**No 1.**

postgres=# \du

List of roles

Role name | Attributes | Member of

-----------+------------------------------------------------------------+-----------

postgres | Superuser, Create role, Create DB, Replication, Bypass RLS | {}

**No 2.**

postgres=# create role saif with login createrole createdb replication superuser connection limit -1 password'saif';

CREATE ROLE

postgres=# \du

List of roles

Role name | Attributes | Member of

-----------+------------------------------------------------------------+-----------

postgres | Superuser, Create role, Create DB, Replication, Bypass RLS | {}

saif | Superuser, Create role, Create DB, Replication | {}

**No 3.**

postgres=# \! clear or postgres=# \! cls

**No 4.**

postgres=# \l

List of databases

Name | Owner | Encoding | Collate | Ctype | Access privileges

-----------+----------+----------+----------------------------+----------------------------+-----------------------

dvdrental | postgres | UTF8 | English\_United States.1252 | English\_United States.1252 |

postgres | postgres | UTF8 | English\_United States.1252 | English\_United States.1252 |

template0 | postgres | UTF8 | English\_United States.1252 | English\_United States.1252 | =c/postgres +

| | | | | postgres=CTc/postgres

template1 | postgres | UTF8 | English\_United States.1252 | English\_United States.1252 | =c/postgres +

| | | | | postgres=CTc/postgres

(4 rows)

**No 5.**

postgres=# create database test;

CREATE DATABASE

postgres=# \l

List of databases

Name | Owner | Encoding | Collate | Ctype | Access privileges

-----------+----------+----------+----------------------------+----------------------------+-----------------------

dvdrental | postgres | UTF8 | English\_United States.1252 | English\_United States.1252 |

postgres | postgres | UTF8 | English\_United States.1252 | English\_United States.1252 |

template0 | postgres | UTF8 | English\_United States.1252 | English\_United States.1252 | =c/postgres +

| | | | | postgres=CTc/postgres

template1 | postgres | UTF8 | English\_United States.1252 | English\_United States.1252 | =c/postgres +

| | | | | postgres=CTc/postgres

test | postgres | UTF8 | English\_United States.1252 | English\_United States.1252 |

**No 6.**

postgres=# \c test saif

Password for user saif:

You are now connected to database "test" as user "saif".

Test=#

**No 7.**

test=# create table trial (id bigserial,name varchar, email varchar);

CREATE TABLE

test=#

**No 8.**

test=# \dt

List of relations

Schema | Name | Type | Owner

--------+-------+-------+----------

public | trial | table | postgres

(1 row)

**No 9.**

test=# \d trial

Table "public.trial"

Column | Type | Collation | Nullable | Default

--------+-------------------+-----------+----------+-----------------------------------

id | bigint | | not null | nextval('trial\_id\_seq'::regclass)

name | character varying | | |

email | character varying | | |

**No 10.**

test=# insert into trial (name,email) values ('abcd','@gmail'),('efgh','@yahoo'), ('ijkl','@hotmail');

INSERT 0 3

**No 11.**

test=# select \* from trial;

id | name | email

----+------+----------

1 | abcd | @gmail

2 | efgh | @yahoo

3 | ijkl | @hotmail

(3 rows)

**No 12.**

test=# update trial set name = 'xxxx' where id=1;

UPDATE 1

test=#

test=# select \* from trial;

id | name | email

----+------+----------

2 | efgh | @yahoo

3 | ijkl | @hotmail

1 | xxxx | @gmail

(3 rows)

**No 13.**

test=# delete from trial where id =2;

DELETE 1

test=# select \* from trial;

id | name | email

----+------+----------

3 | ijkl | @hotmail

1 | xxxx | @gmail

(2 rows)

**No 14.**

test=# delete from trial;

DELETE 2

test=# select \* from trial;

id | name | email

----+------+-------

(0 rows)

**No 15.**

test=# drop table trial;

DROP TABLE

test=# \dt

Did not find any relations.

Test=#

**No 16.**

test=# \c dvdrental

You are now connected to database "dvdrental" as user "postgres".

dvdrental=# drop database test;

DROP DATABASE

dvdrental=# \l

List of databases

Name | Owner | Encoding | Collate | Ctype

-----------+----------+----------+----------------------------+----------------------------

dvdrental | postgres | UTF8 | English\_United States.1252 | English\_United States.1252

postgres | postgres | UTF8 | English\_United States.1252 | English\_United States.1252

template0 | postgres | UTF8 | English\_United States.1252 | English\_United States.1252

| | | |

template1 | postgres | UTF8 | English\_United States.1252 | English\_United States.1252

| | | |

(4 rows)

**No 17.**

dvdrental=# select first\_name from actor;

first\_name

-------------

Penelope

Nick

Ed

Jennifer

Johnny

Bette

Grace

Matthew

Joe

Christian

Zero

Karl

Uma

Vivien

Cuba

Fred

Helen

Dan

Bob

Lucille

Kirsten

--more--

**No 18.**

dvdrental=# select first\_name from actor limit 5;

first\_name

------------

Penelope

Nick

Ed

Jennifer

Johnny

(5 rows)

**No 19.**

dvdrental=# select first\_name,actor\_id from actor limit 5;

first\_name | actor\_id

------------+----------

Penelope | 1

Nick | 2

Ed | 3

Jennifer | 4

Johnny | 5

(5 rows)

**No 20.**

dvdrental=# select first\_name,actor\_id from actor order by first\_name limit 5;

first\_name | actor\_id

------------+----------

Adam | 132

Adam | 71

Al | 165

Alan | 173

Albert | 125

(5 rows)

**No 21.**

dvdrental=# select first\_name,actor\_id from actor where first\_name = 'Adam';

first\_name | actor\_id

------------+----------

Adam | 71

Adam | 132

(2 rows)

**No 22.**

dvdrental=# select first\_name,actor\_id from actor where first\_name = 'Adam'order by actor\_id;

first\_name | actor\_id

------------+----------

Adam | 71

Adam | 132

(2 rows)

**No 23.**

dvdrental=# select distinct first\_name from actor order by first\_name limit 8;

first\_name

------------

Adam

Al

Alan

Albert

Alec

Angela

Angelina

Anne

(8 rows)

**No 24.**

dvdrental=# select \* from actor where first\_name='Ed' and last\_name ='Chase';

actor\_id | first\_name | last\_name | last\_update

----------+------------+-----------+------------------------

3 | Ed | Chase | 2013-05-26 14:47:57.62

(1 row)

**No 25.**

dvdrental=# select \* from actor where first\_name='Ed' and( last\_name ='Chase' or last\_name='Peck');

actor\_id | first\_name | last\_name | last\_update

----------+------------+-----------+------------------------

3 | Ed | Chase | 2013-05-26 14:47:57.62

(1 row)

**No 26.**

dvdrental=# select \* from actor where first\_name='Adam' and( last\_name ='Hopper' or last\_name='Grant');

actor\_id | first\_name | last\_name | last\_update

----------+------------+-----------+------------------------

71 | Adam | Grant | 2013-05-26 14:47:57.62

132 | Adam | Hopper | 2013-05-26 14:47:57.62

(2 rows)

**No 27.**

dvdrental=# select \* from actor where first\_name='Adam' or last\_name='Hudson';

actor\_id | first\_name | last\_name | last\_update

----------+------------+-----------+------------------------

65 | Angela | Hudson | 2013-05-26 14:47:57.62

71 | Adam | Grant | 2013-05-26 14:47:57.62

132 | Adam | Hopper | 2013-05-26 14:47:57.62

(3 rows)

**No 28.**

dvdrental=# select min(actor\_id) from actor;

min

-----

1

(1 row)

**No 29.**

dvdrental=# select max(actor\_id) from actor;

max

-----

200

(1 row)

**No 30.**

dvdrental=# select sum (amount) from payment;

sum

----------

61312.04

(1 row)

**No 31.**

dvdrental=# select customer\_id,sum (amount) from payment group by customer\_id limit 10;

customer\_id | sum

-------------+--------

1 | 114.70

2 | 123.74

3 | 130.76

4 | 81.78

5 | 134.65

6 | 84.75

7 | 130.72

8 | 85.77

9 | 78.80

10 | 94.76

(10 rows)

**No 32.**

dvdrental=# select customer\_id,sum (amount) from payment group by customer\_id order by sum (amount) limit 10;

customer\_id | sum

-------------+-------

318 | 27.93

281 | 32.90

248 | 37.87

320 | 47.85

110 | 49.88

586 | 50.83

288 | 52.81

250 | 54.85

271 | 56.84

395 | 57.81

(10 rows)

**No 33.**

dvdrental=# select customer\_id,sum (amount) from payment group by customer\_id order by sum (amount) desc limit 10;

customer\_id | sum

-------------+--------

148 | 211.55

526 | 208.58

178 | 194.61

137 | 191.62

144 | 189.60

459 | 183.63

181 | 167.67

410 | 167.62

236 | 166.61

403 | 162.67

(10 rows)

**No 34.**

dvdrental=# select count(\*) from payment;

count

-------

14596

(1 row)

dvdrental=# select count(customer\_id) from payment;

count

-------

14596

(1 row)

**No 35.**

dvdrental=# select staff\_id, count(payment\_id) from payment group by staff\_id;

staff\_id | count

----------+-------

1 | 7292

2 | 7304

(2 rows)

**No 36.**

dvdrental=# select now():: date;

now

------------

2020-07-13

(1 row)

**No 37.**

dvdrental=# select now():: time;

now

-----------------

13:20:53.880498

(1 row)

**No 38.**

dvdrental=# select current\_date;

current\_date

--------------

2020-07-13

(1 row)

**No 39.**

dvdrental=# select date (payment\_date),sum(amount) from payment group by payment\_date limit 5;

date | sum

------------+------

2007-04-30 | 4.99

2007-02-15 | 4.99

2007-04-11 | 2.99

2007-03-23 | 5.99

2007-03-23 | 8.99

(5 rows)

**No 40.**

dvdrental=# select customer\_id, sum (amount) from payment group by customer\_id having sum(amount) >'150' limit 10;

customer\_id | sum

-------------+--------

137 | 191.62

144 | 189.60

148 | 211.55

176 | 151.68

178 | 194.61

181 | 167.67

187 | 151.73

236 | 166.61

259 | 154.70

372 | 152.68

(10 rows)

**No 41.**

^

dvdrental=# select customer\_id, sum (amount) from payment group by customer\_id having sum(amount)='150' limit 10;

customer\_id | sum

-------------+-----

(0 rows)

**No 42.**

dvdrental=# select customer\_id, sum (amount) from payment group by customer\_id having sum(amount)>='180' limit 10;

customer\_id | sum

-------------+--------

137 | 191.62

144 | 189.60

148 | 211.55

178 | 194.61

459 | 183.63

526 | 208.58

(6 rows)

**No 43.**

dvdrental=# select 'customer\_id'='staff\_id';

?column?

----------

f

(1 row)

**No 44.**

dvdrental=# select 'customer\_id'>'staff\_id';

?column?

----------

f

(1 row)

**No 45.**

dvdrental=# select 'customer\_id'<>'staff\_id';

?column?

----------

t

(1 row)

**No 46.**

dvdrental=# select amount,customer\_id from payment where customer\_id in(341,343,347) limit 15;

amount | customer\_id

--------+-------------

7.99 | 341

1.99 | 341

7.99 | 341

2.99 | 341

7.99 | 341

5.99 | 341

4.99 | 343

6.99 | 343

0.99 | 343

0.99 | 343

6.99 | 343

8.99 | 343

0.99 | 343

8.99 | 347

0.99 | 347

(15 rows)

**No 47.**

dvdrental=# select customer\_id, amount from payment where customer\_id between '341' and '342' limit 10;

customer\_id | amount

-------------+--------

341 | 7.99

341 | 1.99

341 | 7.99

341 | 2.99

341 | 7.99

341 | 5.99

342 | 5.99

342 | 5.99

342 | 2.99

341 | 0.99

(10 rows)

**No 48.**

dvdrental=# select \* from customer where email like'%@sakilacustomer.com';

customer\_id | store\_id | first\_name | last\_name | email | address\_id | activebool | create\_date | last\_update | active

-------------+----------+------------+-----------+-------+------------+------------+-------------+-------------+-------

(0 rows)

dvdrental=# select \* from customer where email like'%@sakilacustomer.org' limit 10;

customer\_id | store\_id | first\_name | last\_name | email | address\_id | activebool | creat

e\_date | last\_update | active

-------------+----------+------------+-----------+-------------------------------------+------------+------------+------

-------+-------------------------+--------

524 | 1 | Jared | Ely | jared.ely@sakilacustomer.org | 530 | t | 2006-

02-14 | 2013-05-26 14:49:45.738 | 1

1 | 1 | Mary | Smith | mary.smith@sakilacustomer.org | 5 | t | 2006-

02-14 | 2013-05-26 14:49:45.738 | 1

2 | 1 | Patricia | Johnson | patricia.johnson@sakilacustomer.org | 6 | t | 2006-

02-14 | 2013-05-26 14:49:45.738 | 1

3 | 1 | Linda | Williams | linda.williams@sakilacustomer.org | 7 | t | 2006-

02-14 | 2013-05-26 14:49:45.738 | 1

4 | 2 | Barbara | Jones | barbara.jones@sakilacustomer.org | 8 | t | 2006-

02-14 | 2013-05-26 14:49:45.738 | 1

5 | 1 | Elizabeth | Brown | elizabeth.brown@sakilacustomer.org | 9 | t | 2006-

02-14 | 2013-05-26 14:49:45.738 | 1

6 | 2 | Jennifer | Davis | jennifer.davis@sakilacustomer.org | 10 | t | 2006-

02-14 | 2013-05-26 14:49:45.738 | 1

7 | 1 | Maria | Miller | maria.miller@sakilacustomer.org | 11 | t | 2006-

02-14 | 2013-05-26 14:49:45.738 | 1

8 | 2 | Susan | Wilson | susan.wilson@sakilacustomer.org | 12 | t | 2006-

02-14 | 2013-05-26 14:49:45.738 | 1

9 | 2 | Margaret | Moore | margaret.moore@sakilacustomer.org | 13 | t | 2006-

02-14 | 2013-05-26 14:49:45.738 | 1

**No 49.**

dvdrental=# select \* from customer where email like'\_\_\_\_\_\_\_\_@sakilacustomer.org' limit 10;

customer\_id | store\_id | first\_name | last\_name | email | address\_id | activebool | create\_date |

last\_update | active

-------------+----------+------------+-----------+-----------------------------+------------+------------+-------------+

-------------------------+--------

118 | 1 | Kim | Cruz | kim.cruz@sakilacustomer.org | 122 | t | 2006-02-14 |

2013-05-26 14:49:45.738 | 1

324 | 2 | Gary | Coy | gary.coy@sakilacustomer.org | 329 | t | 2006-02-14 |

2013-05-26 14:49:45.738 | 1

386 | 1 | Todd | Tan | todd.tan@sakilacustomer.org | 391 | t | 2006-02-14 |

2013-05-26 14:49:45.738 | 1

403 | 1 | Mike | Way | mike.way@sakilacustomer.org | 408 | t | 2006-02-14 |

2013-05-26 14:49:45.738 | 1

433 | 1 | Don | Bone | don.bone@sakilacustomer.org | 438 | t | 2006-02-14 |

2013-05-26 14:49:45.738 | 1

450 | 1 | Jay | Robb | jay.robb@sakilacustomer.org | 455 | t | 2006-02-14 |

2013-05-26 14:49:45.738 | 1

468 | 1 | Tim | Cary | tim.cary@sakilacustomer.org | 473 | t | 2006-02-14 |

2013-05-26 14:49:45.738 | 1

553 | 1 | Max | Pitt | max.pitt@sakilacustomer.org | 559 | t | 2006-02-14 |

2013-05-26 14:49:45.738 | 1

(8 rows)

**No 50.**

**^**

dvdrental=# select \* from country where country ilike 'b%';

country\_id | country | last\_update

------------+------------+---------------------

11 | Bahrain | 2006-02-15 09:44:00

12 | Bangladesh | 2006-02-15 09:44:00

13 | Belarus | 2006-02-15 09:44:00

14 | Bolivia | 2006-02-15 09:44:00

15 | Brazil | 2006-02-15 09:44:00

16 | Brunei | 2006-02-15 09:44:00

17 | Bulgaria | 2006-02-15 09:44:00

(7 rows)

**No 51.**

dvdrental=# \d actor

Table "public.actor"

Column | Type | Collation | Nullable | Default

-------------+-----------------------------+-----------+----------+-----------------------------------------

actor\_id | integer | | not null | nextval('actor\_actor\_id\_seq'::regclass)

first\_name | character varying(45) | | not null |

last\_name | character varying(45) | | not null |

last\_update | timestamp without time zone | | not null | now()

Indexes:

"actor\_pkey" PRIMARY KEY, btree (actor\_id)

"idx\_actor\_last\_name" btree (last\_name)

Referenced by:

TABLE "film\_actor" CONSTRAINT "film\_actor\_actor\_id\_fkey" FOREIGN KEY (actor\_id) REFERENCES actor(actor\_id) ON UPDATE

CASCADE ON DELETE RESTRICT

Triggers:

last\_updated BEFORE UPDATE ON actor FOR EACH ROW EXECUTE FUNCTION last\_updated()

**No 52.**

dvdrental=# \dt actor

List of relations

Schema | Name | Type | Owner

--------+-------+-------+----------

public | actor | table | postgres

(1 row)

**No 53.**

dvdrental=# alter table actor add email varchar(50);

ALTER TABLE

dvdrental=# select \* from actor limit 10;

actor\_id | first\_name | last\_name | last\_update | email

----------+------------+--------------+------------------------+-------

1 | Penelope | Guiness | 2013-05-26 14:47:57.62 |

2 | Nick | Wahlberg | 2013-05-26 14:47:57.62 |

3 | Ed | Chase | 2013-05-26 14:47:57.62 |

4 | Jennifer | Davis | 2013-05-26 14:47:57.62 |

5 | Johnny | Lollobrigida | 2013-05-26 14:47:57.62 |

6 | Bette | Nicholson | 2013-05-26 14:47:57.62 |

7 | Grace | Mostel | 2013-05-26 14:47:57.62 |

8 | Matthew | Johansson | 2013-05-26 14:47:57.62 |

9 | Joe | Swank | 2013-05-26 14:47:57.62 |

10 | Christian | Gable | 2013-05-26 14:47:57.62 |

(10 rows)

**No 54.**

dvdrental=# alter table actor drop column email;

ALTER TABLE

dvdrental=# select \* from actor limit 10;

actor\_id | first\_name | last\_name | last\_update

----------+------------+--------------+------------------------

1 | Penelope | Guiness | 2013-05-26 14:47:57.62

2 | Nick | Wahlberg | 2013-05-26 14:47:57.62

3 | Ed | Chase | 2013-05-26 14:47:57.62

4 | Jennifer | Davis | 2013-05-26 14:47:57.62

5 | Johnny | Lollobrigida | 2013-05-26 14:47:57.62

6 | Bette | Nicholson | 2013-05-26 14:47:57.62

7 | Grace | Mostel | 2013-05-26 14:47:57.62

8 | Matthew | Johansson | 2013-05-26 14:47:57.62

9 | Joe | Swank | 2013-05-26 14:47:57.62

10 | Christian | Gable | 2013-05-26 14:47:57.62

(10 rows)