Laboratório 05 - Introducao a NoSQL
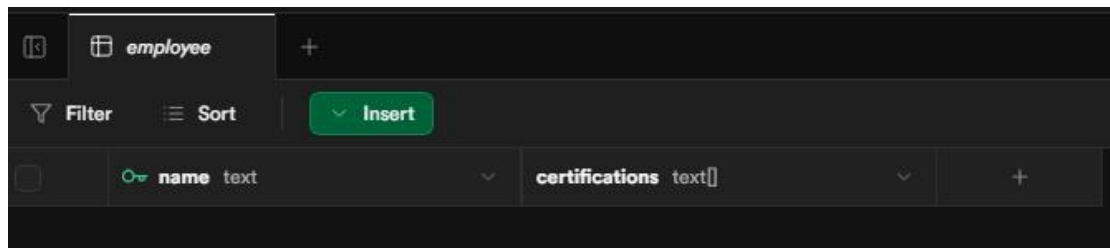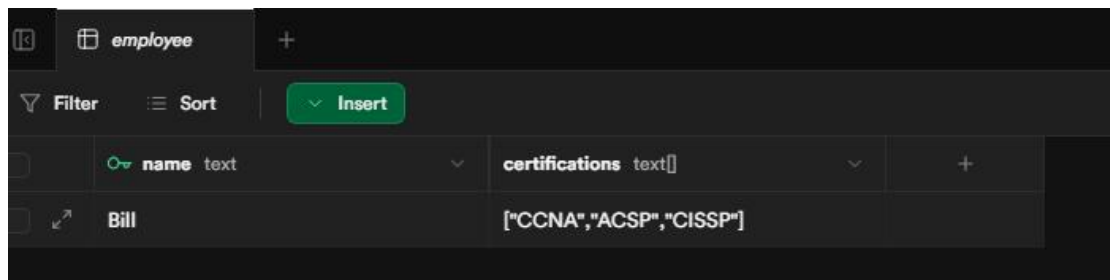Aluno: Herick de Lima Carneiro

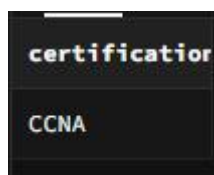1) CREATE TABLE employee (name TEXT PRIMARY KEY, certifications TEXT[]);

2) INSERT INTO employee VALUES ('Bill', '{"CCNA", "ACSP", "CISSP"}');

3) SELECT name FROM employee WHERE certifications @> '{ACSP}';

4) SELECT certifications[1] FROM employee;

5) SELECT unnest(certifications) FROM employee;

6) SELECT name, unnest(certifications) FROM employee;

name	unnest
Bill	CCNA
Bill	ACSP
Bill	CISSP

7) SELECT DISTINCT relkind FROM pg_class ORDER BY 1;

relkind
I
S
c
i
p
r
t
v
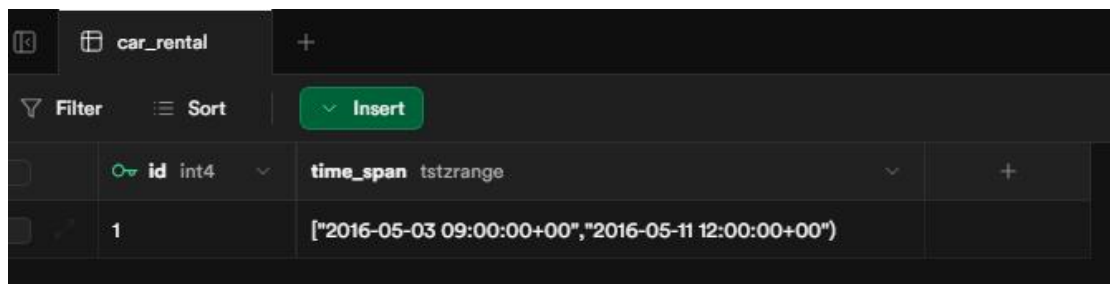
8) SELECT array_agg(DISTINCT relkind) FROM pg_class;

array_agg
{I,S,c,i,p,r,t,v}

9) CREATE TABLE car_rental (id SERIAL PRIMARY KEY, time_span TSTZRANGE);

car_rental +

Filter   Sort   Insert

| id int4 | time_span tstzrange | + |

10) INSERT INTO car_rental VALUES (DEFAULT, '[2016-05-03 09:00:00, 2016-05-11 12:00:00)');

11) SELECT * FROM car_rental WHERE time_span @> '2016-05-09 00:00:00'::timestamptz;

12) SELECT * FROM car_rental WHERE time_span @> '2018-06-09 00:00:00'::timestamptz;

13) INSERT INTO car_rental (time_span) SELECT tstzrange(y, y + '1 day') FROM generate_series('2001-09-01 00:00:00'::timestamptz, '2010-09-01 00:00:00'::timestamptz, '1 day') AS x(y);

id int4	time_span tstzrange
1	["2016-05-03 09:00:00+00","2016-05-11 12:00:00+00")
2	["2001-09-01 00:00:00+00","2001-09-02 00:00:00+00")
3	["2001-09-02 00:00:00+00","2001-09-03 00:00:00+00")
4	["2001-09-03 00:00:00+00","2001-09-04 00:00:00+00")
5	["2001-09-04 00:00:00+00","2001-09-05 00:00:00+00")
6	["2001-09-05 00:00:00+00","2001-09-06 00:00:00+00")
7	["2001-09-06 00:00:00+00","2001-09-07 00:00:00+00")
8	["2001-09-07 00:00:00+00","2001-09-08 00:00:00+00")
9	["2001-09-08 00:00:00+00","2001-09-09 00:00:00+00")
10	["2001-09-09 00:00:00+00","2001-09-10 00:00:00+00")
11	["2001-09-10 00:00:00+00","2001-09-11 00:00:00+00")
12	["2001-09-11 00:00:00+00","2001-09-12 00:00:00+00")
13	["2001-09-12 00:00:00+00","2001-09-13 00:00:00+00")
14	["2001-09-13 00:00:00+00","2001-09-14 00:00:00+00")
15	["2001-09-14 00:00:00+00","2001-09-15 00:00:00+00")
16	["2001-09-15 00:00:00+00","2001-09-16 00:00:00+00")
17	["2001-09-16 00:00:00+00","2001-09-17 00:00:00+00")
18	["2001-09-17 00:00:00+00","2001-09-18 00:00:00+00")
19	["2001-09-18 00:00:00+00","2001-09-19 00:00:00+00")
20	["2001-09-19 00:00:00+00","2001-09-20 00:00:00+00")
21	["2001-09-20 00:00:00+00","2001-09-21 00:00:00+00")

Page 1 of 33   100 rows   3.289 records

14) SELECT * FROM car_rental WHERE time_span @> '2007-08-01 00:00:00'::timestamptz;

15) ALTER TABLE car_rental ADD EXCLUDE USING GIST (time_span WITH &&);

16) INSERT INTO car_rental VALUES (DEFAULT, '[2003-04-01 00:00:00, 2003-04-01 00:00:01]');

17) CREATE TABLE dart (dartno SERIAL, location POINT);

18) INSERT INTO dart (location) SELECT CAST('(' || random() * 100 || ',' || random() * 100 || ')' AS point) FROM generate_series(1, 1000);

dartno int4	location point
1	(67.3720385165419,53.4634378968969)
2	(76.566253553524,76.0881006779086)
Expand row	(23.5484531896211,18.4697906509715)
4	(11.1876433259506,63.0061713327593)
5	(82.9080198867413,8.76102114767503)
6	(81.8015264642725,15.3460915261648)
7	(10.9768914291812,76.5486098740085)
8	(97.414659267011,11.9671030119226)
9	(41.732624023465,20.4362850415241)
10	(78.6767473970543,62.8550268968864)
11	(25.8876574609435,45.993260814299)
12	(94.082573864503,48.7492464952513)
13	(16.0037281484674,75.8436908084228)
14	(8.53167131663086,77.1760583404946)
15	(5.24602459152519,13.1242142181059)
16	(75.8595537243259,12.6473627729222)
17	(95.9620318462136,44.2147881172115)
18	(73.9656988415394,75.1823546032925)
19	(99.2005114826444,32.3176886938118)
20	(38.5932695193741,71.8562903729545)
21	(22.4746075538272,68.1035581811931)

19) SELECT * FROM dart LIMIT 5;

dartno	location
1	(67.3720385165419,53.4634378968969)
2	(76.566253553524,76.0881006779086)
3	(23.5484531896211,18.4697906509715)
4	(11.1876433259506,63.0061713327593)
5	(82.9080198867413,8.76102114767503)

20) SELECT * FROM dart WHERE location <@ '<(50, 50), 4>'::circle;

dartno	location
771	(50.5532611124158,49.8892070713164)
826	(53.2349183013551,47.8691848944745)
912	(51.2610899820167,52.3455496457774)

21) CREATE INDEX dart_idx ON dart USING GIST (location);

22) SELECT * FROM dart WHERE location <@ '<(50, 50), 4>'::circle;

dartno	location
826	(53.2349183013551,47.8691848944745)
771	(50.5532611124158,49.8892070713164)
912	(51.2610899820167,52.3455496457774)

23) SELECT * FROM dart ORDER BY location <-> '(50, 50)'::point LIMIT 2;

Results | Chart | Export ∨

dartno	location
771	(50.5532611124158,49.8892070713164)
912	(51.2610899820167,52.3455496457774)

24) CREATE TABLE printer (doc XML);

25) COPY printer from '/tmp/foomatic.xml';

Results Chart Export ∨

```
ERROR:  42501: permission denied to COPY from a file
DETAIL:  Only roles with privileges of the "pg_read_server_files" role may COPY from a file.
HINT:  Anyone can COPY to stdout or from stdin. psql's \copy command also works for anyone.
```

26) SELECT (xpath('/option/arg_shortname/en', doc)) FROM printer LIMIT 5;

27) CREATE TABLE friend (id SERIAL, data JSON);