nama) ON UPDATE CASC  
ADE ON DELETE CASCADE  
sirima-g5::DATABASE(> );  
CREATE TABLE  
sirima-g5::DATABASE=>
```

CREATE TABLE PROGRAM_STUDI (
kode SERIAL NOT NULL,
nama VARCHAR(100) NOT NULL,
jenis_kelas VARCHAR(50) NOT NULL,


```
nama_fakultas VARCHAR(50) NOT NULL,  
jenjang CHAR(2) NOT NULL,  
PRIMARY KEY (kode),  
FOREIGN KEY (jenjang) REFERENCES JENJANG(nama) ON UPDATE  
CASCADE ON DELETE CASCADE  
);
```

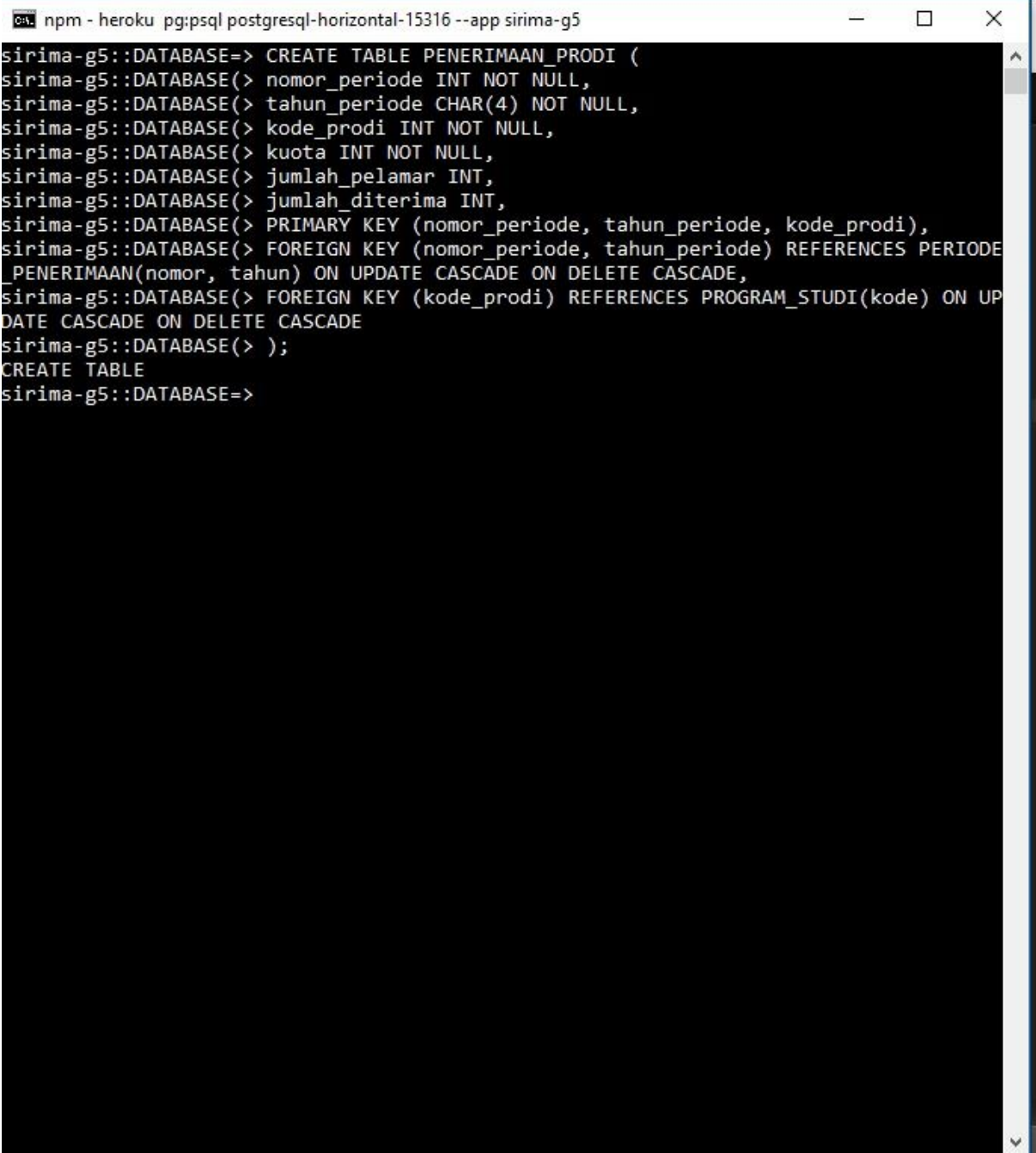
A terminal window titled 'npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5'. The terminal shows a series of PostgreSQL commands being entered at the 'sirima-g5::DATABASE=>' prompt. The commands are: 'CREATE TABLE PROGRAM_STUDI (' followed by several lines of column definitions: 'kode SERIAL NOT NULL,', 'nama VARCHAR(100) NOT NULL,', 'jenis_kelas VARCHAR(50) NOT NULL,', 'nama_fakultas VARCHAR(50) NOT NULL,', 'jenjang CHAR(2) NOT NULL,', 'PRIMARY KEY (kode),', and 'FOREIGN KEY (jenjang) REFERENCES JENJANG(nama) ON UPDATE CASCADE ON DELETE CASCADE'. The prompt then shows ');' and 'CREATE TABLE' on separate lines, followed by another 'sirima-g5::DATABASE=>' prompt.

```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5  
sirima-g5::DATABASE=> CREATE TABLE PROGRAM_STUDI (  
sirima-g5::DATABASE(> kode SERIAL NOT NULL,  
sirima-g5::DATABASE(> nama VARCHAR(100) NOT NULL,  
sirima-g5::DATABASE(> jenis_kelas VARCHAR(50) NOT NULL,  
sirima-g5::DATABASE(> nama_fakultas VARCHAR(50) NOT NULL,  
sirima-g5::DATABASE(> jenjang CHAR(2) NOT NULL,  
sirima-g5::DATABASE(> PRIMARY KEY (kode),  
sirima-g5::DATABASE(> FOREIGN KEY (jenjang) REFERENCES JENJANG(nama) ON UPDATE CASC  
ADE ON DELETE CASCADE  
sirima-g5::DATABASE(> );  
CREATE TABLE  
sirima-g5::DATABASE=>
```

```
CREATE TABLE PENERIMAAN_PRODI (  
  nomor_periode INT NOT NULL,  
  tahun_periode CHAR(4) NOT NULL,  
  kode_prodi INT NOT NULL,
```



```
    kuota INT NOT NULL,  
    jumlah_pelamar INT,  
    jumlah_diterima INT,  
    PRIMARY KEY (nomor_periode, tahun_periode, kode_prodi),  
    FOREIGN KEY (nomor_periode, tahun_periode) REFERENCES  
PERIODE_PENERIMAAN(nomor, tahun) ON UPDATE CASCADE ON DELETE  
CASCADE,  
    FOREIGN KEY (kode_prodi) REFERENCES PROGRAM_STUDI(kode) ON  
UPDATE CASCADE ON DELETE CASCADE  
);
```



The screenshot shows a terminal window with the title bar "npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5". The terminal content shows the execution of SQL commands to create a table named PENERIMAAN_PRODI. The commands are entered line by line, and the prompt "sirima-g5::DATABASE=>" is visible at the start of each line. The commands are: CREATE TABLE PENERIMAAN_PRODI (, nomor_periode INT NOT NULL, tahun_periode CHAR(4) NOT NULL, kode_prodi INT NOT NULL, kuota INT NOT NULL, jumlah_pelamar INT, jumlah_diterima INT, PRIMARY KEY (nomor_periode, tahun_periode, kode_prodi), FOREIGN KEY (nomor_periode, tahun_periode) REFERENCES PERIODE_PENERIMAAN(nomor, tahun) ON UPDATE CASCADE ON DELETE CASCADE, FOREIGN KEY (kode_prodi) REFERENCES PROGRAM_STUDI(kode) ON UPDATE CASCADE ON DELETE CASCADE, and a closing parenthesis and semicolon. The prompt "sirima-g5::DATABASE=>" is visible at the end of the last line.

```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5  
sirima-g5::DATABASE=> CREATE TABLE PENERIMAAN_PRODI (  
sirima-g5::DATABASE(> nomor_periode INT NOT NULL,  
sirima-g5::DATABASE(> tahun_periode CHAR(4) NOT NULL,  
sirima-g5::DATABASE(> kode_prodi INT NOT NULL,  
sirima-g5::DATABASE(> kuota INT NOT NULL,  
sirima-g5::DATABASE(> jumlah_pelamar INT,  
sirima-g5::DATABASE(> jumlah_diterima INT,  
sirima-g5::DATABASE(> PRIMARY KEY (nomor_periode, tahun_periode, kode_prodi),  
sirima-g5::DATABASE(> FOREIGN KEY (nomor_periode, tahun_periode) REFERENCES PERIODE  
_PENERIMAAN(nomor, tahun) ON UPDATE CASCADE ON DELETE CASCADE,  
sirima-g5::DATABASE(> FOREIGN KEY (kode_prodi) REFERENCES PROGRAM_STUDI(kode) ON UP  
DATE CASCADE ON DELETE CASCADE  
sirima-g5::DATABASE(> );  
CREATE TABLE  
sirima-g5::DATABASE=>
```



```
CREATE TABLE PELAMAR (  
    username VARCHAR(50) NOT NULL,  
    nama_lengkap VARCHAR(100) NOT NULL,  
    alamat TEXT NOT NULL,  
    jenis_kelamin CHAR(1) NOT NULL,  
    tanggal_lahir DATE NOT NULL,  
    no_ktp CHAR(16) NOT NULL,  
    email VARCHAR(100) UNIQUE NOT NULL,  
    PRIMARY KEY (username),  
    FOREIGN KEY (username) REFERENCES AKUN(username) ON UPDATE  
    CASCADE ON DELETE CASCADE  
);
```



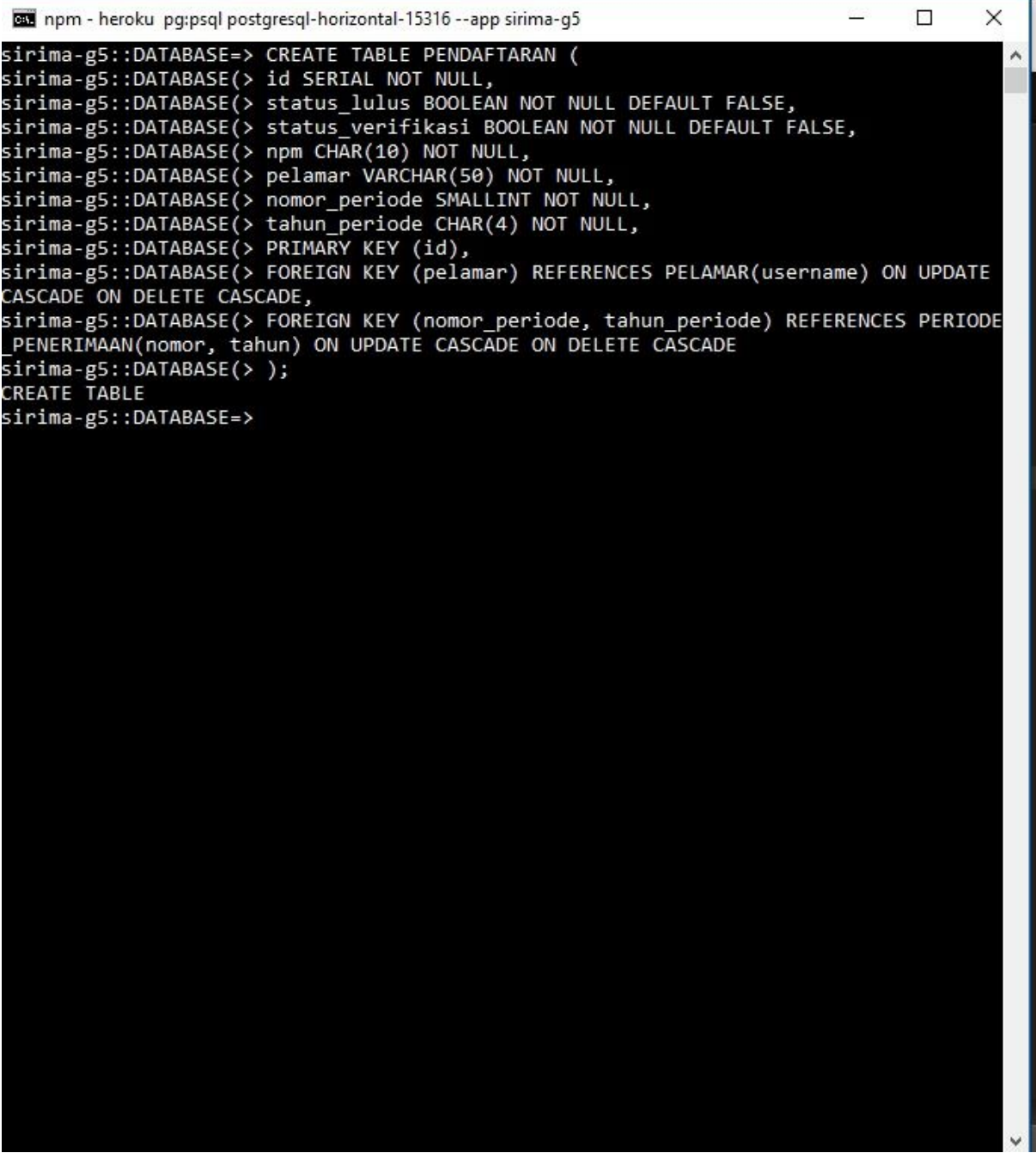
```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> CREATE TABLE PELAMAR (
sirima-g5::DATABASE(> username VARCHAR(50) NOT NULL,
sirima-g5::DATABASE(> nama_lengkap VARCHAR(100) NOT NULL,
sirima-g5::DATABASE(> alamat TEXT NOT NULL,
sirima-g5::DATABASE(> jenis_kelamin CHAR(1) NOT NULL,
sirima-g5::DATABASE(> tanggal_lahir DATE NOT NULL,
sirima-g5::DATABASE(> no_ktp CHAR(16) NOT NULL,
sirima-g5::DATABASE(> email VARCHAR(100) UNIQUE NOT NULL,
sirima-g5::DATABASE(> PRIMARY KEY (username),
sirima-g5::DATABASE(> FOREIGN KEY (username) REFERENCES AKUN(username) ON UPDATE CA
SCADE ON DELETE CASCADE
sirima-g5::DATABASE(> );
CREATE TABLE
sirima-g5::DATABASE=>
```

```
CREATE TABLE PENDAFTARAN (
  id SERIAL NOT NULL,
  status_lulus BOOLEAN NOT NULL DEFAULT FALSE,
  status_verifikasi BOOLEAN NOT NULL DEFAULT FALSE,
  npm CHAR(10) NOT NULL,
  pelamar VARCHAR(50) NOT NULL,
  nomor_periode SMALLINT NOT NULL,
  tahun_periode CHAR(4) NOT NULL,
  PRIMARY KEY (id),
```


FOREIGN KEY (pelamar) REFERENCES PELAMAR(username) ON UPDATE CASCADE ON DELETE CASCADE,

FOREIGN KEY (nomor_periode, tahun_periode) REFERENCES PERIODE_PENERIMAAN(nomor, tahun) ON UPDATE CASCADE ON DELETE CASCADE

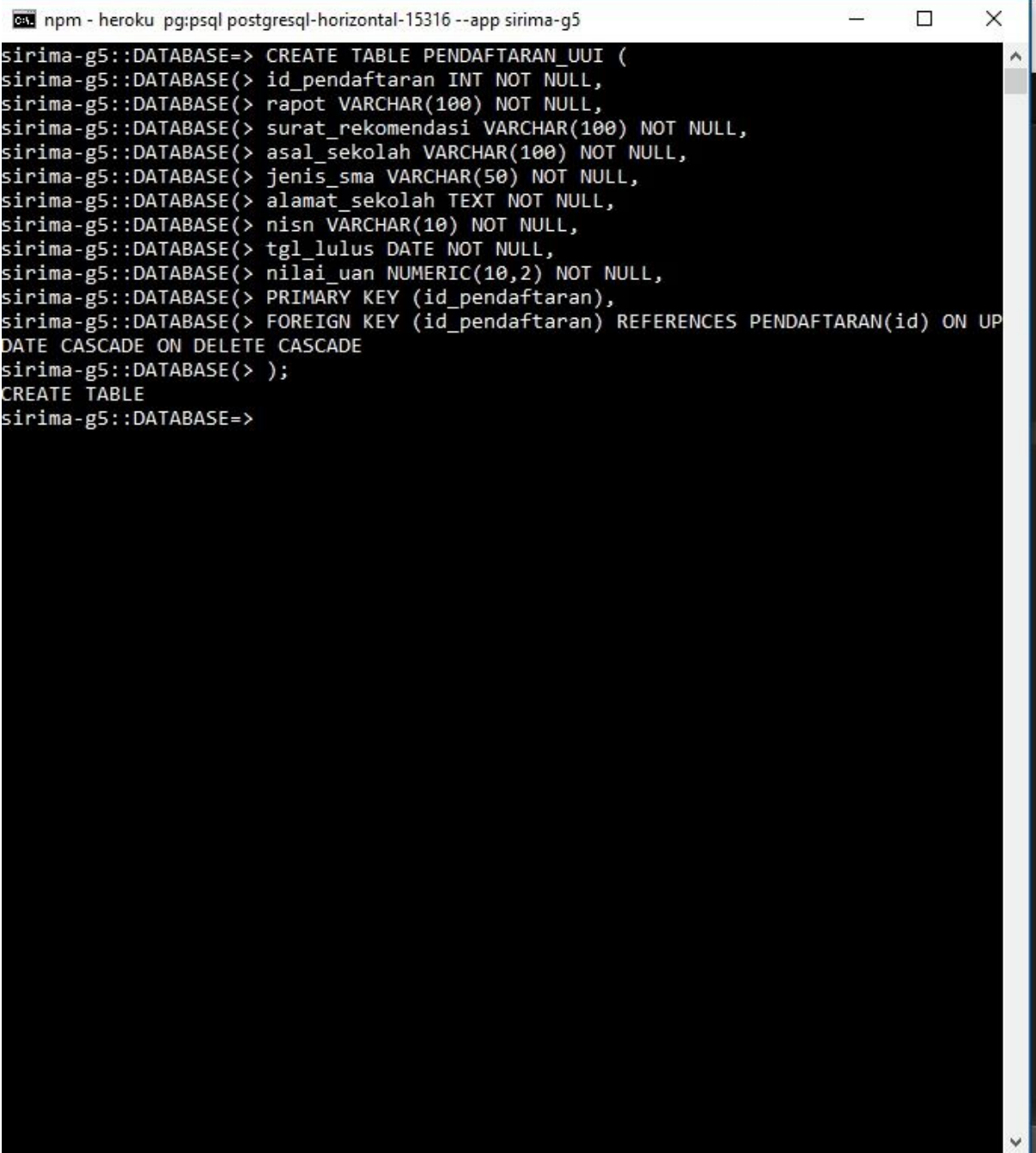
);

A screenshot of a terminal window titled "npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5". The terminal shows a series of SQL commands being entered into a PostgreSQL database. The commands create a table named "PENDAFTARAN" with columns: "id" (SERIAL NOT NULL), "status_lulus" (BOOLEAN NOT NULL DEFAULT FALSE), "status_verifikasi" (BOOLEAN NOT NULL DEFAULT FALSE), "npm" (CHAR(10) NOT NULL), "pelamar" (VARCHAR(50) NOT NULL), "nomor_periode" (SMALLINT NOT NULL), and "tahun_periode" (CHAR(4) NOT NULL). It also sets "id" as the primary key and adds two foreign key constraints: one for "pelamar" referencing "PELAMAR(username)" and another for "nomor_periode, tahun_periode" referencing "PERIODE_PENERIMAAN(nomor, tahun)". The terminal ends with "CREATE TABLE" and "sirima-g5::DATABASE=>".

```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> CREATE TABLE PENDAFTARAN (
sirima-g5::DATABASE(> id SERIAL NOT NULL,
sirima-g5::DATABASE(> status_lulus BOOLEAN NOT NULL DEFAULT FALSE,
sirima-g5::DATABASE(> status_verifikasi BOOLEAN NOT NULL DEFAULT FALSE,
sirima-g5::DATABASE(> npm CHAR(10) NOT NULL,
sirima-g5::DATABASE(> pelamar VARCHAR(50) NOT NULL,
sirima-g5::DATABASE(> nomor_periode SMALLINT NOT NULL,
sirima-g5::DATABASE(> tahun_periode CHAR(4) NOT NULL,
sirima-g5::DATABASE(> PRIMARY KEY (id),
sirima-g5::DATABASE(> FOREIGN KEY (pelamar) REFERENCES PELAMAR(username) ON UPDATE
CASCADE ON DELETE CASCADE,
sirima-g5::DATABASE(> FOREIGN KEY (nomor_periode, tahun_periode) REFERENCES PERIODE
_PENERIMAAN(nomor, tahun) ON UPDATE CASCADE ON DELETE CASCADE
sirima-g5::DATABASE(> );
CREATE TABLE
sirima-g5::DATABASE=>
```

CREATE TABLE PENDAFTARAN_UII (
id_pendaftaran INT NOT NULL,
rapot VARCHAR(100) NOT NULL,
surat_rekomendasi VARCHAR(100) NOT NULL,

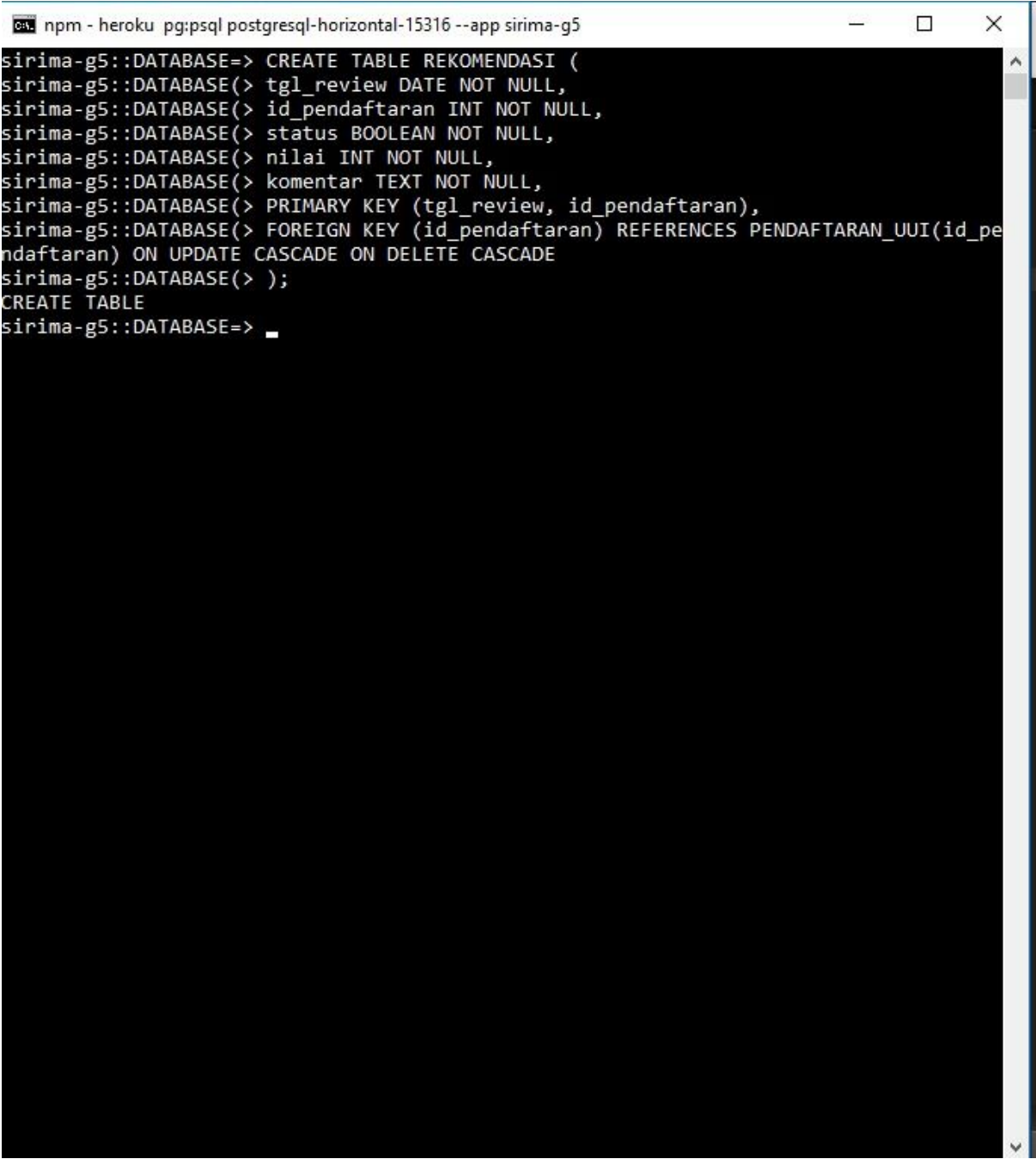

```
asal_sekolah VARCHAR(100) NOT NULL,  
jenis_sma VARCHAR(50) NOT NULL,  
alamat_sekolah TEXT NOT NULL,  
nisd VARCHAR(10) NOT NULL,  
tgl_lulus DATE NOT NULL,  
nilai_uan NUMERIC(10,2) NOT NULL,  
PRIMARY KEY (id_pendaftaran),  
FOREIGN KEY (id_pendaftaran) REFERENCES PENDAFTARAN(id) ON  
UPDATE CASCADE ON DELETE CASCADE  
);
```



```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5  
sirima-g5::DATABASE=> CREATE TABLE PENDAFTARAN_UUI (  
sirima-g5::DATABASE(> id_pendaftaran INT NOT NULL,  
sirima-g5::DATABASE(> rapot VARCHAR(100) NOT NULL,  
sirima-g5::DATABASE(> surat_rekomendasi VARCHAR(100) NOT NULL,  
sirima-g5::DATABASE(> asal_sekolah VARCHAR(100) NOT NULL,  
sirima-g5::DATABASE(> jenis_sma VARCHAR(50) NOT NULL,  
sirima-g5::DATABASE(> alamat_sekolah TEXT NOT NULL,  
sirima-g5::DATABASE(> nisd VARCHAR(10) NOT NULL,  
sirima-g5::DATABASE(> tgl_lulus DATE NOT NULL,  
sirima-g5::DATABASE(> nilai_uan NUMERIC(10,2) NOT NULL,  
sirima-g5::DATABASE(> PRIMARY KEY (id_pendaftaran),  
sirima-g5::DATABASE(> FOREIGN KEY (id_pendaftaran) REFERENCES PENDAFTARAN(id) ON UP  
DATE CASCADE ON DELETE CASCADE  
sirima-g5::DATABASE(> );  
CREATE TABLE  
sirima-g5::DATABASE=>
```



```
CREATE TABLE REKOMENDASI (  
    tgl_review DATE NOT NULL,  
    id_pendaftaran INT NOT NULL,  
    status BOOLEAN NOT NULL,  
    nilai INT NOT NULL,  
    komentar TEXT NOT NULL,  
    PRIMARY KEY (tgl_review, id_pendaftaran),  
    FOREIGN KEY (id_pendaftaran) REFERENCES  
PENDAFTARAN_UUI(id_pendaftaran) ON UPDATE CASCADE ON DELETE  
CASCADE  
);
```



The screenshot shows a terminal window with the title bar "npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5". The terminal content shows the execution of a SQL command to create a table named REKOMENDASI. The command is entered line by line, and the prompt "sirima-g5::DATABASE=>" is visible at the start of each line. The command is: `CREATE TABLE REKOMENDASI (
 tgl_review DATE NOT NULL,
 id_pendaftaran INT NOT NULL,
 status BOOLEAN NOT NULL,
 nilai INT NOT NULL,
 komentar TEXT NOT NULL,
 PRIMARY KEY (tgl_review, id_pendaftaran),
 FOREIGN KEY (id_pendaftaran) REFERENCES PENDAFTARAN_UUI(id_pendaftaran) ON UPDATE CASCADE ON DELETE CASCADE
);`. The prompt "sirima-g5::DATABASE=>" is followed by a cursor character (a small horizontal line) on the last line.

```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5  
sirima-g5::DATABASE=> CREATE TABLE REKOMENDASI (  
sirima-g5::DATABASE(> tgl_review DATE NOT NULL,  
sirima-g5::DATABASE(> id_pendaftaran INT NOT NULL,  
sirima-g5::DATABASE(> status BOOLEAN NOT NULL,  
sirima-g5::DATABASE(> nilai INT NOT NULL,  
sirima-g5::DATABASE(> komentar TEXT NOT NULL,  
sirima-g5::DATABASE(> PRIMARY KEY (tgl_review, id_pendaftaran),  
sirima-g5::DATABASE(> FOREIGN KEY (id_pendaftaran) REFERENCES PENDAFTARAN_UUI(id_pendaftaran) ON UPDATE CASCADE ON DELETE CASCADE  
sirima-g5::DATABASE(> );  
CREATE TABLE  
sirima-g5::DATABASE=> _
```



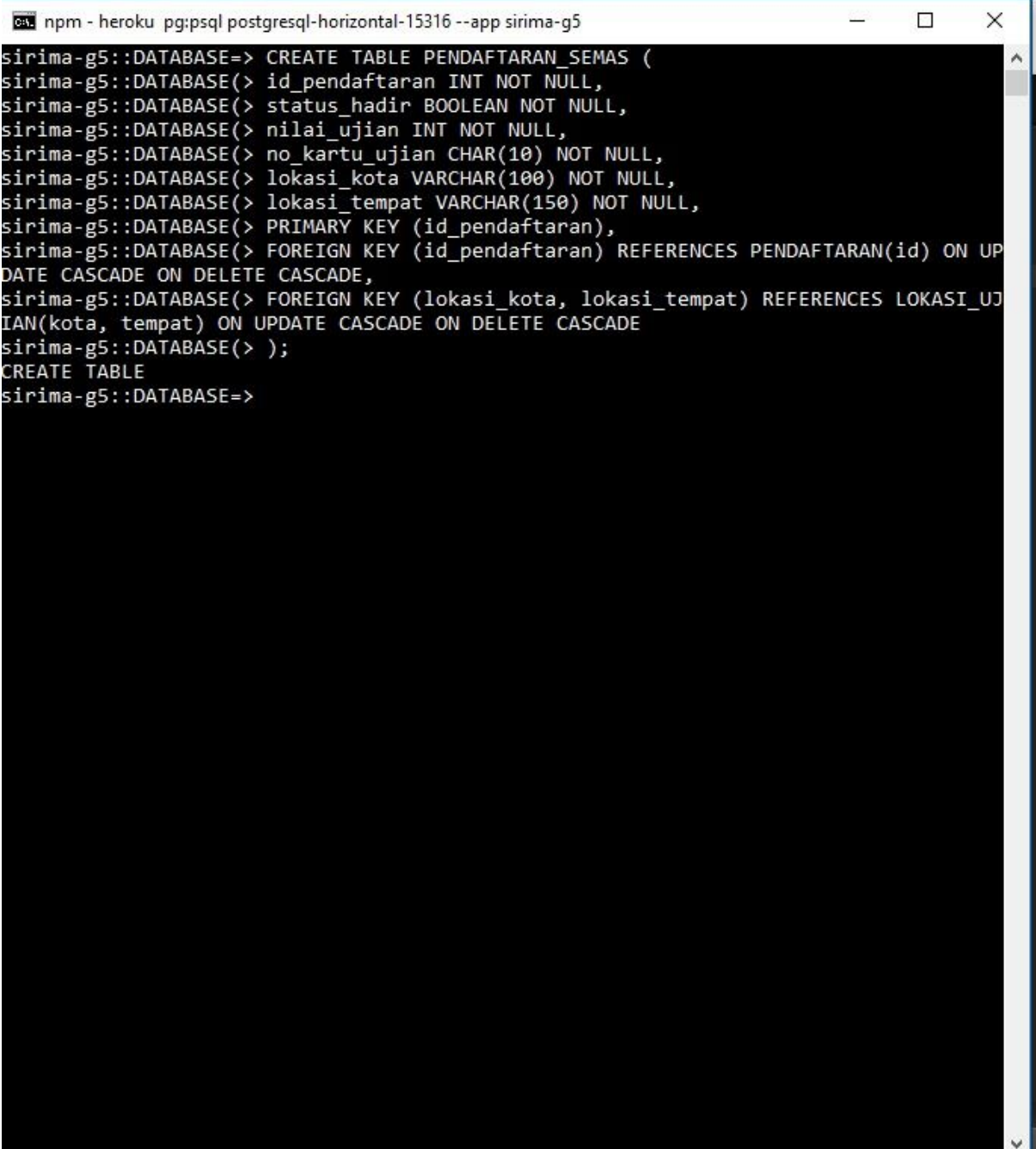
```
CREATE TABLE LOKASI_UJIAN (  
    kota VARCHAR(100) NOT NULL,  
    tempat VARCHAR(150) NOT NULL,  
    nomor_periode SMALLINT NOT NULL,  
    tahun_periode CHAR(4) NOT NULL,  
    jenjang CHAR(2) NOT NULL,  
    waktu_awal TIMESTAMP NOT NULL,  
    PRIMARY KEY (kota, tempat),  
    FOREIGN KEY (nomor_periode, tahun_periode, jenjang, waktu_awal)  
REFERENCES JADWAL_PENTING(nomor, tahun, jenjang, waktu_mulai) ON  
UPDATE CASCADE ON DELETE CASCADE  
);
```



```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> CREATE TABLE LOKASI_UJIAN (
sirima-g5::DATABASE(> kota VARCHAR(100) NOT NULL,
sirima-g5::DATABASE(> tempat VARCHAR(150) NOT NULL,
sirima-g5::DATABASE(> nomor_periode SMALLINT NOT NULL,
sirima-g5::DATABASE(> tahun_periode CHAR(4) NOT NULL,
sirima-g5::DATABASE(> jenjang CHAR(2) NOT NULL,
sirima-g5::DATABASE(> waktu_awal TIMESTAMP NOT NULL,
sirima-g5::DATABASE(> PRIMARY KEY (kota, tempat),
sirima-g5::DATABASE(> FOREIGN KEY (nomor_periode, tahun_periode, jenjang, waktu_awa
1) REFERENCES JADWAL_PENTING(nomor, tahun, jenjang, waktu_mulai) ON UPDATE CASCADE
ON DELETE CASCADE
sirima-g5::DATABASE(> );
CREATE TABLE
sirima-g5::DATABASE=>
```

```
CREATE TABLE PENDAFTARAN_SEMAS (
    id_pendaftaran INT NOT NULL,
    status_hadir BOOLEAN NOT NULL,
    nilai_ujian INT NOT NULL,
    no_kartu_ujian CHAR(10) NOT NULL,
    lokasi_kota VARCHAR(100) NOT NULL,
    lokasi_tempat VARCHAR(150) NOT NULL,
    PRIMARY KEY (id_pendaftaran),
    FOREIGN KEY (id_pendaftaran) REFERENCES PENDAFTARAN(id) ON
UPDATE CASCADE ON DELETE CASCADE,
```

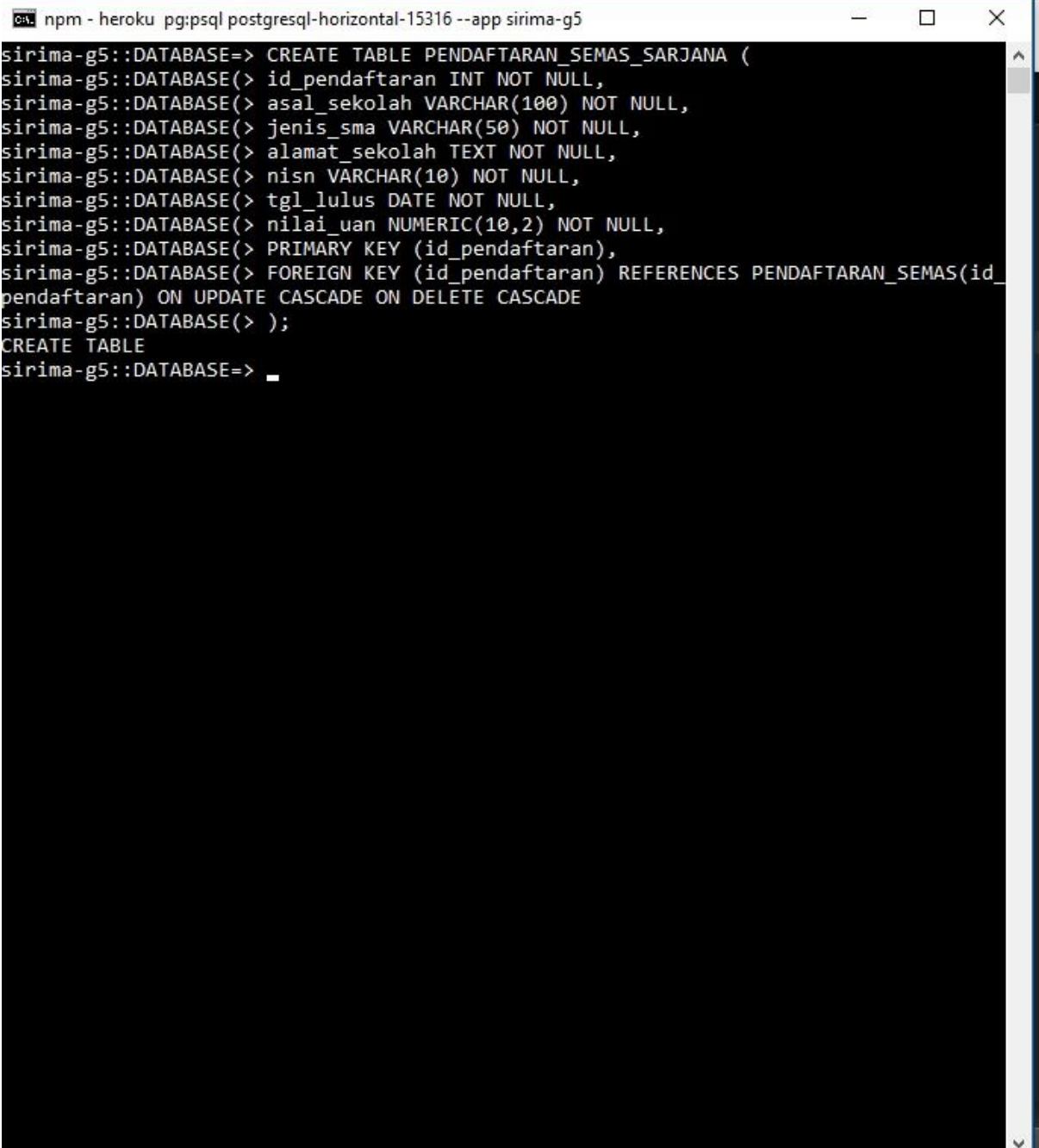

FOREIGN KEY (lokasi_kota, lokasi_tempat) REFERENCES
LOKASI_UJIAN(kota, tempat) ON UPDATE CASCADE ON DELETE CASCADE
);

A screenshot of a terminal window with a dark background. The title bar at the top reads "npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5". The terminal shows a series of PostgreSQL commands being entered and executed. The commands create a table named Pendaftaran_Semas with various columns and constraints, including a primary key and a foreign key. The prompt "sirima-g5::DATABASE=>" is visible at the start of each line.

```
sirima-g5::DATABASE=> CREATE TABLE PENDAFTARAN_SEMAS (  
sirima-g5::DATABASE(> id_pendaftaran INT NOT NULL,  
sirima-g5::DATABASE(> status_hadir BOOLEAN NOT NULL,  
sirima-g5::DATABASE(> nilai_ujian INT NOT NULL,  
sirima-g5::DATABASE(> no_kartu_ujian CHAR(10) NOT NULL,  
sirima-g5::DATABASE(> lokasi_kota VARCHAR(100) NOT NULL,  
sirima-g5::DATABASE(> lokasi_tempat VARCHAR(150) NOT NULL,  
sirima-g5::DATABASE(> PRIMARY KEY (id_pendaftaran),  
sirima-g5::DATABASE(> FOREIGN KEY (id_pendaftaran) REFERENCES PENDAFTARAN(id) ON UP  
DATE CASCADE ON DELETE CASCADE,  
sirima-g5::DATABASE(> FOREIGN KEY (lokasi_kota, lokasi_tempat) REFERENCES LOKASI_UJ  
IAN(kota, tempat) ON UPDATE CASCADE ON DELETE CASCADE  
sirima-g5::DATABASE(> );  
CREATE TABLE  
sirima-g5::DATABASE=>
```

CREATE TABLE PENDAFTARAN_SEMAS_SARJANA (
id_pendaftaran INT NOT NULL,
asal_sekolah VARCHAR(100) NOT NULL,
jenis_sma VARCHAR(50) NOT NULL,
alamat_sekolah TEXT NOT NULL,
nisl VARCHAR(10) NOT NULL,
tgl_lulus DATE NOT NULL,


```
    nilai_uan NUMERIC(10,2) NOT NULL,  
    PRIMARY KEY (id_pendaftaran),  
    FOREIGN KEY (id_pendaftaran) REFERENCES  
PENDAFTARAN_SEMAS(id_pendaftaran) ON UPDATE CASCADE ON DELETE  
CASCADE  
);
```



The screenshot shows a terminal window titled "npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5". The terminal displays the following SQL commands and their output:

```
sirima-g5::DATABASE=> CREATE TABLE PENDAFTARAN_SEMAS_SARJANA (  
sirima-g5::DATABASE(> id_pendaftaran INT NOT NULL,  
sirima-g5::DATABASE(> asal_sekolah VARCHAR(100) NOT NULL,  
sirima-g5::DATABASE(> jenis_sma VARCHAR(50) NOT NULL,  
sirima-g5::DATABASE(> alamat_sekolah TEXT NOT NULL,  
sirima-g5::DATABASE(> nisan VARCHAR(10) NOT NULL,  
sirima-g5::DATABASE(> tgl_lulus DATE NOT NULL,  
sirima-g5::DATABASE(> nilai_uan NUMERIC(10,2) NOT NULL,  
sirima-g5::DATABASE(> PRIMARY KEY (id_pendaftaran),  
sirima-g5::DATABASE(> FOREIGN KEY (id_pendaftaran) REFERENCES PENDAFTARAN_SEMAS(id_  
pendaftaran) ON UPDATE CASCADE ON DELETE CASCADE  
sirima-g5::DATABASE(> );  
CREATE TABLE  
sirima-g5::DATABASE=> _
```

```
CREATE TABLE PENDAFTARAN_SEMAS_PASCASARJANA (  
    id_pendaftaran INT NOT NULL,  
    nilai_tpa INT NOT NULL,  
    nilai_toefl INT NOT NULL,
```



```
jenjang_terakhir CHAR(2) NOT NULL,  
asal_univ VARCHAR(100) NOT NULL,  
alamat_univ TEXT NOT NULL,  
prodi_terakhir VARCHAR(10) NOT NULL,  
nilai_ipk NUMERIC(10,2) NOT NULL,  
no_ijazah VARCHAR(50) NOT NULL,  
tgl_lulus DATE NOT NULL,  
jenjang CHAR(2) NOT NULL,  
nama_rekomender VARCHAR(100),  
prop_penelitian VARCHAR(100),  
PRIMARY KEY (id_pendaftaran),  
FOREIGN KEY (id_pendaftaran) REFERENCES  
PENDAFTARAN_SEMAS(id_pendaftaran) ON UPDATE CASCADE ON DELETE  
CASCADE,  
FOREIGN KEY (jenjang_terakhir) REFERENCES JENJANG(nama) ON  
UPDATE CASCADE ON DELETE CASCADE,  
FOREIGN KEY (jenjang) REFERENCES JENJANG(nama) ON UPDATE  
CASCADE ON DELETE CASCADE  
);
```



```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> CREATE TABLE PENDAFTARAN_SEMAS_PASCASARJANA (
sirima-g5::DATABASE(> id_pendaftaran INT NOT NULL,
sirima-g5::DATABASE(> nilai_tpa INT NOT NULL,
sirima-g5::DATABASE(> nilai_toefl INT NOT NULL,
sirima-g5::DATABASE(> jenjang_terakhir CHAR(2) NOT NULL,
sirima-g5::DATABASE(> asal_univ VARCHAR(100) NOT NULL,
sirima-g5::DATABASE(> alamat_univ TEXT NOT NULL,
sirima-g5::DATABASE(> prodi_terakhir VARCHAR(100) NOT NULL,
sirima-g5::DATABASE(> nilai_ipk NUMERIC(10,2) NOT NULL,
sirima-g5::DATABASE(> no_ijazah VARCHAR(50) NOT NULL,
sirima-g5::DATABASE(> tgl_lulus DATE NOT NULL,
sirima-g5::DATABASE(> jenjang CHAR(2) NOT NULL,
sirima-g5::DATABASE(> nama_rekomender VARCHAR(100),
sirima-g5::DATABASE(> prop_penelitian VARCHAR(100),
sirima-g5::DATABASE(> PRIMARY KEY (id_pendaftaran),
sirima-g5::DATABASE(> FOREIGN KEY (id_pendaftaran) REFERENCES PENDAFTARAN_SEMAS(id_
pendaftaran) ON UPDATE CASCADE ON DELETE CASCADE,
sirima-g5::DATABASE(> FOREIGN KEY (jenjang_terakhir) REFERENCES JENJANG(nama) ON UP
DATE CASCADE ON DELETE CASCADE,
sirima-g5::DATABASE(> FOREIGN KEY (jenjang) REFERENCES JENJANG(nama) ON UPDATE CASC
ADE ON DELETE CASCADE
sirima-g5::DATABASE(> );
CREATE TABLE
sirima-g5::DATABASE=>
```

```
CREATE TABLE PEMBAYARAN (
    id SERIAL NOT NULL,
    waktu_bayar TIMESTAMP NOT NULL,
    jumlah_bayar NUMERIC(10,2) NOT NULL,
    id_pendaftaran INT NOT NULL,
    PRIMARY KEY (id),
    FOREIGN KEY (id_pendaftaran) REFERENCES
PENDAFTARAN_SEMAS(id_pendaftaran) ON UPDATE CASCADE ON DELETE
CASCADE
);
```



```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> CREATE TABLE PEMBAYARAN (
sirima-g5::DATABASE(> id SERIAL NOT NULL,
sirima-g5::DATABASE(> waktu_bayar TIMESTAMP NOT NULL,
sirima-g5::DATABASE(> jumlah_bayar NUMERIC(10,2) NOT NULL,
sirima-g5::DATABASE(> id_pendaftaran INT NOT NULL,
sirima-g5::DATABASE(> PRIMARY KEY (id),
sirima-g5::DATABASE(> FOREIGN KEY (id_pendaftaran) REFERENCES PENDAFTARAN_SEMAS(id_
pendaftaran) ON UPDATE CASCADE ON DELETE CASCADE
sirima-g5::DATABASE(> );
CREATE TABLE
sirima-g5::DATABASE=>
```

```
CREATE TABLE RUANG_UJIAN (
    kota VARCHAR(100) NOT NULL,
    tempat VARCHAR(150) NOT NULL,
    id SMALLINT NOT NULL,
    PRIMARY KEY (kota, tempat, id),
    FOREIGN KEY (kota, tempat) REFERENCES LOKASI_UJIAN(kota, tempat)
ON UPDATE CASCADE ON DELETE CASCADE
);
```

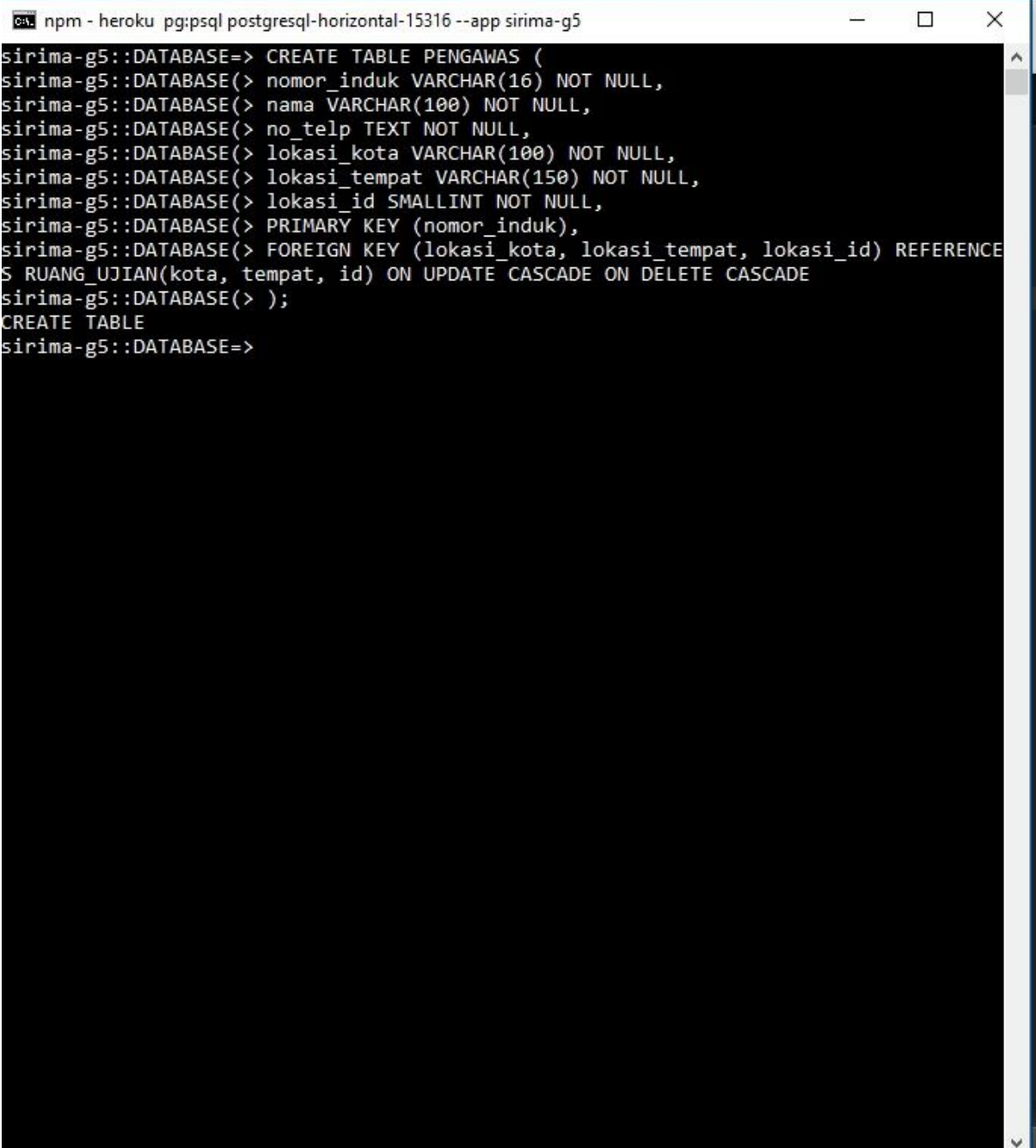


```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> CREATE TABLE RUANG_UJIAN (
sirima-g5::DATABASE(> kota VARCHAR(100) NOT NULL,
sirima-g5::DATABASE(> tempat VARCHAR(150) NOT NULL,
sirima-g5::DATABASE(> id SMALLINT NOT NULL,
sirima-g5::DATABASE(> PRIMARY KEY (kota, tempat, id),
sirima-g5::DATABASE(> FOREIGN KEY (kota, tempat) REFERENCES LOKASI_UJIAN(kota, temp
at) ON UPDATE CASCADE ON DELETE CASCADE
sirima-g5::DATABASE(> );
CREATE TABLE
sirima-g5::DATABASE=>
```

```
CREATE TABLE PENGAWAS (
    nomor_induk VARCHAR(16) NOT NULL,
    nama VARCHAR(100) NOT NULL,
    no_telp TEXT NOT NULL,
    lokasi_kota VARCHAR(100) NOT NULL,
    lokasi_tempat VARCHAR(150) NOT NULL,
    lokasi_id SMALLINT NOT NULL,
    PRIMARY KEY (nomor_induk),
```



```
FOREIGN KEY (lokasi_kota, lokasi_tempat, lokasi_id) REFERENCES
RUANG_UJIAN(kota, tempat, id) ON UPDATE CASCADE ON DELETE
CASCADE
);
```

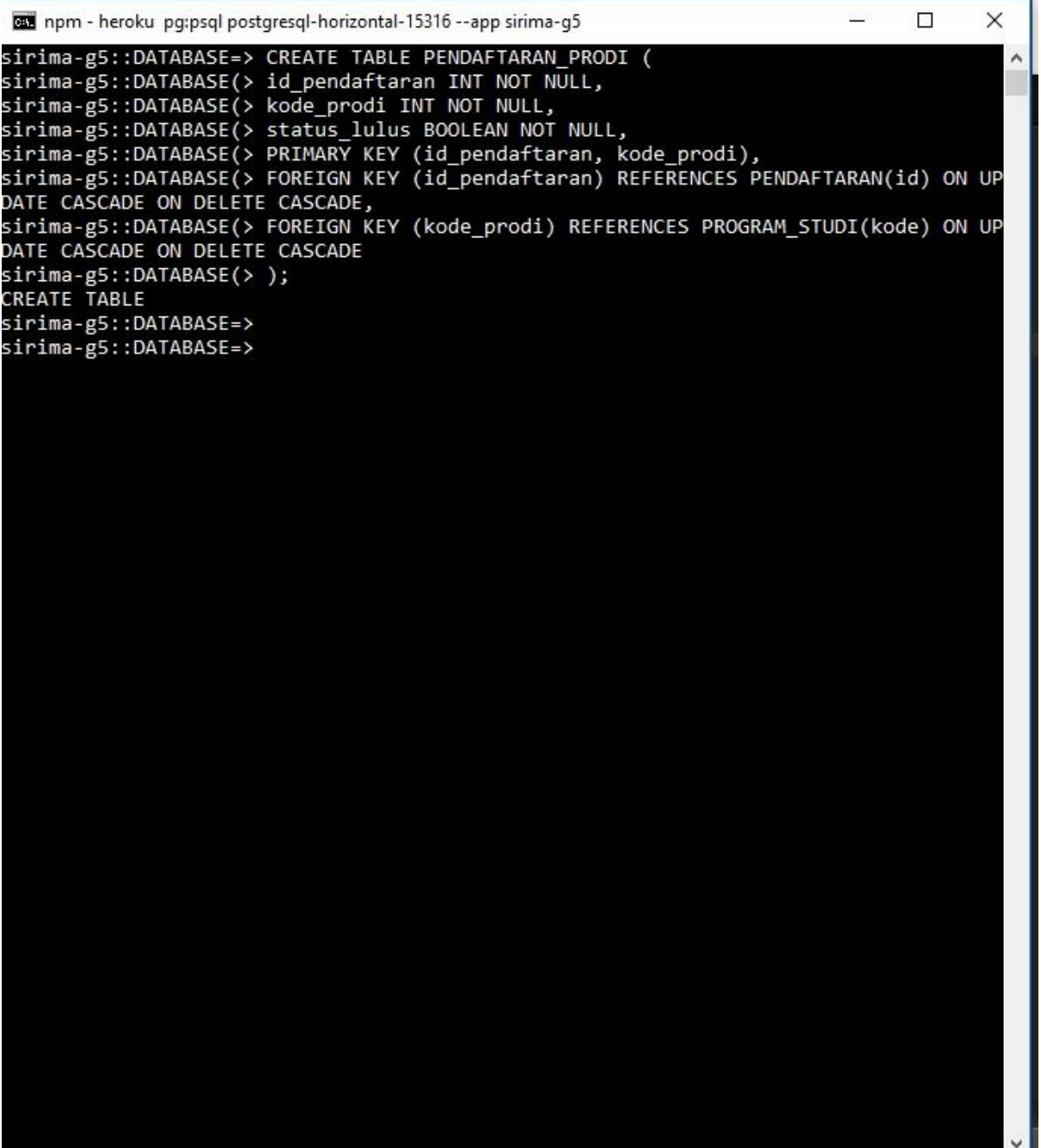
A terminal window titled 'npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5'. The terminal shows a series of SQL commands being entered into a PostgreSQL database. The commands create a table named 'PENGAWAS' with columns: 'nomor_induk' (VARCHAR(16) NOT NULL), 'nama' (VARCHAR(100) NOT NULL), 'no_telp' (TEXT NOT NULL), 'lokasi_kota' (VARCHAR(100) NOT NULL), 'lokasi_tempat' (VARCHAR(150) NOT NULL), and 'lokasi_id' (SMALLINT NOT NULL). A primary key is set on 'nomor_induk', and a foreign key is set on ('lokasi_kota', 'lokasi_tempat', 'lokasi_id') referencing 'RUANG_UJIAN(kota, tempat, id)' with 'ON UPDATE CASCADE' and 'ON DELETE CASCADE' constraints. The terminal shows the prompt 'sirima-g5::DATABASE=>' and the output of the commands.

```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> CREATE TABLE PENGAWAS (
sirima-g5::DATABASE(> nomor_induk VARCHAR(16) NOT NULL,
sirima-g5::DATABASE(> nama VARCHAR(100) NOT NULL,
sirima-g5::DATABASE(> no_telp TEXT NOT NULL,
sirima-g5::DATABASE(> lokasi_kota VARCHAR(100) NOT NULL,
sirima-g5::DATABASE(> lokasi_tempat VARCHAR(150) NOT NULL,
sirima-g5::DATABASE(> lokasi_id SMALLINT NOT NULL,
sirima-g5::DATABASE(> PRIMARY KEY (nomor_induk),
sirima-g5::DATABASE(> FOREIGN KEY (lokasi_kota, lokasi_tempat, lokasi_id) REFERENCE
S RUANG_UJIAN(kota, tempat, id) ON UPDATE CASCADE ON DELETE CASCADE
sirima-g5::DATABASE(> );
CREATE TABLE
sirima-g5::DATABASE=>
```

```
CREATE TABLE PENDAFTARAN_PRODI (
    id_pendaftaran INT NOT NULL,
    kode_prodi INT NOT NULL,
    status_lulus BOOLEAN NOT NULL,
    PRIMARY KEY (id_pendaftaran, kode_prodi),
```



```
FOREIGN KEY (id_pendaftaran) REFERENCES PENDAFTARAN(id) ON  
UPDATE CASCADE ON DELETE CASCADE,  
FOREIGN KEY (kode_prodi) REFERENCES PROGRAM_STUDI(kode) ON  
UPDATE CASCADE ON DELETE CASCADE  
);
```

A terminal window titled "npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5" displays a series of SQL commands. The commands create a table named "PENDAFTARAN_PRODI" with columns "id_pendaftaran", "kode_prodi", and "status_lulus". It also defines a primary key on "id_pendaftaran" and "kode_prodi", and two foreign key constraints: one linking "id_pendaftaran" to "PENDAFTARAN(id)" and another linking "kode_prodi" to "PROGRAM_STUDI(kode)". Both foreign key constraints specify "ON UPDATE CASCADE" and "ON DELETE CASCADE". The terminal shows the prompt "sirima-g5::DATABASE=>" followed by the commands and their execution status.

```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5  
sirima-g5::DATABASE=> CREATE TABLE PENDAFTARAN_PRODI (  
sirima-g5::DATABASE(> id_pendaftaran INT NOT NULL,  
sirima-g5::DATABASE(> kode_prodi INT NOT NULL,  
sirima-g5::DATABASE(> status_lulus BOOLEAN NOT NULL,  
sirima-g5::DATABASE(> PRIMARY KEY (id_pendaftaran, kode_prodi),  
sirima-g5::DATABASE(> FOREIGN KEY (id_pendaftaran) REFERENCES PENDAFTARAN(id) ON UP  
DATE CASCADE ON DELETE CASCADE,  
sirima-g5::DATABASE(> FOREIGN KEY (kode_prodi) REFERENCES PROGRAM_STUDI(kode) ON UP  
DATE CASCADE ON DELETE CASCADE  
sirima-g5::DATABASE(> );  
CREATE TABLE  
sirima-g5::DATABASE=>  
sirima-g5::DATABASE=>
```

B. DDL script trigger/stored procedure

```
CREATE OR REPLACE FUNCTION hitung_pelamar()  
RETURNS trigger AS  
$$
```



```

BEGIN
  IF (TG_OP = 'INSERT') THEN
    UPDATE PENERIMAAN_PRODI PNP
      SET jumlah_pelamar = (coalesce(jumlah_pelamar,0) + 1)
    FROM PERIODE_PENERIMAAN PRP
      JOIN PENDAFTARAN P
        ON P.NOMOR_PERIODE = PRP.NOMOR
          AND P.TAHUN_PERIODE = PRP.TAHUN
    WHERE PRP.NOMOR = PNP.NOMOR_PERIODE
      AND PRP.TAHUN = PNP.TAHUN_PERIODE
      AND P.ID = NEW.ID_PENDAFTARAN
      AND PNP.KODE_PRODI = NEW.kode_prodi;
  ELSEIF (TG_OP = 'UPDATE') THEN
    UPDATE PENERIMAAN_PRODI PNP
      SET jumlah_pelamar = (coalesce(jumlah_pelamar,0) + 1)
    FROM PERIODE_PENERIMAAN PRP
      JOIN PENDAFTARAN P
        ON P.NOMOR_PERIODE = PRP.NOMOR
          AND P.TAHUN_PERIODE = PRP.TAHUN
    WHERE PRP.NOMOR = PNP.NOMOR_PERIODE
      AND PRP.TAHUN = PNP.TAHUN_PERIODE
      AND P.ID = NEW.ID_PENDAFTARAN
      AND PNP.KODE_PRODI = NEW.kode_prodi;

    UPDATE PENERIMAAN_PRODI PNP
      SET jumlah_pelamar = (jumlah_pelamar - 1)
    FROM PERIODE_PENERIMAAN PRP
      JOIN PENDAFTARAN P
        ON P.NOMOR_PERIODE = PRP.NOMOR
          AND P.TAHUN_PERIODE = PRP.TAHUN
    WHERE PRP.NOMOR = PNP.NOMOR_PERIODE
      AND PRP.TAHUN = PNP.TAHUN_PERIODE
      AND P.ID = OLD.ID_PENDAFTARAN
      AND PNP.KODE_PRODI = OLD.kode_prodi;
  ELSEIF (TG_OP = 'DELETE') THEN
    UPDATE PENERIMAAN_PRODI PNP
      SET jumlah_pelamar = (jumlah_pelamar - 1)
    FROM PERIODE_PENERIMAAN PRP
      JOIN PENDAFTARAN P
        ON P.NOMOR_PERIODE = PRP.NOMOR
          AND P.TAHUN_PERIODE = PRP.TAHUN
    WHERE PRP.NOMOR = PNP.NOMOR_PERIODE

```



```
AND PRP.TAHUN = PNP.TAHUN_PERIODE
AND P.ID = OLD.ID_PENDAFTARAN
AND PNP.KODE_PRODI = OLD.kode_prodi;

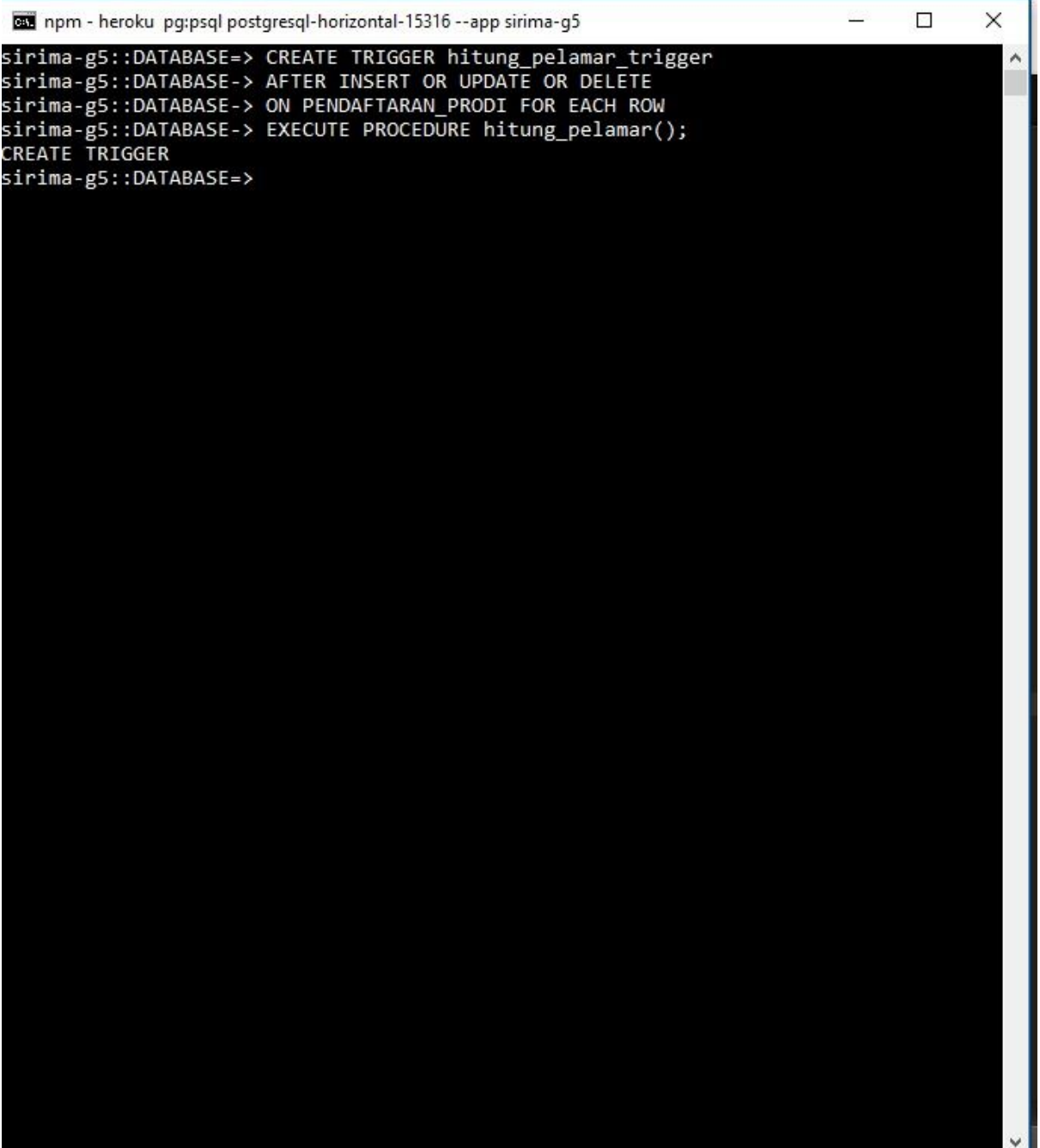
END IF;
RETURN NEW;
END;
$$
LANGUAGE plpgsql;
```



```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> CREATE OR REPLACE FUNCTION hitung_pelamar()
sirima-g5::DATABASE-> RETURNS trigger AS
sirima-g5::DATABASE-> $$
sirima-g5::DATABASE$> BEGIN
sirima-g5::DATABASE$> IF (TG_OP = 'INSERT') THEN
sirima-g5::DATABASE$> UPDATE PENERIMAAN_PRODI PNP
sirima-g5::DATABASE$> SET jumlah_pelamar = (coalesce(jumlah_pelamar,0) + 1)
sirima-g5::DATABASE$> FROM PERIODE_PENERIMAAN PRP
sirima-g5::DATABASE$> JOIN PENDAFTARAN P
sirima-g5::DATABASE$> ON P.NOMOR_PERIODE = PRP.NOMOR
sirima-g5::DATABASE$> AND P.TAHUN_PERIODE = PRP.TAHUN
sirima-g5::DATABASE$> WHERE PRP.NOMOR = PNP.NOMOR_PERIODE
sirima-g5::DATABASE$> AND PRP.TAHUN = PNP.TAHUN_PERIODE
sirima-g5::DATABASE$> AND P.ID = NEW.ID_PENDAFTARAN
sirima-g5::DATABASE$> AND PNP.KODE_PRODI = NEW.kode_prodi;
sirima-g5::DATABASE$> ELSEIF (TG_OP = 'UPDATE') THEN
sirima-g5::DATABASE$> UPDATE PENERIMAAN_PRODI PNP
sirima-g5::DATABASE$> SET jumlah_pelamar = (coalesce(jumlah_pelamar,0) + 1)
sirima-g5::DATABASE$> FROM PERIODE_PENERIMAAN PRP
sirima-g5::DATABASE$> JOIN PENDAFTARAN P
sirima-g5::DATABASE$> ON P.NOMOR_PERIODE = PRP.NOMOR
sirima-g5::DATABASE$> AND P.TAHUN_PERIODE = PRP.TAHUN
sirima-g5::DATABASE$> WHERE PRP.NOMOR = PNP.NOMOR_PERIODE
sirima-g5::DATABASE$> AND PRP.TAHUN = PNP.TAHUN_PERIODE
sirima-g5::DATABASE$> AND P.ID = NEW.ID_PENDAFTARAN
sirima-g5::DATABASE$> AND PNP.KODE_PRODI = NEW.kode_prodi;
sirima-g5::DATABASE$> UPDATE PENERIMAAN_PRODI PNP
sirima-g5::DATABASE$> SET jumlah_pelamar = (jumlah_pelamar - 1)
sirima-g5::DATABASE$> FROM PERIODE_PENERIMAAN PRP
sirima-g5::DATABASE$> JOIN PENDAFTARAN P
sirima-g5::DATABASE$> ON P.NOMOR_PERIODE = PRP.NOMOR
sirima-g5::DATABASE$> AND P.TAHUN_PERIODE = PRP.TAHUN
sirima-g5::DATABASE$> WHERE PRP.NOMOR = PNP.NOMOR_PERIODE
sirima-g5::DATABASE$> AND PRP.TAHUN = PNP.TAHUN_PERIODE
sirima-g5::DATABASE$> AND P.ID = OLD.ID_PENDAFTARAN
sirima-g5::DATABASE$> AND PNP.KODE_PRODI = OLD.kode_prodi;
sirima-g5::DATABASE$> ELSEIF (TG_OP = 'DELETE') THEN
sirima-g5::DATABASE$> UPDATE PENERIMAAN_PRODI PNP
sirima-g5::DATABASE$> SET jumlah_pelamar = (jumlah_pelamar - 1)
sirima-g5::DATABASE$> FROM PERIODE_PENERIMAAN PRP
sirima-g5::DATABASE$> JOIN PENDAFTARAN P
sirima-g5::DATABASE$> ON P.NOMOR_PERIODE = PRP.NOMOR
sirima-g5::DATABASE$> AND P.TAHUN_PERIODE = PRP.TAHUN
sirima-g5::DATABASE$> WHERE PRP.NOMOR = PNP.NOMOR_PERIODE
sirima-g5::DATABASE$> AND PRP.TAHUN = PNP.TAHUN_PERIODE
sirima-g5::DATABASE$> AND P.ID = OLD.ID_PENDAFTARAN
sirima-g5::DATABASE$> AND PNP.KODE_PRODI = OLD.kode_prodi;
sirima-g5::DATABASE$> END IF;
sirima-g5::DATABASE$> RETURN NEW;
sirima-g5::DATABASE$> END;
sirima-g5::DATABASE$> $$
sirima-g5::DATABASE-> LANGUAGE plpgsql;
sirima-g5::DATABASE=> CREATE FUNCTION
sirima-g5::DATABASE=>
```



```
CREATE TRIGGER hitung_pelamar_trigger  
AFTER INSERT OR UPDATE OR DELETE  
ON PENDAFTARAN_PRODI FOR EACH ROW  
EXECUTE PROCEDURE hitung_pelamar();
```

A terminal window with a title bar that reads "npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5". The terminal has a black background with white text. It shows the execution of SQL commands to create a trigger. The commands are: "CREATE TRIGGER hitung_pelamar_trigger", "AFTER INSERT OR UPDATE OR DELETE", "ON PENDAFTARAN_PRODI FOR EACH ROW", "EXECUTE PROCEDURE hitung_pelamar();", and "CREATE TRIGGER". The prompt "sirima-g5::DATABASE=>" is visible at the start of each line.

```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5  
sirima-g5::DATABASE=> CREATE TRIGGER hitung_pelamar_trigger  
sirima-g5::DATABASE-> AFTER INSERT OR UPDATE OR DELETE  
sirima-g5::DATABASE-> ON PENDAFTARAN_PRODI FOR EACH ROW  
sirima-g5::DATABASE-> EXECUTE PROCEDURE hitung_pelamar();  
CREATE TRIGGER  
sirima-g5::DATABASE=>
```

```
CREATE OR REPLACE FUNCTION hitung_pelamar_diterima()  
RETURNS trigger AS  
$$  
DECLARE  
jumlah_lulus INT;
```



```

BEGIN
    SELECT COUNT(PP.status_lulus) INTO jumlah_lulus
    FROM PENDAFTARAN_PRODI PP
    WHERE PP.ID_PENDAFTARAN = NEW.ID_PENDAFTARAN
    AND PP.status_lulus = TRUE;

    IF (TG_OP = 'UPDATE') THEN
        IF(NEW.status_lulus IS TRUE AND OLD.status_lulus IS FALSE) THEN
            IF(jumlah_lulus = 1) THEN
                UPDATE PENERIMAAN_PRODI PNP
                SET jumlah_diterima = (coalesce(jumlah_diterima,0) +
1)
                FROM PERIODE_PENERIMAAN PRP
                JOIN PENDAFTARAN P
                ON P.NOMOR_PERIODE = PRP.NOMOR
                AND P.TAHUN_PERIODE =
PRP.TAHUN
                WHERE PRP.NOMOR = PNP.NOMOR_PERIODE
                AND PRP.TAHUN = PNP.TAHUN_PERIODE
                AND P.ID = NEW.ID_PENDAFTARAN
                AND PNP.KODE_PRODI = NEW.kode_prodi;
            ELSE
                RAISE EXCEPTION 'Error : status_lulus untuk
id_pendaftaran yang sama maksimal berjumlah 1';
            END IF;
        ELSEIF(NEW.status_lulus IS FALSE AND OLD.status_lulus IS TRUE)
        THEN
            UPDATE PENERIMAAN_PRODI PNP
            SET jumlah_diterima = (jumlah_diterima - 1)
            FROM PERIODE_PENERIMAAN PRP
            JOIN PENDAFTARAN P
            ON P.NOMOR_PERIODE = PRP.NOMOR
            AND P.TAHUN_PERIODE = PRP.TAHUN
            WHERE PRP.NOMOR = PNP.NOMOR_PERIODE
            AND PRP.TAHUN = PNP.TAHUN_PERIODE
            AND P.ID = NEW.ID_PENDAFTARAN
            AND PNP.KODE_PRODI = NEW.kode_prodi;
        END IF;
    END IF;
    RETURN NEW;
END;
$$

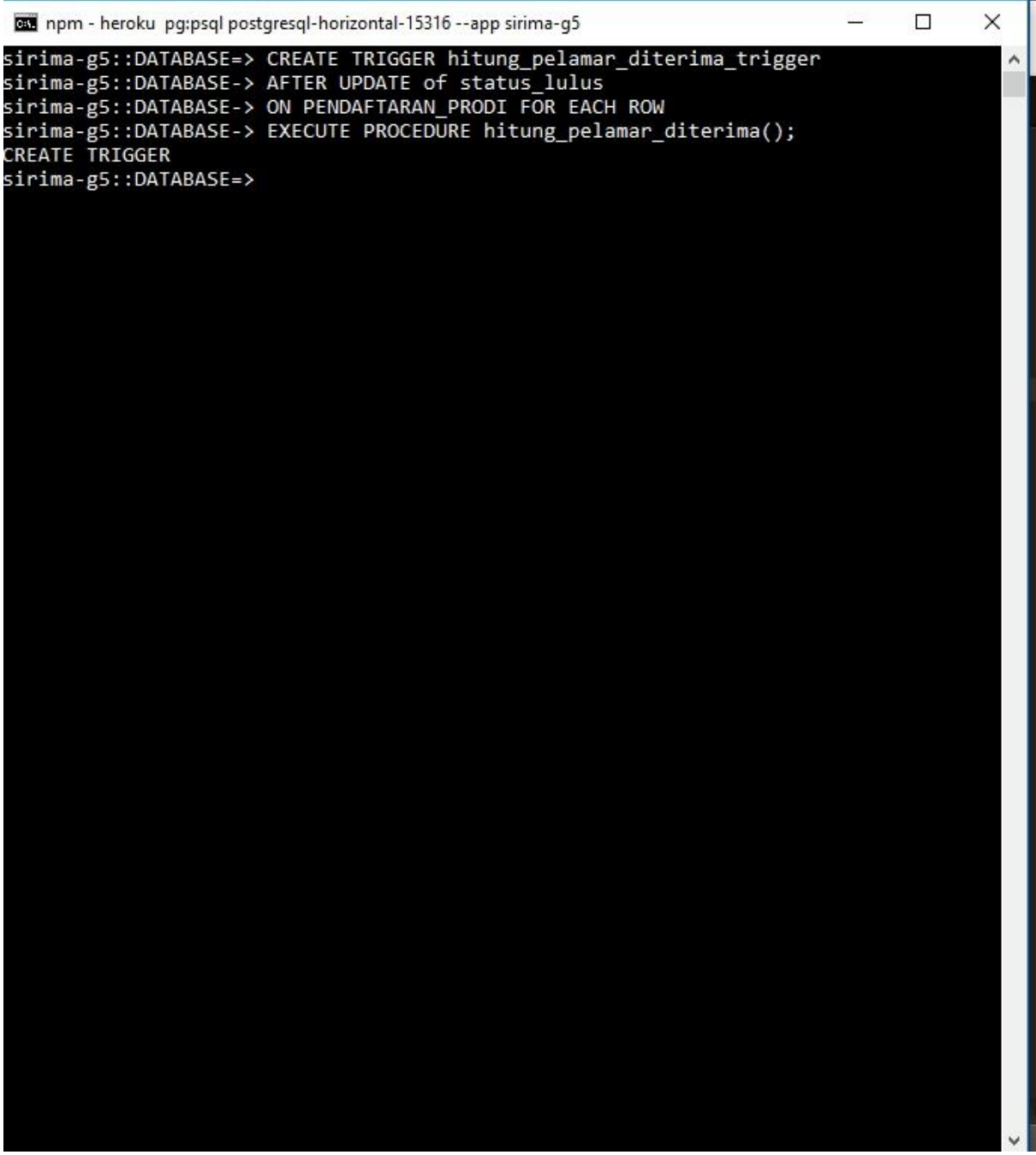
```


LANGUAGE plpgsql;

```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> CREATE OR REPLACE FUNCTION hitung_pelamar_diterima()
sirima-g5::DATABASE-> RETURNS trigger AS
sirima-g5::DATABASE-> $$
sirima-g5::DATABASE$> DECLARE
sirima-g5::DATABASE$> jumlah_lulus INT;
sirima-g5::DATABASE$> BEGIN
sirima-g5::DATABASE$> SELECT COUNT(PP.status_lulus) INTO jumlah_lulus
sirima-g5::DATABASE$> FROM PENDAFTARAN_PRODI PP
sirima-g5::DATABASE$> WHERE PP.ID_PENDAFTARAN = NEW.ID_PENDAFTARAN
sirima-g5::DATABASE$> AND PP.status_lulus = TRUE;
sirima-g5::DATABASE$>
sirima-g5::DATABASE$> IF (TG_OP = 'UPDATE') THEN
sirima-g5::DATABASE$> IF(NEW.status_lulus IS TRUE AND OLD.status_lulus IS FALSE) TH
EN
sirima-g5::DATABASE$> IF(jumlah_lulus = 1) THEN
sirima-g5::DATABASE$> UPDATE PENERIMAAN_PRODI PNP
sirima-g5::DATABASE$> SET jumlah_diterima = (coalesce(jumlah_diterima,0) + 1)
sirima-g5::DATABASE$> FROM PERIODE_PENERIMAAN PRP
sirima-g5::DATABASE$> JOIN PENDAFTARAN P
sirima-g5::DATABASE$> ON P.NOMOR_PERIODE = PRP.NOMOR
sirima-g5::DATABASE$> AND P.TAHUN_PERIODE = PRP.TAHUN
sirima-g5::DATABASE$> WHERE PRP.NOMOR = PNP.NOMOR_PERIODE
sirima-g5::DATABASE$> AND PRP.TAHUN = PNP.TAHUN_PERIODE
sirima-g5::DATABASE$> AND P.ID = NEW.ID_PENDAFTARAN
sirima-g5::DATABASE$> AND PNP.KODE_PRODI = NEW.kode_prodi;
sirima-g5::DATABASE$> ELSE
sirima-g5::DATABASE$> RAISE EXCEPTION 'Error : status_lulus untuk id_pendaftaran ya
ng sama maksimal berjumlah 1';
sirima-g5::DATABASE$> END IF;
sirima-g5::DATABASE$> ELSEIF(NEW.status_lulus IS FALSE AND OLD.status_lulus IS TRUE
) THEN
sirima-g5::DATABASE$> UPDATE PENERIMAAN_PRODI PNP
sirima-g5::DATABASE$> SET jumlah_diterima = (jumlah_diterima - 1)
sirima-g5::DATABASE$> FROM PERIODE_PENERIMAAN PRP
sirima-g5::DATABASE$> JOIN PENDAFTARAN P
sirima-g5::DATABASE$> ON P.NOMOR_PERIODE = PRP.NOMOR
sirima-g5::DATABASE$> AND P.TAHUN_PERIODE = PRP.TAHUN
sirima-g5::DATABASE$> WHERE PRP.NOMOR = PNP.NOMOR_PERIODE
sirima-g5::DATABASE$> AND PRP.TAHUN = PNP.TAHUN_PERIODE
sirima-g5::DATABASE$> AND P.ID = NEW.ID_PENDAFTARAN
sirima-g5::DATABASE$> AND PNP.KODE_PRODI = NEW.kode_prodi;
sirima-g5::DATABASE$> END IF;
sirima-g5::DATABASE$> END IF;
sirima-g5::DATABASE$> RETURN NEW;
sirima-g5::DATABASE$> END;
sirima-g5::DATABASE$> $$
sirima-g5::DATABASE-> LANGUAGE plpgsql;
CREATE FUNCTION
sirima-g5::DATABASE=>
```

CREATE TRIGGER hitung_pelamar_diterima_trigger
AFTER UPDATE of status_lulus
ON PENDAFTARAN_PRODI FOR EACH ROW

EXECUTE PROCEDURE hitung_pelamar_diterima();

A terminal window titled "npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5" is shown. The terminal has a dark background. The following commands are entered:

```
sirima-g5::DATABASE=> CREATE TRIGGER hitung_pelamar_diterima_trigger  
sirima-g5::DATABASE-> AFTER UPDATE of status_lulus  
sirima-g5::DATABASE-> ON PENDAFTARAN_PRODI FOR EACH ROW  
sirima-g5::DATABASE-> EXECUTE PROCEDURE hitung_pelamar_diterima();  
CREATE TRIGGER  
sirima-g5::DATABASE=>
```



```
npm - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> \df
List of functions
Schema | Name | Result data type | Argument data types | Type
-----+-----+-----+-----+-----
sirima | hitung_pelamar | trigger | | trigger
sirima | hitung_pelamar_diterima | trigger | | trigger
(2 rows)

sirima-g5::DATABASE=>
```

C. Table state

\d AKUN


```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5

sirima-g5::DATABASE=> \d AKUN
        Table "sirima.akun"
  Column |          Type          | Modifiers
-----+-----+-----
username | character varying(50) | not null
role      | boolean                | not null
password  | character varying(20) | not null
Indexes:
    "akun_pkey" PRIMARY KEY, btree (username)
Referenced by:
    TABLE "pelamar" CONSTRAINT "pelamar_username_fkey" FOREIGN KEY (username) RE
REFERENCES akun(username) ON UPDATE CASCADE ON DELETE CASCADE

sirima-g5::DATABASE=>
```

SELECT * FROM AKUN;

```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5

Hendricks.Wilma48 | f | 4iCeHurhkONL
Howell.Kitra87 | f | WRNw43qyzB
Perkins.Merrill87 | f | thzatxaUiOI5
Christensen.Constance90 | f | TbxqLa
Mendoza.Christopher100 | f | rVdc50c
Peters.Cherokee71 | f | zFYtExjXG
Kaufman.Ciara5 | f | 5BGHYWppJHf
Moody.Hall39 | f | lV6bCg
Gross.Adena8 | f | wIOuRaX
Joyce.Kareem51 | f | rn0TnX
Guy.Grant10 | f | DmylAT
Albert.Ina45 | f | fzPIDhmbHIj
Mcclain.Elliott76 | f | uf9nuwD
Rutledge.Teagan33 | f | UgsMo4y
Ramos.Jama178 | f | g1he7H96q
Barrett.Echo100 | f | v56i1NfL10v
Glass.Aristotle86 | f | Dc9mXkZTjp
Herring.Adele60 | f | u8gPxv4EKwC
Rich.Adrienne97 | f | jXa2azwniSC6
Rivers.Ingrid95 | f | DpQgWlVUmFT
Mcmillan.Mariko69 | f | eRCCA0sOXC
Carson.Herrod88 | f | PRg8xU0x
Lewis.Wayne43 | f | KcIgwNtXMwJ5
Dunlap.Harper2 | f | lpGwf1y4Bq
Bird.Branden18 | f | yQCnbsaTVj
Garcia.Reed1 | f | GtBff4uS6Yzt
Mcguire.Mia1 | f | j4r090CBorT
Short.Nathan42 | f | NZDcTK
(505 rows)

sirima-g5::DATABASE=>
```

\d JADWAL_PENTING


```

Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> \d JADWAL_PENTING
Table "sirima.jadwal_penting"
  Column      |      Type      | Modifiers
-----+-----+-----
 nomor        | smallint       | not null
 tahun        | character(4)   | not null
 jenjang      | character(2)   | not null
 waktu_mulai  | timestamp without time zone | not null
 waktu_selesai | timestamp without time zone | not null
 deskripsi    | character varying(150) | not null
Indexes:
    "jadwal_penting_pkey" PRIMARY KEY, btree (nomor, tahun, jenjang, waktu_mulai)
Foreign-key constraints:
    "jadwal_penting_jenjang_fkey" FOREIGN KEY (jenjang) REFERENCES jenjang(nama)
    ON UPDATE CASCADE ON DELETE CASCADE
    "jadwal_penting_nomor_fkey" FOREIGN KEY (nomor, tahun) REFERENCES periode_penerimaan(nomor, tahun)
    ON UPDATE CASCADE ON DELETE CASCADE
Referenced by:
    TABLE "lokasi_ujian" CONSTRAINT "lokasi_ujian_nomor_periode_fkey" FOREIGN KEY (nomor_periode, tahun_periode, jenjang, waktu_awal) REFERENCES jadwal_penting(nomor, tahun, jenjang, waktu_mulai)
    ON UPDATE CASCADE ON DELETE CASCADE
sirima-g5::DATABASE=>

```

SELECT * FROM JADWAL_PENTING;

```

Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> SELECT * FROM JADWAL_PENTING;
  nomor | tahun | jenjang | waktu_mulai | waktu_selesai | deskripsi
-----+-----+-----+-----+-----+-----
      3 | 2009 | S3      | 2009-07-21 08:01:00 | 2009-08-13 09:01:00 | Pembayaran
      3 | 2009 | S3      | 2009-08-14 08:02:00 | 2009-08-16 09:02:00 | Pencetakan
      3 | 2009 | S3      | 2009-08-17 07:30:00 | 2009-08-24 14:00:00 | Ujian Sar
      3 | 2009 | S3      | 2009-08-29 12:04:00 | 2009-08-31 14:01:00 | Pengumuman
      2 | 2008 | S1      | 2008-06-20 08:00:00 | 2008-07-21 09:00:00 | Pendaftaran
      2 | 2008 | S1      | 2008-07-21 08:01:00 | 2008-08-13 09:01:00 | Pembayaran
      2 | 2008 | S1      | 2008-08-14 08:02:00 | 2008-08-16 09:02:00 | Pencetakan
      2 | 2008 | S1      | 2008-08-17 07:30:00 | 2008-08-24 14:00:00 | Ujian Sar
      2 | 2008 | S1      | 2008-08-29 12:04:00 | 2008-08-31 14:01:00 | Pengumuman
      3 | 2009 | S1      | 2008-06-20 08:00:00 | 2008-07-21 09:00:00 | Pendaftaran
      3 | 2009 | S1      | 2009-07-21 08:01:00 | 2009-08-13 09:01:00 | Pembayaran
      3 | 2009 | S1      | 2009-08-14 08:02:00 | 2009-08-16 09:02:00 | Pencetakan
      3 | 2009 | S1      | 2009-08-17 07:30:00 | 2009-08-24 14:00:00 | Ujian Sar
      3 | 2009 | S1      | 2009-08-29 12:04:00 | 2009-08-31 14:01:00 | Pengumuman
(26 rows)
sirima-g5::DATABASE=>

```

\d JENJANG


```

Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5

sirima-g5::DATABASE=> \d JENJANG
      Table "sirima.jenjang"
  Column |      Type      | Modifiers
-----+-----+-----
  nama   | character(2)   | not null
Indexes:
    "jenjang_pkey" PRIMARY KEY, btree (nama)
Referenced by:
    TABLE "jadwal_penting" CONSTRAINT "jadwal_penting_jenjang_fkey" FOREIGN KEY (jenjang) REFERENCES jenjang(nama) ON UPDATE CASCADE ON DELETE CASCADE
    TABLE "pendaftaran_semas_pascasarjana" CONSTRAINT "pendaftaran_semas_pascasarjana_jenjang_fkey" FOREIGN KEY (jenjang) REFERENCES jenjang(nama) ON UPDATE CASCADE ON DELETE CASCADE
    TABLE "pendaftaran_semas_pascasarjana" CONSTRAINT "pendaftaran_semas_pascasarjana_jenjang_terakhir_fkey" FOREIGN KEY (jenjang_terakhir) REFERENCES jenjang(nama) ON UPDATE CASCADE ON DELETE CASCADE
    TABLE "program_studi" CONSTRAINT "program_studi_jenjang_fkey" FOREIGN KEY (jenjang) REFERENCES jenjang(nama) ON UPDATE CASCADE ON DELETE CASCADE

sirima-g5::DATABASE=>

```

SELECT * FROM JENJANG;

```

Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5

an Online
  2 | 2008 | S1 | 2008-07-21 08:01:00 | 2008-08-13 09:01:00 | Pembayaran
n
  2 | 2008 | S1 | 2008-08-14 08:02:00 | 2008-08-16 09:02:00 | Pencetakan
n Kartu Tanda Ujian
  2 | 2008 | S1 | 2008-08-17 07:30:00 | 2008-08-24 14:00:00 | Ujian Sar
ingan Masuk
  2 | 2008 | S1 | 2008-08-29 12:04:00 | 2008-08-31 14:01:00 | Pengumuma
n Hasil Seleksi Masuk
  3 | 2009 | S1 | 2008-06-20 08:00:00 | 2008-07-21 09:00:00 | Pendaftar
an Online
  3 | 2009 | S1 | 2009-07-21 08:01:00 | 2009-08-13 09:01:00 | Pembayaran
n
  3 | 2009 | S1 | 2009-08-14 08:02:00 | 2009-08-16 09:02:00 | Pencetakan
n Kartu Tanda Ujian
  3 | 2009 | S1 | 2009-08-17 07:30:00 | 2009-08-24 14:00:00 | Ujian Sar
ingan Masuk
  3 | 2009 | S1 | 2009-08-29 12:04:00 | 2009-08-31 14:01:00 | Pengumuma
n Hasil Seleksi Masuk
(26 rows)

sirima-g5::DATABASE=> SELECT * FROM JENJANG;
  nama
-----
  S1
  S2
  S3
(3 rows)

sirima-g5::DATABASE=>

```

\d LOKASI_UJIAN


```

Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> \d LOKASI_UJIAN
Table "sirima.lokasi_ujian"
  Column      |      Type      | Modifiers
-----+-----+-----
 kota         | character varying(100) | not null
 tempat      | character varying(150) | not null
 nomor_periode | smallint         | not null
 tahun_periode | character(4)       | not null
 jenjang      | character(2)       | not null
 waktu_awal   | timestamp without time zone | not null
Indexes:
    "lokasi_ujian_pkey" PRIMARY KEY, btree (kota, tempat)
Foreign-key constraints:
    "lokasi_ujian_nomor_periode_fkey" FOREIGN KEY (nomor_periode, tahun_periode, jenjang, waktu_awal) REFERENCES jadwal_penting(nomor, tahun, jenjang, waktu_mulai) ON UPDATE CASCADE ON DELETE CASCADE
Referenced by:
    TABLE "pendaftaran_semas" CONSTRAINT "pendaftaran_semas_lokasi_kota_fkey" FOREIGN KEY (lokasi_kota, lokasi_tempat) REFERENCES lokasi_ujian(kota, tempat) ON UPDATE CASCADE ON DELETE CASCADE
    TABLE "ruang_ujian" CONSTRAINT "ruang_ujian_kota_fkey" FOREIGN KEY (kota, tempat) REFERENCES lokasi_ujian(kota, tempat) ON UPDATE CASCADE ON DELETE CASCADE
sirima-g5::DATABASE=>

```

SELECT * FROM LOKASI_UJIAN;

```

Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> insert into lokasi_ujian (kota,tempat,nomor_periode,tahun_periode,jenjang,waktu_awal) values ('Depok','Balairung Kampus UI',3,'2009','S3','17/8/2009 07:30');
INSERT 0 1
sirima-g5::DATABASE=> select * from lokasi_ujian;
 kota      |      tempat      | nomor_periode | tahun_periode | jenjang | waktu_awal
-----+-----+-----+-----+-----+-----
 Depok     | Kampus UI Fasilkom | 1 | 2007 | S1 | 2007-08-17 07:30:00
 Jakarta Pusat | Kampus UI Akuntansi | 1 | 2007 | S1 | 2007-08-17 07:30:00
 Depok     | Kampus UI FIB | 2 | 2008 | S1 | 2008-08-17 07:30:00
 Jakarta Pusat | Kampus UI Kedokteran | 2 | 2008 | S1 | 2008-08-17 07:30:00
 Depok     | Kampus UI FEB | 3 | 2009 | S1 | 2009-08-17 07:30:00
 Jakarta Pusat | Kampus UI Fasilkom | 3 | 2009 | S1 | 2009-08-17 07:30:00
 Depok     | Kampus UI Kesmas | 2 | 2008 | S2 | 2008-08-17 07:30:00
 Jakarta Pusat | Kampus UI Sastra Inggris | 2 | 2008 | S2 | 2008-08-17 07:30:00
 Depok     | Balairung Kampus UI | 3 | 2009 | S3 | 2009-08-17 07:30:00
(9 rows)

sirima-g5::DATABASE=>

```

\d PELAMAR


```

Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5

sirima-g5::DATABASE=> \d PELAMAR
Table "sirima.pelamar"
  Column      |      Type      | Modifiers
-----+-----+-----
username     | character varying(50) | not null
nama_lengkap | character varying(100) | not null
alamat       | text            | not null
jenis_kelamin | character(1)      | not null
tanggal_lahir | date            | not null
no_ktp       | character(16)     | not null
email        | character varying(100) | not null
Indexes:
    "pelamar_pkey" PRIMARY KEY, btree (username)
    "pelamar_email_key" UNIQUE CONSTRAINT, btree (email)
Foreign-key constraints:
    "pelamar_username_fkey" FOREIGN KEY (username) REFERENCES akun(username) ON
UPDATE CASCADE ON DELETE CASCADE
Referenced by:
    TABLE "pendaftaran" CONSTRAINT "pendaftaran_pelamar_fkey" FOREIGN KEY (pelamar) REFERENCES pelamar(username) ON UPDATE CASCADE ON DELETE CASCADE

sirima-g5::DATABASE=>

```

SELECT * FROM PELAMAR;

```

Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5

| 1132627111500005 | Rich.Adrienne97@hotmail.com | Jl. Ciputat Raya No. 40, Aceh | 1997-06-05
Rivers.Ingrid95 | Rivers Ingrid | L
13458
| 4171510101400001 | Rivers.Ingrid95@hotmail.com | Jl. Raya Bekasi Timur 170 C, | 1996-10-23
Mcmillan.Mariko69 | Mcmillan Mariko | P
Samarinda 12832
| 1191524121100003 | Mcmillan.Mariko69@gmail.com | Jl. Pluit Raya No. 2, Makasar | 1998-11-22
Carson.Herrod88 | Carson Herrod | L
12330
| 3182528101400008 | Carson.Herrod88@hotmail.com | Jl. Cempaka Putih Tengah I / | 1996-05-16
Lewis.Wayne43 | Lewis Wayne | P
1, Garut 15703
| 1022330101200008 | Lewis.Wayne43@yahoo.com | Jl. Pemuda No. 80 RT.001 RW. | 1998-01-08
Dunlap.Harper2 | Dunlap Harper | L
08, Bogor 13335
| 1091218121000008 | Dunlap.Harper2@gmail.com | Jl. Pemuda No. 80 RT.001 RW. | 1992-02-01
Bird.Branden18 | Bird Branden | L
08, Samarinda 12817
| 9161713121000006 | Bird.Branden18@gmail.com | Jl. Panglima Polim I No. 34, | 1995-01-25
Garcia.Reed1 | Garcia Reed | P
Bontang 13356
| 1113410101300002 | Garcia.Reed1@yahoo.com | Jl. Bekasi Timur Raya KM. 18 | 1997-02-10
Mcguire.Mia1 | Mcguire Mia | L
No. 6 P. Gdg. , Tasikmalaya 13880
| 5052016101500005 | Mcguire.Mia1@gmail.com | Jl. Ciputat Raya No. 5, Jakar | 1992-01-30
Short.Nathan42 | Short Nathan | P
ta Utara 12930
| 3192615101100005 | Short.Nathan42@hotmail.com
(500 rows)

sirima-g5::DATABASE=>

```

\d PEMBAYARAN


```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> \d PEMBAYARAN
Table "sirima.pembayaran"
  Column      |          Type          | Modifiers
-----+-----+-----
 id           | integer                | not null default nextval('pembayar
 ar_id_seq'::regclass)
 waktu_bayar  | timestamp without time zone | not null
 jumlah_bayar | numeric(10,2)           | not null
 id_pendaftaran | integer                | not null
Indexes:
    "pembayaran_pkey" PRIMARY KEY, btree (id)
Foreign-key constraints:
    "pembayaran_id_pendaftaran_fkey" FOREIGN KEY (id_pendaftaran) REFERENCES pen
 daftaran_semas(id_pendaftaran) ON UPDATE CASCADE ON DELETE CASCADE

sirima-g5::DATABASE=> 
```

SELECT * FROM PEMBAYARAN;

```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
 973 | 2009-06-22 12:30:00 | 1000000.00 | 1173
 974 | 2009-06-18 12:44:00 | 1000000.00 | 1174
 975 | 2009-06-10 13:26:00 | 1000000.00 | 1175
 976 | 2009-06-26 14:20:00 | 1000000.00 | 1176
 977 | 2009-06-16 09:23:00 | 1000000.00 | 1177
 978 | 2009-07-15 12:59:00 | 1000000.00 | 1178
 979 | 2009-06-07 11:40:00 | 1000000.00 | 1179
 980 | 2009-06-14 09:50:00 | 1000000.00 | 1180
 981 | 2009-07-09 18:55:00 | 1000000.00 | 1181
 982 | 2009-06-01 10:20:00 | 1000000.00 | 1182
 983 | 2009-07-09 16:33:00 | 1000000.00 | 1183
 984 | 2009-07-06 11:29:00 | 1000000.00 | 1184
 985 | 2009-06-20 15:21:00 | 1000000.00 | 1185
 986 | 2009-07-03 15:59:00 | 1000000.00 | 1186
 987 | 2009-06-04 17:45:00 | 1000000.00 | 1187
 988 | 2009-06-10 10:58:00 | 1000000.00 | 1188
 989 | 2009-06-06 16:26:00 | 1000000.00 | 1189
 990 | 2009-06-20 15:55:00 | 1000000.00 | 1190
 991 | 2009-07-03 13:53:00 | 1000000.00 | 1191
 992 | 2009-06-16 11:21:00 | 1000000.00 | 1192
 993 | 2009-06-17 14:53:00 | 1000000.00 | 1193
 994 | 2009-07-01 18:24:00 | 1000000.00 | 1194
 995 | 2009-06-18 12:59:00 | 1000000.00 | 1195
 996 | 2009-06-25 09:53:00 | 1000000.00 | 1196
 997 | 2009-06-11 12:25:00 | 1000000.00 | 1197
 998 | 2009-06-28 18:24:00 | 1000000.00 | 1198
 999 | 2009-07-06 12:40:00 | 1000000.00 | 1199
1000 | 2009-07-13 15:41:00 | 1000000.00 | 1200
(1000 rows)

sirima-g5::DATABASE=> 
```

\d PENDAFTARAN


```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> \d PENDAFTARAN
Table "sirima.pendaftaran"
  Column      |      Type      | Modifiers
-----+-----+-----
 id           | integer        | not null default nextval('pendaftaran_id_seq'::regclass)
 status_lulus | boolean        | not null default false
 status_verifikasi | boolean      | not null default false
 npm          | character(10)   | not null
 pelamar      | character varying(50) | not null
 nomor_periode | smallint       | not null
 tahun_periode | character(4)    | not null
Indexes:
    "pendaftaran_pkey" PRIMARY KEY, btree (id)
Foreign-key constraints:
    "pendaftaran_nomor_periode_fkey" FOREIGN KEY (nomor_periode, tahun_periode)
REFERENCES periode_penerimaan(nomor, tahun) ON UPDATE CASCADE ON DELETE CASCADE
    "pendaftaran_pelamar_fkey" FOREIGN KEY (pelamar) REFERENCES pelamar(username)
ON UPDATE CASCADE ON DELETE CASCADE
Referenced by:
    TABLE "pendaftaran_prodi" CONSTRAINT "pendaftaran_prodi_id_pendaftaran_fkey"
FOREIGN KEY (id_pendaftaran) REFERENCES pendaftaran(id) ON UPDATE CASCADE ON DELETE CASCADE
    TABLE "pendaftaran_semas" CONSTRAINT "pendaftaran_semas_id_pendaftaran_fkey"
FOREIGN KEY (id_pendaftaran) REFERENCES pendaftaran(id) ON UPDATE CASCADE ON DELETE CASCADE
    TABLE "pendaftaran_uui" CONSTRAINT "pendaftaran_uui_id_pendaftaran_fkey" FOREIGN KEY (id_pendaftaran) REFERENCES pendaftaran(id) ON UPDATE CASCADE ON DELETE CASCADE

sirima-g5::DATABASE=> 
```

SELECT * FROM PENDAFTARAN;


```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
1187 | t      | 3 | 2009 | t      | 1508263693 | Ramos.Jamal78
1188 | t      | 3 | 2009 | t      | 1508263695 | Barrett.Echo100
1189 | t      | 3 | 2009 | t      | 1508263697 | Glass.Aristotle86
1190 | t      | 3 | 2009 | t      | 1508263699 | Herring.Adele60
1191 | t      | 3 | 2009 | t      | 1508263701 | Rich.Adrienne97
1192 | t      | 3 | 2009 | t      | 1508263703 | Rivers.Ingrid95
1193 | t      | 3 | 2009 | t      | 1508263705 | Mcmillan.Mariko69
1194 | t      | 3 | 2009 | t      | 1508263707 | Carson.Herrod88
1195 | t      | 3 | 2009 | t      | 1508263709 | Lewis.Wayne43
1196 | t      | 3 | 2009 | t      | 1508263711 | Dunlap.Harper2
1197 | t      | 3 | 2009 | t      | 1508263713 | Bird.Branden18
1198 | t      | 3 | 2009 | t      | 1508263715 | Garcia.Reed1
1199 | t      | 3 | 2009 | t      | 1508263717 | Mcguire.Mia1
1200 | t      | 3 | 2009 | t      | 1508263719 | Short.Nathan42
(1200 rows)

sirima-g5:DATABASE=>
```

\d PENDAFTARAN_PRODI


```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5

sirima-g5::DATABASE=> \d PENDAFTARAN_PRODI
Table "sirima.pendaftaran_prodi"
  Column      | Type      | Modifiers
-----+-----+-----
id_pendaftaran | integer   | not null
kode_prodi    | integer   | not null
status_lulus  | boolean   | not null
Indexes:
    "pendaftaran_prodi_pkey" PRIMARY KEY, btree (id_pendaftaran, kode_prodi)
Foreign-key constraints:
    "pendaftaran_prodi_id_pendaftaran_fkey" FOREIGN KEY (id_pendaftaran) REFERENCES pendaftaran(id) ON UPDATE CASCADE ON DELETE CASCADE
    "pendaftaran_prodi_kode_prodi_fkey" FOREIGN KEY (kode_prodi) REFERENCES program_studi(kode) ON UPDATE CASCADE ON DELETE CASCADE
Triggers:
    hitung_pelamar_diterima_trigger AFTER UPDATE OF status_lulus ON pendaftaran_prodi FOR EACH ROW EXECUTE PROCEDURE hitung_pelamar_diterima()
    hitung_pelamar_trigger AFTER INSERT OR DELETE OR UPDATE ON pendaftaran_prodi FOR EACH ROW EXECUTE PROCEDURE hitung_pelamar()

sirima-g5::DATABASE=>
```

SELECT * FROM PENDAFTARAN_PRODI;


```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
1173 | 12 | f
1174 | 9 | f
1175 | 10 | f
1176 | 11 | f
1177 | 11 | f
1178 | 11 | f
1179 | 9 | f
1180 | 10 | f
1181 | 9 | f
1182 | 11 | f
1183 | 12 | f
1184 | 12 | f
1185 | 9 | f
1186 | 11 | t
1187 | 9 | t
1188 | 10 | t
1189 | 10 | t
1190 | 9 | t
1191 | 9 | t
1192 | 9 | t
1193 | 11 | t
1194 | 9 | t
1195 | 11 | t
1196 | 9 | t
1197 | 9 | t
1198 | 12 | t
1199 | 9 | t
1200 | 10 | t
(2147 rows)

sirima-g5:DATABASE=> _
```

\d PENDAFTARAN_SEMAS


```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> \d PENDAFTARAN_SEMAS
Table "sirima.pendaftaran_semas"
  Column      |      Type      | Modifiers
-----+-----+-----
id_pendaftaran | integer         | not null
status_hadir  | boolean         | not null
nilai_ujian   | integer         | not null
no_kartu_ujian | character(10)    | not null
lokasi_kota    | character varying(100) | not null
lokasi_tempat  | character varying(150) | not null
Indexes:
    "pendaftaran_semas_pkey" PRIMARY KEY, btree (id_pendaftaran)
Foreign-key constraints:
    "pendaftaran_semas_id_pendaftaran_fkey" FOREIGN KEY (id_pendaftaran) REFERENCES pendaftaran(id) ON UPDATE CASCADE ON DELETE CASCADE
    "pendaftaran_semas_lokasi_kota_fkey" FOREIGN KEY (lokasi_kota, lokasi_tempat) REFERENCES lokasi_ujian(kota, tempat) ON UPDATE CASCADE ON DELETE CASCADE
Referenced by:
    TABLE "pembayaran" CONSTRAINT "pembayaran_id_pendaftaran_fkey" FOREIGN KEY (id_pendaftaran) REFERENCES pendaftaran_semas(id_pendaftaran) ON UPDATE CASCADE ON DELETE CASCADE
    TABLE "pendaftaran_semas_pascasarjana" CONSTRAINT "pendaftaran_semas_pascasarjana_id_pendaftaran_fkey" FOREIGN KEY (id_pendaftaran) REFERENCES pendaftaran_semas(id_pendaftaran) ON UPDATE CASCADE ON DELETE CASCADE
    TABLE "pendaftaran_semas_sarjana" CONSTRAINT "pendaftaran_semas_sarjana_id_pendaftaran_fkey" FOREIGN KEY (id_pendaftaran) REFERENCES pendaftaran_semas(id_pendaftaran) ON UPDATE CASCADE ON DELETE CASCADE

sirima-g5::DATABASE=> _
```

SELECT * FROM PENDAFTARAN_SEMAS;


```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
Balairung 1174 | t | 53 | 3046736646 | Depok |
Balairung Kampus UI 1176 | t | 68 | 3046736648 | Depok |
Balairung Kampus UI 1178 | t | 76 | 3046736650 | Depok |
Balairung Kampus UI 1180 | t | 62 | 3046736652 | Depok |
Balairung Kampus UI 1182 | f | 0 | 3046736654 | Depok |
Balairung Kampus UI 1184 | f | 0 | 3046736656 | Depok |
Balairung Kampus UI 1186 | t | 91 | 3046736658 | Depok |
Balairung Kampus UI 1188 | t | 97 | 3046736660 | Depok |
Balairung Kampus UI 1190 | t | 93 | 3046736662 | Depok |
Balairung Kampus UI 1192 | t | 98 | 3046736664 | Depok |
Balairung Kampus UI 1194 | t | 95 | 3046736666 | Depok |
Balairung Kampus UI 1196 | t | 99 | 3046736668 | Depok |
Balairung Kampus UI 1198 | t | 100 | 3046736670 | Depok |
Balairung Kampus UI 1200 | t | 94 | 3046736672 | Depok |
(1000 rows)

sirima-g5:DATABASE=> _
```

\\d PENDAFTARAN_SEMAS_PASCASARJANA


```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> \d PENDAFTARAN_SEMAS_PASCASARJANA
Table "sirima.pendaftaran_semas_pascasarjana"
Column          |          Type          | Modifiers
-----+-----+-----
id_pendaftaran  | integer                | not null
nilai_tpa       | integer                | not null
nilai_toefl     | integer                | not null
jenjang_terakhir | character(2)           | not null
asal_univ       | character varying(100) | not null
alamat_univ     | text                   | not null
prodi_terakhir  | character varying(100) | not null
nilai_ipk       | numeric(10,2)          | not null
no_ijazah       | character varying(50)  | not null
tgl_lulus       | date                    | not null
jenjang         | character(2)           | not null
nama_rekomender | character varying(100) | not null
prop_penelitian | character varying(100) | not null
Indexes:
    "pendaftaran_semas_pascasarjana_pkey" PRIMARY KEY, btree (id_pendaftaran)
Foreign-key constraints:
    "pendaftaran_semas_pascasarjana_id_pendaftaran_fkey" FOREIGN KEY (id_pendaftaran) REFERENCES pendaftaran_semas(id_pendaftaran) ON UPDATE CASCADE ON DELETE CASCADE
    "pendaftaran_semas_pascasarjana_jenjang_fkey" FOREIGN KEY (jenjang) REFERENCES jenjang(nama) ON UPDATE CASCADE ON DELETE CASCADE
    "pendaftaran_semas_pascasarjana_jenjang_terakhir_fkey" FOREIGN KEY (jenjang_terakhir) REFERENCES jenjang(nama) ON UPDATE CASCADE ON DELETE CASCADE

sirima-g5::DATABASE=> _
```

SELECT * FROM PENDAFTARAN_SEMAS_PASCASARJANA;


```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
1194 | 644 | 849 | S2 | Universitas Diponegoro |
| Jl. Diponegoro No. 71, Semarang | Fisika
| 3.92 | SKS79156387369 | 2007-09-20 | S3 | Quentin | peneliti
an_124517.pdf
1195 | 620 | 759 | S2 | Universitas Gadjah |
| Jl. Achmad Yani No. 2, By Pass, Yogyakarta | Psikologi
| 3.86 | SKS79156387370 | 2007-09-25 | S3 | Marny | peneliti
an_124518.pdf
1196 | 684 | 757 | S2 | Universitas Diponegoro |
| Jl. Diponegoro No. 71, Semarang | Ilmu Administrasi
| 3.75 | SKS79156387371 | 2007-08-29 | S3 | Bruno | peneliti
an_124519.pdf
1197 | 651 | 835 | S2 | Institut Teknologi |
| Jl. Raya Mangga Besar Raya 137 / 139, Surabaya | Akutansi
| 3.75 | SKS79156387372 | 2007-09-14 | S3 | Ivan | peneliti
an_124520.pdf
1198 | 627 | 751 | S2 | Institut Teknologi |
| Jl. Kali Pasir No. 9, Bandung | Sastra Inggris
| 3.82 | SKS79156387373 | 2007-08-21 | S3 | Walter | peneliti
an_124521.pdf
1199 | 674 | 827 | S2 | Universitas Gadjah |
| Jl. Achmad Yani No. 2, By Pass, Yogyakarta | Sastara Belanda
| 3.78 | SKS79156387374 | 2007-08-01 | S3 | Peter | peneliti
an_124522.pdf
1200 | 642 | 850 | S2 | Institut Teknologi |
| Jl. Raya Mangga Besar Raya 137 / 139, Surabaya | Sastra Inggris
| 3.86 | SKS79156387375 | 2007-08-06 | S3 | Carly | peneliti
an_124523.pdf
(200 rows)

sirima-g5::DATABASE=>
```

\\d PENDAFTARAN_SEMAS_SARJANA


```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5

sirima-g5::DATABASE=> \d PENDAFTARAN_SEMAS_SARJANA
Table "sirima.pendaftaran_semas_sarjana"
  Column      |      Type      | Modifiers
-----+-----+-----
id_pendaftaran | integer        | not null
asal_sekolah   | character varying(100) | not null
jenis_sma      | character varying(50)  | not null
alamat_sekolah | text           | not null
nisn           | character varying(10)  | not null
tgl_lulus      | date           | not null
nilai_ujian    | numeric(10,2)         | not null
Indexes:
    "pendaftaran_semas_sarjana_pkey" PRIMARY KEY, btree (id_pendaftaran)
Foreign-key constraints:
    "pendaftaran_semas_sarjana_id_pendaftaran_fkey" FOREIGN KEY (id_pendaftaran)
    REFERENCES pendaftaran_semas(id_pendaftaran) ON UPDATE CASCADE ON DELETE CASCADE

sirima-g5::DATABASE=>
```

SELECT * FROM PENDAFTARA_SEMAS_SARJANA;


```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
007-06-29 | 37.08
992 | SMA Negeri 16 Jakarta Selatan | IPS | Jl. Cendrawa
sih No.1 Komp. Dep. Han, Mabes TNI Slipi, Jakarta Selatan | 9945675596 | 2
007-07-11 | 38.71
993 | SMA Negeri 01 Palembang | IPA | Jl. Daan Mog
ot No. 34, Palembang | 9945675597 | 2
007-06-02 | 37.34
994 | SMK Negeri 14 Aceh | Teknik Mesin | Jl. Kyai Tap
a No. 1, Aceh | 9945675598 | 2
007-07-13 | 37.41
995 | SMA Negeri 08 Jakarta Utara | IPA | Jl. Kintaman
i Raya No. 2, Kawasan Daan Mogot Baru, Jakarta Utara | 9945675599 | 2
007-07-11 | 37.72
996 | SMA Negeri 09 Depok | IPA | Jl. Raya Pej
uangan Kav. 8, Depok | 9945675600 | 2
007-06-03 | 38.55
997 | SMK Negeri 11 Banten | Teknik Komputer | Jl. Kedoya R
aya / Al-Kamal No. 2, Banten | 9945675601 | 2
007-06-22 | 37.72
998 | SMK Negeri 16 Bandung | Teknik Komputer | Jl. Panjang
Arteri 26, Bandung | 9945675602 | 2
007-06-09 | 38.60
999 | SMK Negeri 04 Bogor | Teknik Otomasi | Jl. Raya Keb
ayoran Lama No. 64 , Bogor | 9945675603 | 2
007-06-25 | 38.74
1000 | SMA Negeri 12 Bali | IPA | Jl. Puri Ind
ah Raya Blok S-2, Bali | 9945675604 | 2
007-06-06 | 37.65
(800 rows)

sirima-g5:DATABASE=>
```


\d PENDAFTARAN_UUI

```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
REFERENCES pendaftaran_semas(id_pendaftaran) ON UPDATE CASCADE ON DELETE CASCADE
E

sirima-g5::DATABASE=> \d PENDAFTARAN_UUI
      Table "sirima.pendaftaran_uui"
  Column          |      Type      | Modifiers
-----+-----+-----
 id_pendaftaran   | integer         | not null
 rapot            | character varying(100) | not null
 surat_rekomendasi | character varying(100) | not null
 asal_sekolah     | character varying(100) | not null
 jenis_sma        | character varying(50)  | not null
 alamat_sekolah   | text            | not null
 nisp             | character varying(10)  | not null
 tgl_lulus        | date            | not null
 nilai_ujian      | numeric(10,2)      | not null
Indexes:
    "pendaftaran_uui_pkey" PRIMARY KEY, btree (id_pendaftaran)
Foreign-key constraints:
    "pendaftaran_uui_id_pendaftaran_fkey" FOREIGN KEY (id_pendaftaran) REFERENCES pendaftaran(id) ON UPDATE CASCADE ON DELETE CASCADE
Referenced by:
    TABLE "rekomendasi" CONSTRAINT "rekomendasi_id_pendaftaran_fkey" FOREIGN KEY (id_pendaftaran) REFERENCES pendaftaran_uui(id_pendaftaran) ON UPDATE CASCADE ON DELETE CASCADE

sirima-g5::DATABASE=>
```

SELECT * FROM PENDAFTARAN_UUI


```

Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
192 | raport_32758.pdf | rekomendasi_45512.pdf | SMA Negeri 12 Jakarta Utara
| IPS | 9945675408 | 2007-07-09 | 34.19
| 9945675409 | 2007-07-14 | 34.54
193 | raport_32759.pdf | rekomendasi_45513.pdf | SMK Negeri 14 Balikpapan
| Analisa Kimia | Jl. Letjen S. Parman Kav. 84-86, Balikpapan
| 9945675410 | 2007-06-27 | 35.78
194 | raport_32760.pdf | rekomendasi_45514.pdf | SMK Negeri 02 Makassar
| Teknik Mesin | Jl. Letjen S. Parman Kav. 87, Slipi, Makassar
| 9945675411 | 2007-06-06 | 34.39
195 | raport_32761.pdf | rekomendasi_45515.pdf | SMA Negeri 07 Jakarta Utara
| IPS | Jl. Letjen S. Parman Kav. 87, Jakarta Utara
| 9945675412 | 2007-06-20 | 35.42
196 | raport_32762.pdf | rekomendasi_45516.pdf | SMA Negeri 14 Jakarta Utara
| IPA | Jl. Tanah Sereal VII / 9, Jakarta Utara
| 9945675413 | 2007-07-21 | 35.14
197 | raport_32763.pdf | rekomendasi_45517.pdf | SMA Negeri 01 Balikpapan
| IPS | Jl. Kyai Tapa No. , Balikpapan
| 9945675414 | 2007-07-29 | 36.44
198 | raport_32764.pdf | rekomendasi_45518.pdf | SMA Negeri 11 Garut
| IPS | Jl. Anggrek No. 2 B, Garut
| 9945675415 | 2007-07-30 | 36.12
199 | raport_32765.pdf | rekomendasi_45519.pdf | SMA Negeri 14 Bandung
| IPS | Jl. Pesanggrahan No. 1, Bandung
| 9945675416 | 2007-06-09 | 36.31
200 | raport_32766.pdf | rekomendasi_45520.pdf | SMA Negeri 18 Papua
| IPA | Jl. RS Fatmawati No. 80 - 82, Papua
| 9945675417 | 2007-06-15 | 35.76
(200 rows)

sirima-g5::DATABASE=>

```

\d PENERIMAAN_PRODI

```

Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> \d PENERIMAAN_PRODI
Table "sirima.penerimaan_prodi"
Column          | Type          | Modifiers
-----+-----+-----
nomor_periode   | integer       | not null
tahun_periode   | character(4)  | not null
kode_prodi      | integer       | not null
kuota           | integer       | not null
jumlah_pelamar  | integer       |
jumlah_diterima | integer       |
Indexes:
    "penerimaan_prodi_pkey" PRIMARY KEY, btree (nomor_periode, tahun_periode, kode_prodi)
Foreign-key constraints:
    "penerimaan_prodi_kode_prodi_fkey" FOREIGN KEY (kode_prodi) REFERENCES program_studi(kode) ON UPDATE CASCADE ON DELETE CASCADE
    "penerimaan_prodi_nomor_periode_fkey" FOREIGN KEY (nomor_periode, tahun_periode) REFERENCES periode_penerimaan(nomor, tahun) ON UPDATE CASCADE ON DELETE CASCADE

sirima-g5::DATABASE=>

```

SELECT * FROM PENERIMAAN_PRODI;


```

Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
45      2 | 2008      |      12 | 53 |      530 |
43      2 | 2008      |      9  | 54 |      430 |
        3 | 2009      |      1  | 55 |      525 |
45      3 | 2009      |      2  | 64 |      640 |
61      3 | 2009      |     18  | 52 |      438 |
48      3 | 2009      |      3  | 65 |      621 |
60      2 | 2008      |     18  | 69 |      487 |
62      2 | 2008      |     19  | 53 |      561 |
39      2 | 2008      |      1  | 50 |      644 |
36      2 | 2008      |      5  | 65 |      451 |
50      3 | 2009      |     11  | 58 |      434 |
47      3 | 2009      |     17  | 73 |      502 |
62      1 | 2007      |      2  | 68 |      678 |
64      1 | 2007      |      4  | 71 |      649 |
64
(53 rows)

sirima-g5:DATABASE=>

```

\d PENGAWAS

```

Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5

sirima-g5:DATABASE=> \d PENGAWAS
Table "sirima.pengawas"
  Column      |      Type      | Modifiers
-----+-----+-----
 nomor_induk  | character varying(16) | not null
 nama         | character varying(100) | not null
 no_telp      | text             | not null
 lokasi_kota  | character varying(100) | not null
 lokasi_tempat | character varying(150) | not null
 lokasi_id    | smallint         | not null
Indexes:
    "pengawas_pkey" PRIMARY KEY, btree (nomor_induk)
Foreign-key constraints:
    "pengawas_lokasi_kota_fkey" FOREIGN KEY (lokasi_kota, lokasi_tempat, lokasi_id) REFERENCES ruang_ujian(kota, tempat, id) ON UPDATE CASCADE ON DELETE CASCADE

sirima-g5:DATABASE=>

```

SELECT * FROM PENGAWAS;


```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
45','Depok','Kampus UII',10);
ERROR: duplicate key value violates unique constraint "pengawas_pkey"
DETAIL: Key (nomor_induk)=(3482652437928359) already exists.
sirima-g5::DATABASE=> select * from pengawas;
  nomor_induk | nama | no_telp | lokasi_kota | lokasi
-----+-----+-----+-----+-----
3482652437928359 | Bagas Pratama | 085629273045 | Depok | Kampus UII
3482652437928350 | Sri Lestari | 085635425346 | Depok | Kampus UI F
3482652437928351 | Arwan Singgih | 085223032704 | Jakarta Pusat | Kampus UI A
3482652437928352 | Kin Dhananjaya | 085622833521 | Depok | Kampus UI F
3482652437928353 | Ruri Narendra | 085335852492 | Jakarta Pusat | Kampus UI K
3482652437928354 | Tommy Wijaya | 085235083381 | Depok | Kampus UI F
3482652437928355 | Antonio Ricardo | 085228614030 | Jakarta Pusat | Kampus UI F
3482652437928356 | Arwin Wijanarko | 085529652296 | Depok | Kampus UI K
3482652437928357 | Arief Wirayudha | 085350943646 | Jakarta Pusat | Kampus UI S
3482652437928358 | Muhammad Mirza | 085346792585 | Depok | Balairung K
(10 rows)

sirima-g5::DATABASE=>
```

\d PERIODE_PENERIMAAN

```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> \d PERIODE_PENERIMAAN
Table "sirima.periode_penerimaan"
Column |      Type      | Modifiers
-----+-----+-----
nomor | smallint | not null
tahun | character(4) | not null
Indexes:
    "periode_penerimaan_pkey" PRIMARY KEY, btree (nomor, tahun)
Referenced by:
    TABLE "jadwal_penting" CONSTRAINT "jadwal_penting_nomor_fkey" FOREIGN KEY (nomor, tahun) REFERENCES periode_penerimaan(nomor, tahun) ON UPDATE CASCADE ON DELETE CASCADE
    TABLE "pendaftaran" CONSTRAINT "pendaftaran_nomor_periode_fkey" FOREIGN KEY (nomor_periode, tahun_periode) REFERENCES periode_penerimaan(nomor, tahun) ON UPDATE CASCADE ON DELETE CASCADE
    TABLE "penerimaan_prodi" CONSTRAINT "penerimaan_prodi_nomor_periode_fkey" FOREIGN KEY (nomor_periode, tahun_periode) REFERENCES periode_penerimaan(nomor, tahun) ON UPDATE CASCADE ON DELETE CASCADE

sirima-g5::DATABASE=>
```

SELECT * FROM PERIODE_PENERIMAAN;


```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=>
sirima-g5::DATABASE=>
sirima-g5::DATABASE=>
sirima-g5::DATABASE=>
sirima-g5::DATABASE=>
sirima-g5::DATABASE=>
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sirima-g5::DATABASE=>
sirima-g5::DATABASE=>
sirima-g5::DATABASE=>
sirima-g5::DATABASE=>
sirima-g5::DATABASE=>
sirima-g5::DATABASE=>
sirima-g5::DATABASE=> select * from periode_penerimaan;
  nomor | tahun
-----+-----
       1 | 2007
       2 | 2008
       3 | 2009
(3 rows)

sirima-g5::DATABASE=> _
```

\\d PROGRAM_STUDI


```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5

sirima-g5::DATABASE=> \d PROGRAM_STUDI
Table "sirima.program_studi"
  Column      |      Type      | Modifiers
-----+-----+-----
 kode         | integer        | not null default nextval('program_studi_kode_seq'::regclass)
 nama         | character varying(100) | not null
 jenis_kelas  | character varying(50) | not null
 nama_fakultas | character varying(50) | not null
 jenjang      | character(2)     | not null
Indexes:
    "program_studi_pkey" PRIMARY KEY, btree (kode)
Foreign-key constraints:
    "program_studi_jenjang_fkey" FOREIGN KEY (jenjang) REFERENCES jenjang(nama) ON UPDATE CASCADE ON DELETE CASCADE
Referenced by:
    TABLE "pendaftaran_prodi" CONSTRAINT "pendaftaran_prodi_kode_prodi_fkey" FOREIGN KEY (kode_prodi) REFERENCES program_studi(kode) ON UPDATE CASCADE ON DELETE CASCADE
    TABLE "penerimaan_prodi" CONSTRAINT "penerimaan_prodi_kode_prodi_fkey" FOREIGN KEY (kode_prodi) REFERENCES program_studi(kode) ON UPDATE CASCADE ON DELETE CASCADE

sirima-g5::DATABASE=> _
```

SELECT * FROM PROGRAM_STUDI;


```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
ltas,jenjang) values (20,'Ilmu Komputer','Paralel','Ilmu Komputer','S1');
ERROR: duplicate key value violates unique constraint "program_studi_pkey"
DETAIL: Key (kode)=(20) already exists.
sirima-g5::DATABASE=> select * from program_studi;
 kode |      nama      | jenis_kelas | nama_fakultas | jenj
ang
-----+-----+-----+-----+-----
 1 | Kedokteran      | Reguler     | Kedokteran    | S1
 2 | Matematika      | Reguler     | Matematika dan Pengetahuan Alam | S1
 3 | Teknik Sipil    | Reguler     | Teknik        | S1
 4 | Ilmu Komputer   | Reguler     | Ilmu Komputer | S1
 5 | Kedokteran      | Reguler     | Kedokteran    | S2
 8 | Ilmu Komputer   | Reguler     | Ilmu Komputer | S2
 9 | Kedokteran      | Reguler     | Kedokteran    | S3
10 | Biologi         | Reguler     | Matematika dan Pengetahuan Alam | S3
11 | Teknik Sipil    | Reguler     | Teknik        | S3
12 | Ilmu Komputer   | Reguler     | Ilmu Komputer | S3
13 | Kedokteran      | Internasional | Kedokteran    | S1
14 | Biologi         | Internasional | Matematika dan Pengetahuan Alam | S1
15 | Teknik Industri | Internasional | Teknik        | S1
16 | Ilmu Komputer   | Internasional | Ilmu Komputer | S1
17 | Kedokteran      | Paralel     | Kedokteran    | S1
18 | Biologi         | Paralel     | Matematika dan Pengetahuan Alam | S1
19 | Teknik Industri | Paralel     | Teknik        | S1
20 | Ilmu Komputer   | Paralel     | Ilmu Komputer | S1
 6 | Fisika          | Reguler     | Matematika dan Pengetahuan Alam | S2
 7 | Teknik Sipil    | Reguler     | Teknik        | S2
(20 rows)

sirima-g5::DATABASE=>
```

\\d REKOMENDASI


```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5

sirima-g5::DATABASE=> \d REKOMENDASI
      Table "sirima.rekomendasi"
  Column      |  Type   | Modifiers
-----+-----+-----
 tgl_review   |  date   | not null
 id_pendaftaran | integer | not null
 status       | boolean | not null
 nilai        | integer | not null
 komentar     |  text   | not null
Indexes:
    "rekomendasi_pkey" PRIMARY KEY, btree (tgl_review, id_pendaftaran)
Foreign-key constraints:
    "rekomendasi_id_pendaftaran_fkey" FOREIGN KEY (id_pendaftaran) REFERENCES pendaftaran_uui(id_pendaftaran) ON UPDATE CASCADE ON DELETE CASCADE

sirima-g5::DATABASE=> 
```

SELECT * FROM REKOMENDASI;


```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
2009-03-24 | 173 | f | 78 | Cukup Berprestasi
2009-03-30 | 174 | f | 80 | Cukup Berprestasi
2009-04-07 | 175 | f | 77 | Cukup Berprestasi
2009-03-31 | 176 | f | 79 | Cukup Berprestasi
2009-03-16 | 177 | f | 77 | Cukup Berprestasi
2009-03-29 | 178 | f | 73 | Cukup Berprestasi
2009-04-15 | 179 | f | 79 | Cukup Berprestasi
2009-04-06 | 180 | f | 76 | Cukup Berprestasi
2009-04-13 | 181 | f | 75 | Cukup Berprestasi
2009-04-06 | 182 | f | 77 | Cukup Berprestasi
2009-04-14 | 183 | f | 74 | Cukup Berprestasi
2009-04-06 | 184 | f | 76 | Cukup Berprestasi
2009-03-23 | 185 | f | 70 | Cukup Berprestasi
2009-04-12 | 186 | f | 74 | Cukup Berprestasi
2009-04-05 | 187 | f | 70 | Cukup Berprestasi
2009-04-03 | 188 | f | 80 | Cukup Berprestasi
2009-03-16 | 189 | f | 71 | Cukup Berprestasi
2009-04-06 | 190 | f | 74 | Cukup Berprestasi
2009-03-27 | 191 | f | 73 | Cukup Berprestasi
2009-04-03 | 192 | f | 78 | Cukup Berprestasi
2009-03-15 | 193 | f | 75 | Cukup Berprestasi
2009-04-14 | 194 | f | 71 | Cukup Berprestasi
2009-04-03 | 195 | f | 74 | Cukup Berprestasi
2009-04-11 | 196 | f | 74 | Cukup Berprestasi
2009-03-25 | 197 | f | 80 | Cukup Berprestasi
2009-03-31 | 198 | f | 74 | Cukup Berprestasi
2009-03-31 | 199 | f | 71 | Cukup Berprestasi
2009-04-10 | 200 | f | 79 | Cukup Berprestasi
(200 rows)

sirima-g5::DATABASE=>
```

\\d RUANG_UJIAN


```
Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5
sirima-g5::DATABASE=> \d RUANG_UJIAN
Table "sirima.ruang_ujian"
Column |          Type          | Modifiers
-----+-----+-----
kota   | character varying(100) | not null
tempat | character varying(150) | not null
id      | smallint               | not null
Indexes:
    "ruang_ujian_pkey" PRIMARY KEY, btree (kota, tempat, id)
Foreign-key constraints:
    "ruang_ujian_kota_fkey" FOREIGN KEY (kota, tempat) REFERENCES lokasi_ujian(kota, tempat) ON UPDATE CASCADE ON DELETE CASCADE
Referenced by:
    TABLE "pengawas" CONSTRAINT "pengawas_lokasi_kota_fkey" FOREIGN KEY (lokasi_kota, lokasi_tempat, lokasi_id) REFERENCES ruang_ujian(kota, tempat, id) ON UPDATE CASCADE ON DELETE CASCADE

sirima-g5::DATABASE=>
```

SELECT * FROM RUANG_UJIAN;


```

Git CMD - heroku pg:psql postgresql-horizontal-15316 --app sirima-g5

sirima-g5::DATABASE=> insert into ruang_ujian (kota,tempat,id) values ('Depok','
Kampus UI',10);
ERROR: insert or update on table "ruang_ujian" violates foreign key constraint
"ruang_ujian_kota_fkey"
DETAIL: Key (kota, tempat)=(Depok, Kampus UI) is not present in table "lokasi_u
jian".
sirima-g5::DATABASE=> insert into lokasi_ujian (kota,tempat,nomor_periode,tahun_
periode,jenjang,waktu_awal) values ('Depok','Kampus UUI',3,'2009','S3','17/8/200
9 07:30');
INSERT 0 1
sirima-g5::DATABASE=> insert into ruang_ujian (kota,tempat,id) values ('Depok','
Kampus UUI',10);
INSERT 0 1
sirima-g5::DATABASE=> select * from ruang_ujian;
  kota      |      tempat      | id
-----+-----+-----
 Depok      | Kampus UI Fasilkom | 1
 Jakarta Pusat | Kampus UI Akuntansi | 2
 Depok      | Kampus UI FIB      | 3
 Jakarta Pusat | Kampus UI Kedokteran | 4
 Depok      | Kampus UI FEB      | 5
 Jakarta Pusat | Kampus UI Fasilkom | 6
 Depok      | Kampus UI Kesmas    | 7
 Jakarta Pusat | Kampus UI Sastra Inggris | 8
 Depok      | Balairung Kampus UI | 9
 Depok      | Kampus UUI         | 10
(10 rows)

sirima-g5::DATABASE=>

```

D. Pembagian tugas dan kontribusi

| NPM | Nama | Deskripsi Tugas | Kontribusi |
|------------|----------------------|---|------------|
| 1606954735 | Arri Kurniawan | Membuat script DDL untuk create table, stored procedure dan trigger | 25% |
| 1606954754 | Budi Indrawan | Membuat script DDL untuk insert query dan program untuk generate data acak (9 table) | 25% |
| 1606954792 | Fadly Muhammad Ridho | Membuat script DDL untuk insert query dan program untuk generate data acak (9 table) | 25% |
| 1406649403 | Riyandi Eko Pambudi | Menyusun laporan akhir, melakukan koreksi query serta eksekusi script DDL ke dalam sistem | 25% |

