

**LAPORAN TUTORIAL LAB 2  
BASIS DATA**



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DEPOK  
2022/2023**

# Laporan Tutorial Lab 2

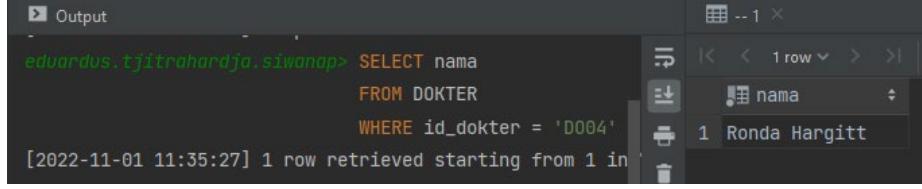
## Basis Data

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#### Latihan 1

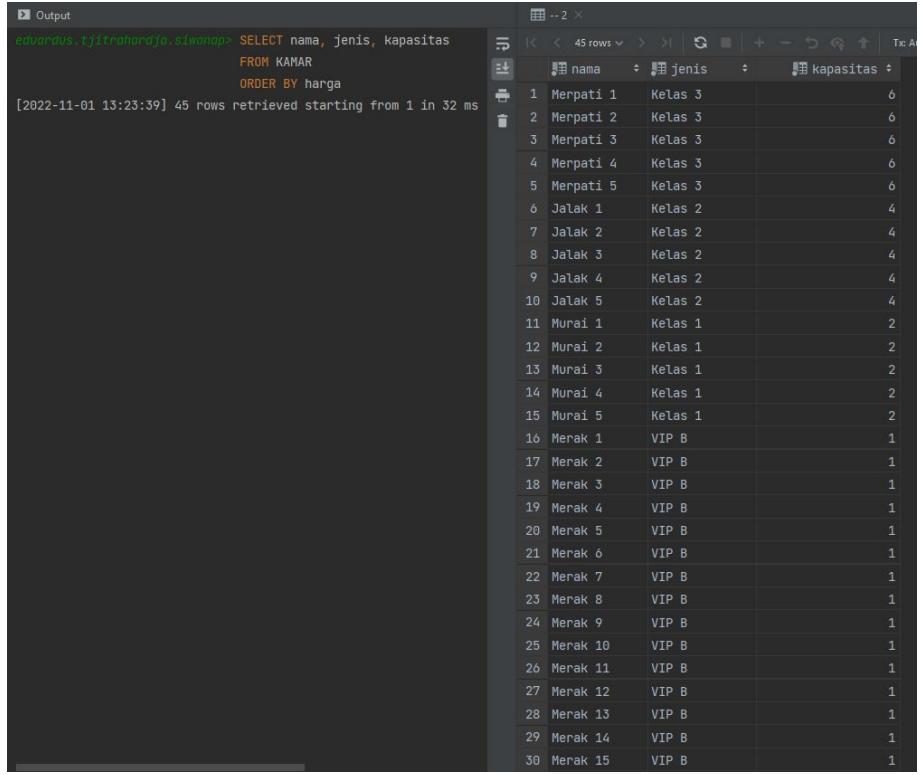
1. [SQL] Jalankan SQL Query pada Contoh 1 hingga Contoh 26 di atas dan cantumkan hasilnya pada laporan.

1.



```
eduardus.tjitrabhardja.siwanap> SELECT nama
   FROM DOKTER
  WHERE id_dokter = 'D0041'
[2022-11-01 11:35:27] 1 row retrieved starting from 1 in 1 ms
```

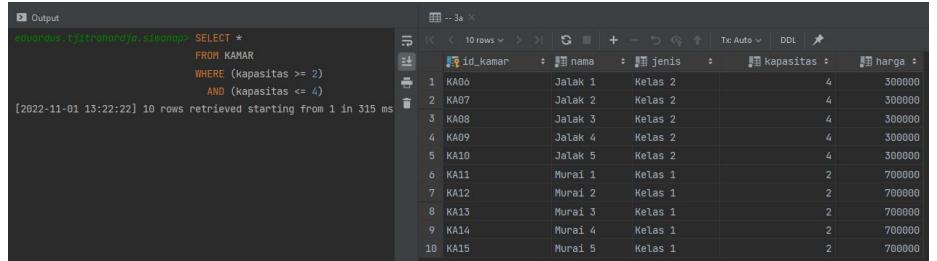
2.



```
eduardus.tjitrabhardja.siwanap> SELECT nama, jenis, kapasitas
   FROM KAMAR
  ORDER BY harga
[2022-11-01 13:23:39] 45 rows retrieved starting from 1 in 32 ms
```

nama	jenis	kapasitas
Merpati 1	Kelas 3	6
Merpati 2	Kelas 3	6
Merpati 3	Kelas 3	6
Merpati 4	Kelas 3	6
Merpati 5	Kelas 3	6
Jalak 1	Kelas 2	4
Jalak 2	Kelas 2	4
Jalak 3	Kelas 2	4
Jalak 4	Kelas 2	4
Jalak 5	Kelas 2	4
Murai 1	Kelas 1	2
Murai 2	Kelas 1	2
Murai 3	Kelas 1	2
Murai 4	Kelas 1	2
Murai 5	Kelas 1	2
Merak 1	VIP B	1
Merak 2	VIP B	1
Merak 3	VIP B	1
Merak 4	VIP B	1
Merak 5	VIP B	1
Merak 6	VIP B	1
Merak 7	VIP B	1
Merak 8	VIP B	1
Merak 9	VIP B	1
Merak 10	VIP B	1
Merak 11	VIP B	1
Merak 12	VIP B	1
Merak 13	VIP B	1
Merak 14	VIP B	1
Merak 15	VIP B	1

3.



```
eduardus.tjitrabhardja.siwanap> SELECT *
   FROM KAMAR
  WHERE (kapasitas >= 2)
    AND (kapasitas <= 4)
[2022-11-01 13:22:22] 10 rows retrieved starting from 1 in 315 ms
```

id_kamar	nama	jenis	kapasitas	harga
KA06	Jalak 1	Kelas 2	4	300000
KA07	Jalak 2	Kelas 2	4	300000
KA08	Jalak 3	Kelas 2	4	300000
KA09	Jalak 4	Kelas 2	4	300000
KA10	Jalak 5	Kelas 2	4	300000
KA11	Murai 1	Kelas 1	2	700000
KA12	Murai 2	Kelas 1	2	700000
KA13	Murai 3	Kelas 1	2	700000
KA14	Murai 4	Kelas 1	2	700000
KA15	Murai 5	Kelas 1	2	700000

a.

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b.

```
eduardus.tjitrahardja.siwano> SELECT *
  FROM KAMAR
 WHERE (kapasitas BETWEEN 2 AND 4)
[2022-11-01 13:22:38] 10 rows retrieved starting from 1 in 50 ms
```

	id_kamar	nama	jenis	kapasitas	harga
1	KAO6	Jalak 1	Kelas	2	300000
2	KAO7	Jalak 2	Kelas	2	300000
3	KAO8	Jalak 3	Kelas	2	300000
4	KAO9	Jalak 4	Kelas	2	300000
5	KA10	Jalak 5	Kelas	2	300000
6	KA11	Murai 1	Kelas	1	200000
7	KA12	Murai 2	Kelas	1	200000
8	KA13	Murai 3	Kelas	1	200000
9	KA14	Murai 4	Kelas	1	200000
10	KA15	Murai 5	Kelas	1	200000

4.

```
eduardus.tjitrahardja.siwano> SELECT nama, email
  FROM PERAWAT
 WHERE nama LIKE 'Karen%'
[2022-11-01 11:38:41] 1 row retrieved starting from 1 in 304 ms (e
```

	nama	email
1	Karen Cotillard	kcotillardk@omniture.com

5.

```
eduardus.tjitrahardja.siwano> (SELECT *
  FROM DOKTER
 WHERE spesialisasi = 'anak')
 UNION
 (SELECT *
  FROM DOKTER
 WHERE spesialisasi = 'bedah')
[2022-11-01 13:21:57] 14 rows retrieved starting from 1 in 62 ms
```

	id_dokter	nama	no_telp	email	spesialisasi
1	D008	Den Stoltzner	85654750630	dstollsteiner7@myspace.com	anak
2	D009	Jenda Chaudret	87860070111	jchaudret@example.com	anak
3	D010	Moreen Hebbelthwaite	831095860118	mhebbelthwaite9@buzzfeed.com	anak
4	D011	Idolia Caughta	88041581978	icoughtea@samsung.com	anak
5	D012	Darbie Howle	84548758195	dhowle9@imbiro.com	anak
6	D013	Meade Munn	85430172820	mmunn@si.edu	anak
7	D014	Josephine Schneider	84551802642	jschneider@um.edu	anak
8	D029	Devlin Earney	81063195082	dearney@gbwire.com	bedah
9	D030	Carl Adelsberg	87917208718	cadelsberg@networksolutions.c...	bedah
10	D031	Gearard Staples	85738280467	gstapelsu@n360.com	bedah
11	D032	Cassandra Noddles	81220215324	cnoddlesv@dell.com	bedah
12	D033	Genevieve Guillotin	8131597179	gguillotin@theatlantic.com	bedah
13	D034	Tiana Klimentek	89104117516	tklimentek@con.ne.jp	bedah
14	D035	Garry Aspinell	89869928031	gaspinelly@cargocollective.com	bedah

6.

```
[2022-11-01 11:39:05] 14 rows retrieved starting from 1 in 398 ms
eduardus.tjitrahardja.siwano> (SELECT *
  FROM DOKTER
 WHERE nama LIKE '%')
 INTERSECT
 (SELECT *
  FROM DOKTER
 WHERE spesialisasi = 'bedah')
[2022-11-01 11:39:37] 2 rows retrieved starting from 1 in 155 ms (e
```

	id_dokter	nama	no_telp	email	spesialisasi
1	D030	Carl Adelsberg	87917208718	cadelsberg@networksolutions.com	bedah
2	D032	Cassandra Noddles	81220215324	cnoddlesv@dell.com	bedah

7.

```
[2022-11-01 11:39:37] 2 rows retrieved starting from 1 in 155 ms
eduardus.tjitrahardja.siwano> (SELECT *
  FROM DOKTER
 WHERE nama LIKE 'C%')
 EXCEPT
 (SELECT *
  FROM DOKTER
 WHERE spesialisasi = 'bedah')
[2022-11-01 11:40:08] 1 row retrieved starting from 1 in 144 ms (e
```

	id_dokter	nama	no_telp	email	spesialisasi
1	D020	Candy Arminger	8431934032	carmingr@abc.net.au	saraf

8.

```
eduardus.tjitrahardja.siwano> SELECT nama
  FROM PASIEN
 WHERE EXTRACT(DECADE FROM tgl_lahir) = '199'
[2022-11-01 13:21:01] 12 rows retrieved starting from 1 in 59 ms (execution: 19 ms, fetchi
```

	nama
1	Padraig De Francisci
2	Friedrick Pina
3	Sibella Raddin
4	Virgil Clutterbuck
5	Hamlen Ryles
6	Andrew Ginnell
7	Meade Redington
8	Maitilde Cundey
9	Judy Phillip
10	Genna Mechem
11	Elena Badgers
12	Bobbye Elnor

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9.

```
Output
WHERE EXTRACT(LEVEL FROM ty_tenant) = 177 ;
[2022-11-01 11:40:33] 12 rows retrieved starting from 1 in 244 ms (execution: 60 ms, fetching: 0 ms)
eduardus.tjitrahardja.siwanap> SELECT P.nama
  FROM PASIEN P,
       KAMAR K,
       RAWAT_INAP R
 WHERE R.id_pasien = P.id_pasien
   AND R.id_kamar = K.id_kamar
   AND K.nama = 'Merak 1'
[2022-11-01 11:41:06] 0 rows retrieved in 114 ms (execution: 60 ms, fetching: 0 ms)
```

10.

```
[2022-11-01 11:41:06] 0 rows retrieved in 114 ms (execution: 60 ms)
eduardus.tjitrahardja.siwanap> SELECT *
  FROM PERAWAT
          CROSS JOIN SHIFT_PERAWAT
```

#	perawat_id_perawat	nama	no_telp	email	jenis_kelamin	id_shift_perawat	shift_perawat_id_perawat	id_ruang_inap	waktu_awal	waktu_selesai
1	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP01	PE02	RI23	2021-12-07 00:00:00.000000	2021-12-07 12:00:00	
2	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP02	PE05	RI14	2022-02-02 00:00:00.000000	2022-02-02 12:00:00	
3	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP03	PE39	RI49	2022-09-11 00:00:00.000000	2022-09-11 12:00:00	
4	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP04	PE27	RI42	2022-01-23 00:00:00.000000	2022-01-23 12:00:00	
5	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP05	PE39	RI13	2022-01-23 00:00:00.000000	2022-01-23 12:00:00	
6	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP06	PE64	RI36	2022-09-06 00:00:00.000000	2022-09-06 12:00:00	
7	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP07	PE31	RI05	2021-06-29 00:00:00.000000	2021-06-29 12:00:00	
8	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP08	PE34	RI01	2022-06-13 00:00:00.000000	2022-06-13 12:00:00	
9	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP09	PE47	RI05	2021-04-26 12:00:00.000000	2021-04-26 00:00:00	
10	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP10	PE54	RI28	2020-06-05 00:00:00.000000	2020-06-05 12:00:00	
11	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP11	PE41	RI15	2020-06-27 00:00:00.000000	2020-06-27 12:00:00	
12	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP12	PE10	RI10	2020-06-28 00:00:00.000000	2020-06-28 12:00:00	
13	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP13	PE38	RI01	2022-06-13 11:00:00.000000	2022-06-14 00:00:00	
14	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP14	PE28	RI26	2020-01-22 00:00:00.000000	2020-01-22 12:00:00	
15	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP15	PE46	RI16	2020-03-28 00:00:00.000000	2020-03-28 12:00:00	
16	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP16	PE20	RI22	2020-10-18 00:00:00.000000	2020-10-18 12:00:00	
17	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP17	PE27	RI13	2022-01-28 00:00:00.000000	2022-01-28 12:00:00	
18	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP18	PE47	RI24	2022-01-24 00:00:00.000000	2022-01-24 12:00:00	
19	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP19	PE35	RI45	2021-03-01 00:00:00.000000	2021-03-01 12:00:00	
20	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP20	PE53	RI27	2022-01-13 11:00:00.000000	2022-01-14 00:00:00	
21	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP21	PE31	RI30	2020-06-05 00:00:00.000000	2020-06-05 12:00:00	
22	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP22	PE24	RI24	2020-06-26 12:00:00.000000	2020-06-26 23:00:00	
23	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP23	PE05	RI10	2020-12-03 12:00:00.000000	2020-12-04 00:00:00	
24	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP24	PE54	RI36	2022-09-08 12:00:00.000000	2022-09-07 00:00:00	
25	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP25	PE33	RI11	2021-08-13 00:00:00.000000	2021-08-13 12:00:00	
26	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP26	PE60	RI56	2022-09-07 00:00:00.000000	2022-09-07 12:00:00	
27	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP27	PE40	RI29	2022-01-28 11:00:00.000000	2022-01-29 00:00:00	
28	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP28	PE03	RI27	2020-06-05 11:00:00.000000	2021-01-17 00:00:00	
29	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP29	PE36	RI20	2020-11-19 00:00:00.000000	2020-11-19 12:00:00	
30	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP30	PE13	RI16	2020-02-02 12:00:00.000000	2022-02-03 00:00:00	
31	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP31	PE31	RI25	2022-01-03 00:00:00.000000	2022-01-03 12:00:00	
32	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP32	PE37	RI37	2022-09-18 00:00:00.000000	2022-09-18 12:00:00	
33	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP33	PE02	RI07	2021-08-01 00:00:00.000000	2021-08-01 12:00:00	
34	P001	Ase Huddlestorne	845793040515	ahuddlestorne@businessinsider.com L	SP34	PE22	RI43	2021-12-04 00:00:00.000000	2021-12-04 12:00:00	

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```
[2022-11-01 13:00:27] completed in 16 ms
eduardus.tjitrahardja.siwanap> SELECT *
  FROM PERAWAT P
  JOIN SHIFT_PERAWAT S
    ON P.id_perawat = S.id_perawat
```

11.

#	id_perawat	name	no_telp	email	Jenis Kelamin	id_shift_perawat	S.id_perawat	id_rwat_insp	waktu_mulai	waktu_akhir
1	PE02	Erlina Georgiou	8527281896	egorghiou@ytp.com	P	SP01	PE02	R123	2021-12-07 00:00:00.000000	2021-12-07 12:00:00.000000
2	PE05	Erfree Wixey	8059710604	erxkey@djiply.com	P	SP02	PE05	R114	2022-02-02 00:00:00.000000	2022-02-02 12:00:00.000000
3	PE39	Mellicent Crawley	8904771205	mcrawley12@google.co.jp	L	SP03	PE39	R149	2020-09-11 00:00:00.000000	2020-09-11 12:00:00.000000
4	PE27	Jeth Barlow	8552961793	jbarlow@longinyc.com	P	SP04	PE27	R142	2022-09-06 00:00:00.000000	2022-09-06 12:00:00.000000
5	PE37	Nellie Meridian	8900772245	nmeridian@charassele.com	L	SP05	PE37	R150	2021-09-01 00:00:00.000000	2021-09-01 12:00:00.000000
6	PE34	Stevana Stewart	8231931145	sstewart14@outlook.com	L	SP06	PE34	R115	2021-09-01 00:00:00.000000	2021-09-01 12:00:00.000000
7	PE31	Kelsy Freshfield	8465997359	kfreshfield@upnpog.com	L	SP07	PE31	R109	2021-04-29 00:00:00.000000	2021-04-29 12:00:00.000000
8	PE36	Shaughn Bernadotte	8485720895	sbernadotte@yurtingtoppost.com	P	SP08	PE36	R101	2022-08-13 00:00:00.000000	2022-08-13 12:00:00.000000
9	PE47	Andrei Sandland	8500543596	asandland@ajuness.com	L	SP09	PE47	R105	2021-04-29 12:00:00.000000	2021-04-30 00:00:00.000000
10	PE34	Shaughn Bernadotte	8495723891	sbernadotte@yurtingtoppost.com	P	SP10	PE34	R128	2020-04-09 00:00:00.000000	2020-04-05 12:00:00.000000
11	PE41	Dasi Mirnas	8189579842	dsmirnas14@wired.com	P	SP11	PE41	R115	2020-04-27 00:00:00.000000	2020-04-27 12:00:00.000000
12	PE15	Brianna Sebring	8549799793	bsebring@asatoday.com	L	SP12	PE15	R104	2020-11-13 00:00:00.000000	2020-11-13 12:00:00.000000
13	PE35	Willow DeCote	8507951374	wodecot@zutter.com	P	SP13	PE35	R130	2022-03-22 00:00:00.000000	2022-03-22 12:00:00.000000
14	PE29	Lizette Rodolico	8502113569	lrodolico@outlook.com	P	SP14	PE29	R120	2020-05-21 00:00:00.000000	2020-05-21 12:00:00.000000
15	PE60	Mitchell Greger	8407231365	mgreger19@thejournalist.com	L	SP15	PE60	R116	2022-03-18 00:00:00.000000	2022-03-18 12:00:00.000000
16	PE20	Clarabelle Gong	8117377432	cggong@tgbob.com	L	SP16	PE20	R122	2020-10-10 00:00:00.000000	2020-10-10 12:00:00.000000
17	PE27	Jeth Barlow	8552961793	jbarlow@longinyc.com	P	SP17	PE27	R113	2022-01-20 00:00:00.000000	2022-01-20 12:00:00.000000
18	PE47	Andrei Sandland	8500543596	asandland@ajuness.com	L	SP18	PE47	R124	2022-05-10 00:00:00.000000	2022-05-10 12:00:00.000000
19	PE35	Ella Arnold	8745021219	earnoldly@about.me	P	SP19	PE35	R145	2022-03-10 00:00:00.000000	2022-03-10 12:00:00.000000
20	PE29	Willow DeCote	8507951374	wodecot@zutter.com	L	SP20	PE29	R127	2021-04-05 00:00:00.000000	2021-04-05 12:00:00.000000
21	PE34	Lizette Rodolico	8502113569	lrodolico@outlook.com	P	SP21	PE34	R133	2022-03-22 00:00:00.000000	2022-03-22 12:00:00.000000
22	PE24	Jandy Bassingthwaite	8895360488	jbassingthwaite@io.com	L	SP22	PE24	R124	2022-05-27 12:00:00.000000	2022-05-27 00:00:00.000000
23	PE05	Erfree Wixey	8059710604	erxkey@djiply.com	P	SP23	PE05	R110	2020-12-10 12:00:00.000000	2020-12-10 00:00:00.000000
24	PE36	Shaughn Bernadotte	8485720895	sbernadotte@yurtingtoppost.com	P	SP24	PE36	R136	2022-09-06 12:00:00.000000	2022-09-07 00:00:00.000000
25	PE13	Noreen Agustin	8199239095	naugustin@about.com	P	SP25	PE13	R131	2021-04-10 00:00:00.000000	2021-04-10 12:00:00.000000
26	PE30	Jarrett Bonmassa	8745021219	jarrettbonmassa@about.com	L	SP26	PE30	R136	2022-09-07 00:00:00.000000	2022-09-07 12:00:00.000000
27	PE42	Ossie Meridian	8479251534	osmeridian@ytp.org	P	SP27	PE42	R129	2021-12-30 00:00:00.000000	2021-12-30 12:00:00.000000
28	PE30	Donna Leanne	8505212129	dleanne@about.me	L	SP28	PE30	R127	2022-03-10 00:00:00.000000	2022-03-10 12:00:00.000000
29	PE36	Tonita Soltau	8169557807	tonitasontau@about.com	P	SP29	PE36	R120	2020-11-18 00:00:00.000000	2020-11-18 12:00:00.000000
30	PE13	Noreen Agustin	8199239095	naugustin@about.com	P	SP30	PE13	R114	2022-02-20 12:00:00.000000	2022-02-20 00:00:00.000000
31	PE11	Hairi Kidinoff	8973651976	mrkidinoff@google.co.uk	L	SP31	PE11	R125	2022-01-03 00:00:00.000000	2022-01-03 12:00:00.000000
32	PE17	Sanderson Wong	8377991451	swong@ajuney.com	P	SP32	PE17	R137	2022-08-19 00:00:00.000000	2022-08-19 12:00:00.000000
33	PE02	Erlina Georgiou	8527281896	egorghiou@ytp.com	P	SP33	PE02	R107	2021-08-10 00:00:00.000000	2021-08-11 12:00:00.000000
34	PE22	Clea Edith	83017435465	cedith@trc.gov	L	SP34	PE22	R143	2021-12-04 00:00:00.000000	2021-12-04 12:00:00.000000

12.

#	id_perawat	name	no_telp	email	Jenis Kelamin	id_shift_perawat	S.id_perawat	id_rwat_insp	waktu_mulai	waktu_akhir
1	PE02	Erlina Georgiou	8527281896	egorghiou@ytp.com	P	PE02	R123	2021-12-07 00:00:00.000000	2021-12-07 12:00:00.000000	
2	PE05	Erfree Wixey	8059710604	erxkey@djiply.com	P	PE05	R114	2022-02-02 00:00:00.000000	2022-02-02 12:00:00.000000	
3	PE39	Mellicent Crawley	8904771205	mcrawley12@google.co.jp	L	PE39	R149	2020-09-11 00:00:00.000000	2020-09-11 12:00:00.000000	
4	PE27	Jeth Barlow	8552961793	jbarlow@longinyc.com	P	PE27	R142	2022-09-06 00:00:00.000000	2022-09-06 12:00:00.000000	
5	PE37	Nellie Meridian	8900772245	nmeridian@charassele.com	L	SP05	PE37	R150	2021-09-01 00:00:00.000000	2021-09-01 12:00:00.000000
6	PE34	Stevana Stewart	8231931145	sstewart14@outlook.com	L	SP06	PE34	R115	2022-08-13 00:00:00.000000	2022-08-13 12:00:00.000000
7	PE31	Kelsy Freshfield	8665997359	kfreshfield@upnpog.it	L	SP07	PE31	R105	2022-04-29 00:00:00.000000	2021-04-29 12:00:00.000000
8	PE34	Shaughn Bernadotte	8485720895	sbernadotte@yurtingtoppost.com	P	SP08	PE34	R101	2022-08-13 00:00:00.000000	2022-08-13 12:00:00.000000
9	PE47	Andrei Sandland	8500543596	asandland@ajuness.com	L	SP09	PE47	R105	2021-04-29 12:00:00.000000	2021-04-30 00:00:00.000000
10	PE34	Shaughn Bernadotte	8495723891	sbernadotte@yurtingtoppost.com	P	SP10	PE34	R128	2020-06-05 00:00:00.000000	2020-06-05 12:00:00.000000
11	PE41	Dasi Mirnas	8189579842	dsmirnas14@wired.com	P	SP11	PE41	R115	2020-04-27 00:00:00.000000	2020-04-27 12:00:00.000000
12	PE15	Brianna Sebring	8549799716	bsebring@asatoday.com	L	SP12	PE15	R104	2020-11-13 00:00:00.000000	2020-11-13 12:00:00.000000
13	PE35	Willow DeCote	8507951374	wodecot@zutter.com	P	SP13	PE35	R130	2022-03-22 00:00:00.000000	2022-03-22 12:00:00.000000
14	PE29	Lizette Rodolico	8502113569	lrodolico@outlook.com	L	SP14	PE29	R126	2022-09-06 00:00:00.000000	2022-09-06 12:00:00.000000
15	PE60	Gipsy Gallegos	8598437359	ggallegos@yurtingtoppost.com	L	SP15	PE60	R116	2021-05-28 00:00:00.000000	2021-05-28 12:00:00.000000
16	PE20	Clarabelle Gong	85177574528	cggong@tgbob.com	L	SP16	PE20	R122	2020-10-18 00:00:00.000000	2020-10-18 12:00:00.000000
17	PE27	Jeth Barlow	8552961793	jbarlow@longinyc.com	P	SP17	PE27	R113	2022-01-20 00:00:00.000000	2022-01-20 12:00:00.000000
18	PE47	Andrei Sandland	8500543596	asandland@ajuness.com	L	SP18	PE47	R124	2022-05-26 00:00:00.000000	2022-05-26 12:00:00.000000
19	PE34	Shaughn Bernadotte	8485720895	sbernadotte@yurtingtoppost.com	P	SP19	PE34	R128	2020-06-05 00:00:00.000000	2020-06-05 12:00:00.000000
20	PE26	Lizette Rodolico	8502113569	lrodolico@outlook.com	L	SP20	PE26	R127	2021-01-16 00:00:00.000000	2021-01-16 12:00:00.000000
21	PE33	Jandy Bassingthwaite	8895360488	jbassingthwaite@io.com	L	SP21	PE33	R130	2020-03-02 00:00:00.000000	2020-03-02 12:00:00.000000
22	PE24	Jenny Bassingthwaite	8895360488	jbassingthwaite@io.com	L	SP22	PE24	R124	2022-05-27 00:00:00.000000	2022-05-27 12:00:00.000000
23	PE34	Willow DeCote	8507951374	wodecot@zutter.com	P	SP23	PE34	R130	2022-03-22 00:00:00.000000	2022-03-22 12:00:00.000000
24	PE36	Shaughn Bernadotte	8485720895	sbernadotte@yurtingtoppost.com	P	SP24	PE36	R130	2022-03-22 00:00:00.000000	2022-03-22 12:00:00.000000
25	PE15	Noreen Agustin	8199239095	naugustin@about.com	P	SP25	PE15	R131	2021-08-11 00:00:00.000000	2021-08-11 12:00:00.000000
26	PE30	Jarrett Bonmassa	87405579595	jarrettbonmassa@about.me	L	SP26	PE30	R136	2022-09-07 00:00:00.000000	2022-09-07 12:00:00.000000
27	PE27	Ossie Meridian	84874731361	osmeridian@ytp.org	P	SP27	PE27	R129	2021-12-28 00:00:00.000000	2021-12-28 12:00:00.000000
28	PE03	Jeanne Bestlone	8983939853	jbestlone2@funt.net	L	SP28	PE03	R127	2021-01-16 12:00:00.000000	2021-01-17 00:00:00.000000
29	PE36	Teodor Schlag	81095798007	tschlag@ncnews.com	P	SP29	PE36	R128	2020-11-30 00:00:00.000000	2020-11-30 12:00:00.000000
30	PE13	Noreen Agustin	8199239095	naugustin@about.com	P	SP30	PE13	R114	2022-02-02 12:00:00.000000	2022-02-02 00:00:00.000000
31	PE11	Hairi Kidinoff	8975194798	mrkidinoff@google.co.uk	L	SP31	PE11	R125	2022-01-05 00:00:00.000000	2022-01-03 12:00:00.000000
32	PE17	Sanderson Wong	8377991451	swong@ajuney.com	P	SP32	PE17	R137	2022-05-18 00:00:00.000000	2022-05-18 12:00:00.000000
33	PE02	Erlina Georgiou	8527281896	egorghiou@ytp.com	P	SP33	PE02	R107	2021-08-01 00:00:00.000000	2021-08-01 12:00:00.000000
34	PE22	Clea Edith	83017435465	cedith@trc.gov	L	SP34	PE22	R143	2021-12-04 00:00:00.000000	2021-12-04 12:00:00.000000

# Laporan Tutorial Lab 2

## Basis Data

### Semester Ganjil 2022/2023



```
[2022-11-01 13:11:15] completed in 38 ms
eduardvs,tjitraharaja.siwanop> SELECT *
    FROM SHIFT_PERAWAT S
        RIGHT OUTER JOIN PERAWAT P
            ON P.id_perawat = S.id_perawat
```

13.

```
[2022-11-01 13:11:15] 110 rows retrieved starting from 1 in 124 ms (execution: 73 ms)
eduardus.tjitrahardja.siwanap> SELECT *
    FROM OBAT O
        FULL OUTER JOIN PEMBERIAN_OBAT PO
            ON O.id_obat = PO.id_obat
```

14.

	id_obat	nama	id_pemberian_obat	id_shift_perawat	P0.id_obat	dosis
1	0801	calcitonin salmon	P040	SP32	0801	7 mg
2	0801	calcitonin salmon	P011	SP22	0801	53 mg
3	0802	Estazolam	P060	SP89	0802	54 mg
4	0802	Estazolam	P043	SP15	0802	50 mg
5	0802	Estazolam	P022	SP13	0802	43 mg
6	0802	Estazolam	P014	SP81	0802	78 mg
7	0803	ARNICA MONTANA - RHUS TOXICODENDRON - RUTA GRAVEOLENS	<null>	<null>	<null>	<null>
8	0804	ANTIPYRINE AND BENZOCAINE	P075	SP77	0804	80 mg
9	0804	ANTIPYRINE AND BENZOCAINE	P032	SP22	0804	45 mg
10	0805	Phenobarbital	P083	SP34	0805	66 mg
11	0805	Phenobarbital	P019	SP22	0805	20 mg
12	0806	levofloxacin	P073	SP42	0806	36 mg
13	0806	levofloxacin	P066	SP91	0806	68 mg
14	0806	levofloxacin	P007	SP78	0806	66 mg
15	0807	Albuterol Sulfate	P071	SP68	0807	30 mg
16	0808	RISPERIDONE	P0160	SP94	0808	60 mg
17	0808	RISPERIDONE	P067	SP62	0808	42 mg
18	0808	RISPERIDONE	P049	SP52	0808	45 mg
19	0808	RISPERIDONE	P036	SP91	0808	15 mg
20	0808	RISPERIDONE	P028	SP13	0808	94 mg
21	0809	Levotyroxine Sodium	P063	SP20	0809	20 mg
22	0810	calcipotriene 0.005% and betamethasone dipropionate 0.064%	P093	SP32	0810	25 mg
23	0810	calcipotriene 0.005% and betamethasone dipropionate 0.064%	P027	SP12	0810	5 mg
24	0811	sus scrofa small intestine mucosa lymph follicle	P009	SP01	0811	76 mg
25	0812	Benzalkonium Chloride	P086	SP64	0812	91 mg
26	0812	Benzalkonium Chloride	P081	SP55	0812	56 mg
27	0812	Benzalkonium Chloride	P065	SP29	0812	43 mg
28	0812	Benzalkonium Chloride	P058	SP83	0812	33 mg
29	0812	Benzalkonium Chloride	P010	SP98	0812	68 mg
30	0813	HYDROCODONE BITARTRATE AND ACETAMINOPHEN	P091	SP33	0813	98 mg
31	0813	HYDROCODONE BITARTRATE AND ACETAMINOPHEN	P003	SP57	0813	14 mg
32	0814	Natural Medicine	P088	SP80	0814	80 mg
33	0814	Natural Medicine	P042	SP95	0814	49 mg
34	0814	Natural Medicine	P020	SP88	0814	99 mg

# Laporan Tutorial Lab 2

## Basis Data

### Semester Ganjil 2022/2023



FACULTY OF  
COMPUTER  
SCIENCE

```
[2022-11-01 13:12:19] 107 rows retrieved starting from 1 in 67 ms (e)
eduardus.tjitrahardja.siwanap> SELECT *
FROM PERAWAT
NATURAL JOIN SHIFT_PERAWAT
```

15.

	<code>id_perawat</code>	<code>name</code>	<code>no_telp</code>	<code>email</code>	<code>jenis_kelamin</code>	<code>id_shift_perawat</code>	<code>id_ranjang_inap</code>	<code>waktu_awalai</code>	<code>waktu_akhir</code>
1	PE02	Erina Georgiou	852278051894	egorghiou@yelp.com	P	SP01	R123	2021-12-07 08:00:00.000000	2021-12-07 12:00:00.000000
2	PE05	Efrem Wiley	86587100468	ewiley@qiggy.com	P	SP02	R14	2022-02-02 08:00:00.000000	2022-02-02 12:00:00.000000
3	PE39	Melissant Crawley	89047721652	mcrawley12@google.co.jp	L	SP03	R149	2020-09-11 08:00:00.000000	2020-09-11 12:00:00.000000
4	PE27	Jeth Bartow	85529041760	jbarlow@tinypic.com	P	SP04	R162	2022-06-29 08:00:00.000000	2022-06-29 12:00:00.000000
5	PE39	Melissant Crawley	89047721652	mcrawley12@google.co.jp	L	SP05	R110	2020-12-03 08:00:00.000000	2020-12-03 12:00:00.000000
6	PE04	Gannie Stewart	821411516	g.stewart@mb.com	L	SP06	R15	2022-09-06 08:00:00.000000	2022-09-06 12:00:00.000000
7	PE31	Kelcy Freshini	84659997329	kfrashini@posta.it	L	SP07	R105	2021-04-29 08:00:00.000000	2021-04-29 12:00:00.000000
8	PE34	Shaughn Bernadette	84852720891	sbernardotte@huffingtonpost.com	P	SP08	R101	2022-08-13 08:00:00.000000	2022-08-13 12:00:00.000000
9	PE47	Andrei Sandland	85005453696	asandland@usnews.com	L	SP09	R105	2021-04-29 12:00:00.000000	2021-04-29 16:00:00.000000
10	PE34	Shaughn Bernadette	84852720891	sbernardotte@huffingtonpost.com	P	SP10	R128	2020-06-05 08:00:00.000000	2020-06-05 12:00:00.000000
11	PE41	Dasi Mirens	81871579842	dmirens@lired.com	P	SP11	R115	2020-04-27 08:00:00.000000	2020-04-27 12:00:00.000000
12	PE15	Brennon Sebring	85464979160	bsebring@usatoday.com	L	SP12	R104	2020-11-13 08:00:00.000000	2020-11-13 12:00:00.000000
13	PE35	Ella Andrell	87453261219	earnell@yabout.me	P	SP13	R101	2022-08-15 12:00:00.000000	2022-08-16 00:00:00.000000
14	PE28	Mitchell Greger	84551338439	mgreger@chromenine.com	L	SP14	R126	2020-03-22 08:00:00.000000	2020-03-22 12:00:00.000000
15	PE46	Gipsy Gultefant	89545827319	gyllefant@theguardian.com	L	SP15	R116	2022-05-28 08:00:00.000000	2022-05-28 12:00:00.000000
16	PE20	Clarabelle Gong	81173374328	cgon@toboo.com	L	SP16	R122	2020-10-18 08:00:00.000000	2020-10-18 12:00:00.000000
17	PE27	Jeth Bartow	85529041760	jbarlow@tinypic.com	P	SP17	R113	2022-01-20 08:00:00.000000	2022-01-20 12:00:00.000000
18	PE47	Andrei Sandland	85005453696	asandland@usnews.com	L	SP18	R124	2022-05-26 08:00:00.000000	2022-05-26 12:00:00.000000
19	PE35	Ella Andrell	87453261219	earnell@yabout.me	P	SP19	R145	2022-03-30 08:00:00.000000	2022-03-30 12:00:00.000000
20	PE26	Willow De Cruce	8517951741	wdecruce@feed.com	L	SP20	R127	2021-01-16 08:00:00.000000	2021-01-16 12:00:00.000000
21	PE33	Lizette Rodolico	85847911985	lrodolico@uiuc.edu	P	SP21	R130	2020-03-02 08:00:00.000000	2020-03-02 12:00:00.000000
22	PE24	Jandy Bassingham	88953064688	j.bassingham@gen.io	L	SP22	R124	2022-05-26 12:00:00.000000	2022-05-27 00:00:00.000000
23	PE05	Efrem Wiley	86587100468	ewiley@qiggy.com	P	SP23	R101	2020-12-03 12:00:00.000000	2020-12-04 00:00:00.000000
24	PE34	Shaughn Bernadette	84852720891	sbernardotte@huffingtonpost.com	P	SP24	R156	2022-09-06 12:00:00.000000	2022-09-07 00:00:00.000000
25	PE13	Noreen Agostini	81592510949	negostini@yabout.com	P	SP25	R131	2021-08-13 08:00:00.000000	2021-08-13 12:00:00.000000
26	PE30	Jarrett Rompass	87495579599	jrompass@shareasale.com	L	SP26	R156	2022-09-07 08:00:00.000000	2022-09-07 12:00:00.000000
27	PE42	Ossie Merriday	84572421561	omerriday10@ppng.org	P	SP27	R129	2021-12-28 08:00:00.000000	2021-12-28 12:00:00.000000
28	PE03	Jeanna Basilon	9893839853	jbasilon@2gfun.net	L	SP28	R127	2021-01-16 12:00:00.000000	2021-01-17 00:00:00.000000
29	PE56	Teodor Schlag	81495678807	tschlag@hcnnews.com	P	SP29	R120	2020-11-30 08:00:00.000000	2020-11-30 12:00:00.000000
30	PE13	Noreen Agostini	81592510949	negostini@yabout.com	P	SP30	R114	2022-02-02 12:00:00.000000	2022-02-03 00:00:00.000000
31	PE11	Mair Riddich	89576194780	mriddich@google.co.uk	L	SP31	R125	2022-01-03 08:00:00.000000	2022-01-03 12:00:00.000000
32	PE17	Sanderson Wong	83770914651	swong@keyteck.com	P	SP32	R157	2022-05-18 08:00:00.000000	2022-05-18 12:00:00.000000
33	PE02	Erina Georgiou	852278051894	egorghiou@yelp.com	P	SP33	R107	2021-08-01 08:00:00.000000	2021-08-01 12:00:00.000000

114/13 CR

	<code>Output</code>	<code>-- 16 ×</code>
	eduardus.tjitrahardja.siwanap> SELECT <code>id_pasien</code> FROM RAWAT_INAP WHERE <code>tgl_keluar</code> IS NOT NULL	
	[2022-11-01 13:14:42] 45 rows retrieved starting from 1 in 43 ms (executed in 43 ms)	
1	PA11	
2	PA29	
3	PA02	
4	PA47	
5	PA44	
6	PA33	
7	PA07	
8	PA34	
9	PA12	
10	PA48	
11	PA34	
12	PA22	
13	PA14	
14	PA44	
15	PA08	
16	PA09	
17	PA43	

16.

	<code>Output</code>	<code>-- 17 ×</code>
	eduardus.tjitrahardja.siwanap> SELECT <code>id_pasien</code> FROM RAWAT_INAP WHERE <code>tgl_keluar</code> IS NULL	
	[2022-11-01 13:15:00] 5 rows retrieved starting from 1 in 61 ms (executed in 61 ms)	
1	PA43	
2	PA22	
3	PA19	
4	PA25	
5	PA32	

17.

# Laporan Tutorial Lab 2

## Basis Data

### Semester Ganjil 2022/2023

18.

```
eduardus.tjitrahardja.siwanap> SELECT O.nama
   FROM OBAT O
  WHERE O.id_obat IN (SELECT PO.id_obat
   FROM PEMERIAN_OBAT PO,
        SHIFT_PERAWAT SP,
        PERAWAT P
  WHERE PO.id_shift_perawat = SP.id_shift_perawat
    AND SP.id_perawat = P.id_perawat
    AND P.nama = 'Mitchell (gregen)')
[2022-11-01 13:15:17] 5 rows retrieved starting from 1 in 30 ms (execution: 20 ms, fetching: 16 ms)
```

nama
Triclosan
Codeine Phosphate, Phenylephrine Hydrochloride, Pyrilamine Maleate
RISPERIDONE
levofloxacin
Acetaminophen

19.

```
eduardus.tjitrahardja.siwanap> SELECT P.id_perawat, P.nama
   FROM PERAWAT P
  WHERE NOT EXISTS(
    SELECT *
      FROM PEMERIAN_OBAT PO,
        SHIFT_PERAWAT SP
     WHERE PO.id_shift_perawat = SP.id_shift_perawat
       AND SP.id_perawat = P.id_perawat
)
[2022-11-01 13:15:38] 13 rows retrieved starting from 1 in 128 ms (execution: 111 ms, fetching: 17 ms)
```

id_perawat	nama
PE01	Asa Huddlestone
PE04	Gannie Stewart
PE06	Talbot Dust
PE08	Constantine Hukin
PE16	Charyl Doornba
PE18	Russell Prestedge
PE21	Karen Cotillard
PE23	Dalis Rummings
PE29	Vonny Northway
PE32	Rafa Demare
PE37	Nobe Claye
PE48	Jeremias Chickmore
PE50	Bella Prall

20.

```
eduardus.tjitrahardja.siwanap> SELECT MIN(harga)
   FROM KAMAR
[2022-11-01 13:15:55] 1 row retrieved starting from 1 in 1 ms
```

min
170000

21.

```
eduardus.tjitrahardja.siwanap> SELECT MAX(harga)
   FROM KAMAR
[2022-11-01 13:17:27] 1 row retrieved starting from 1 in 1 ms
```

max
3100000

22.

```
eduardus.tjitrahardja.siwanap> SELECT COUNT(*)
   FROM KAMAR
[2022-11-01 13:17:40] 1 row retrieved starting from 1 in 1 ms
```

count
45

23.

```
eduardus.tjitrahardja.siwanap> SELECT SUM(kapasitas)
   FROM KAMAR
[2022-11-01 13:18:20] 1 row retrieved starting from 1 in 1 ms
```

sum
90

24.

```
eduardus.tjitrahardja.siwanap> SELECT AVG(harga)
   FROM KAMAR
[2022-11-01 13:18:56] 1 row retrieved starting from 1 in 1 ms
```

avg
1196666.666666666667

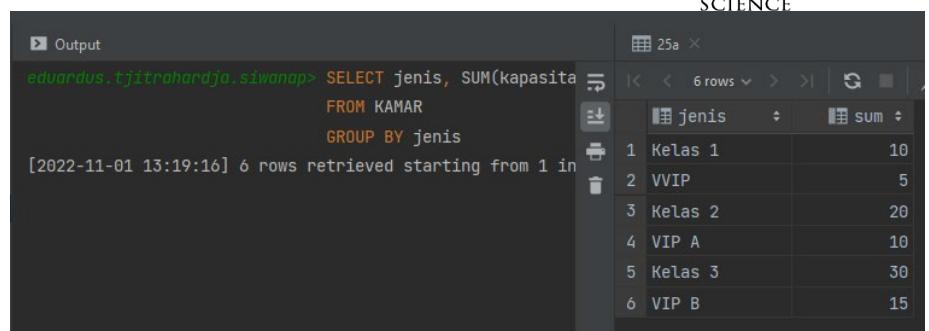
25.

# Laporan Tutorial Lab 2

## Basis Data

### Semester Ganjil 2022/2023

a.

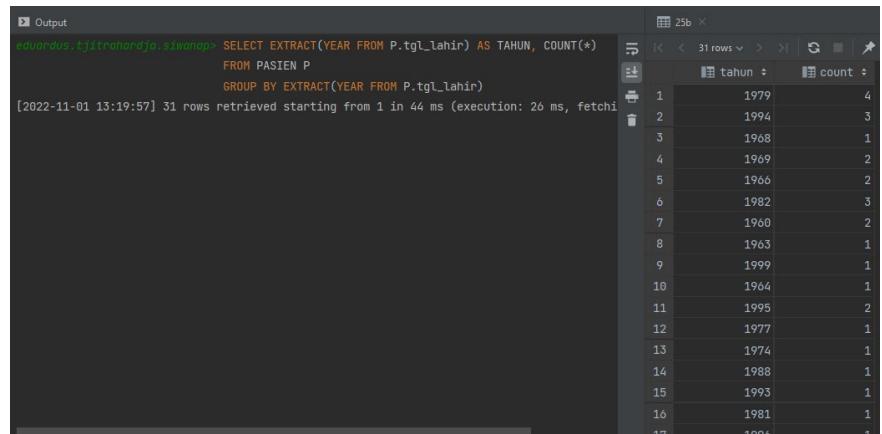


```
eduardus.tjitrabhardja.siwanap> SELECT jenis, SUM(kapasita
   FROM KAMAR
  GROUP BY jenis
[2022-11-01 13:19:16] 6 rows retrieved starting from 1 in 1 ms
```

jenis	sum
Kelas 1	10
VVIP	5
Kelas 2	20
VIP A	10
Kelas 3	30
VIP B	15

a.

b.



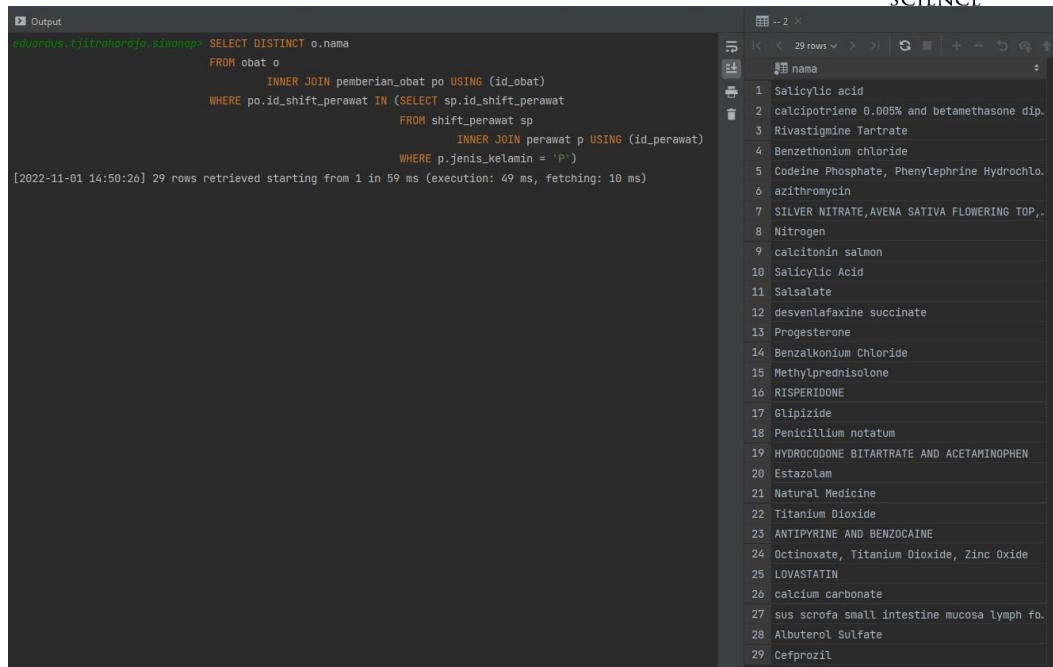
```
eduardus.tjitrabhardja.siwanap> SELECT EXTRACT(YEAR FROM P.tgl_lahir) AS TAHUN, COUNT(*)
   FROM PASIEN P
  GROUP BY EXTRACT(YEAR FROM P.tgl_lahir)
[2022-11-01 13:19:57] 31 rows retrieved starting from 1 in 44 ms (execution: 26 ms, fetchin
```

TAHUN	count
1979	4
1994	3
1968	1
1969	2
1966	2
1982	3
1960	2
1963	1
1999	1
1964	1
1995	2
1977	1
1974	1
1988	1
1993	1
1981	1
1962	1
1970	1
1985	1
1971	1
1987	1
1973	1
1984	1
1976	1
1989	1
1978	1
1991	1
1983	1
1975	1
1986	1
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2020	1
2021	1
2022	1
2023	1
2024	1
2025	1
2026	1
2027	1
2028	1
2029	1
2030	1
2031	1
2032	1
2033	1
2034	1
2035	1
2036	1
2037	1
2038	1
2039	1
2040	1
2041	1
2042	1
2043	1
2044	1
2045	1
2046	1
2047	1
2048	1
2049	1
2050	1
2051	1
2052	1
2053	1
2054	1
2055	1
2056	1
2057	1
2058	1
2059	1
2060	1
2061	1
2062	1
2063	1
2064	1
2065	1
2066	1
2067	1
2068	1
2069	1
2070	1
2071	1
2072	1
2073	1
2074	1
2075	1
2076	1
2077	1
2078	1
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# Laporan Tutorial Lab 2

## Basis Data

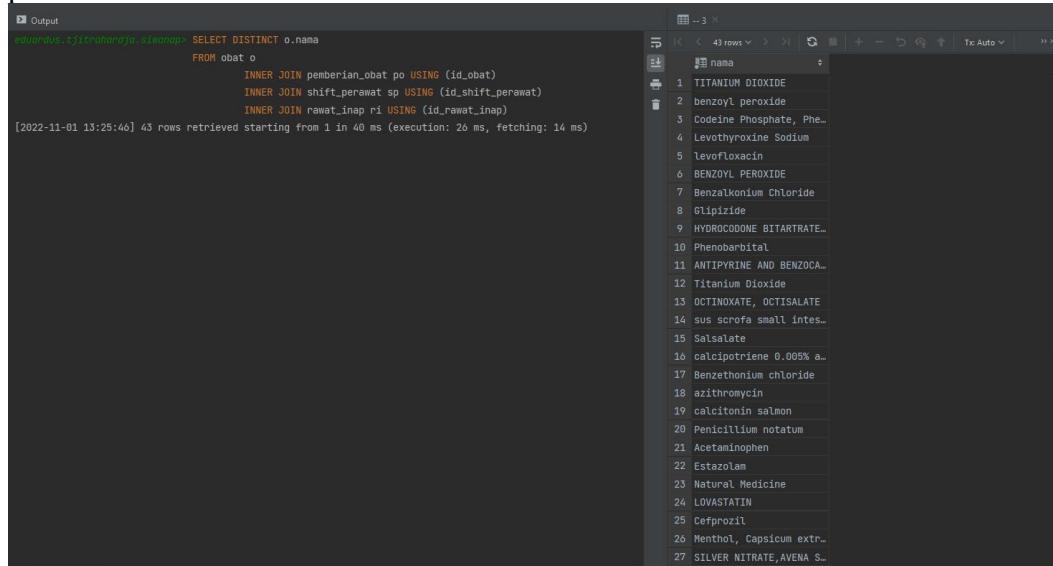
### Semester Ganjil 2022/2023



```
Output
eduardus.tjitrabhardja_siewanap> SELECT DISTINCT o.nama
   FROM obat o
         INNER JOIN pemberian_obat po USING (id_obat)
        WHERE po.id_shift_perawat IN (SELECT sp.id_shift_perawat
                                         FROM shift_perawat sp
                                         INNER JOIN perawat p USING (id_perawat)
                                         WHERE p.jenis_kelamin = 'P')
[2022-11-01 14:50:26] 29 rows retrieved starting from 1 in 59 ms (execution: 49 ms, fetching: 10 ms)

-- 2 --
nama
1 Salicylic acid
2 calcipotriene 0.005% and betamethasone dip.
3 Rivastigmine Tartrate
4 Benzethonium chloride
5 Codeine Phosphate, Phenylephrine Hydrochlo.
6 azithromycin
7 SILVER NITRATE, AVENA SATIVA FLOWERING TOP,-
8 Nitrogen
9 calcitonin salmon
10 Salicylic Acid
11 Salsalate
12 desvenlafaxine succinate
13 Progesterone
14 Benzalkonium Chloride
15 Methylprednisolone
16 RISPERIDONE
17 Glipizide
18 Penicillium notatum
19 HYDROCODONE BITARTRATE AND ACETAMINOPHEN
20 Estazolam
21 Natural Medicine
22 Titanium Dioxide
23 ANTIPYRINE AND BENZOCAINE
24 Octinoxate, Titanium Dioxide, Zinc Oxide
25 LOVASTATIN
26 calcium carbonate
27 sus scrofa small intestine mucosa lymph fo.
28 Albuterol Sulfate
29 Cefprozil
```

3. [SQL] Tampilkan nama UNIK obat yang **setidaknya** telah diberikan pada pasien.



```
Output
eduardus.tjitrabhardja_siewanap> SELECT DISTINCT o.nama
   FROM obat o
         INNER JOIN pemberian_obat po USING (id_obat)
        INNER JOIN shift_perawat sp USING (id_shift_perawat)
        INNER JOIN rawat_inap ri USING (id_rawat_inap)
[2022-11-01 13:25:46] 43 rows retrieved starting from 1 in 40 ms (execution: 26 ms, fetching: 14 ms)

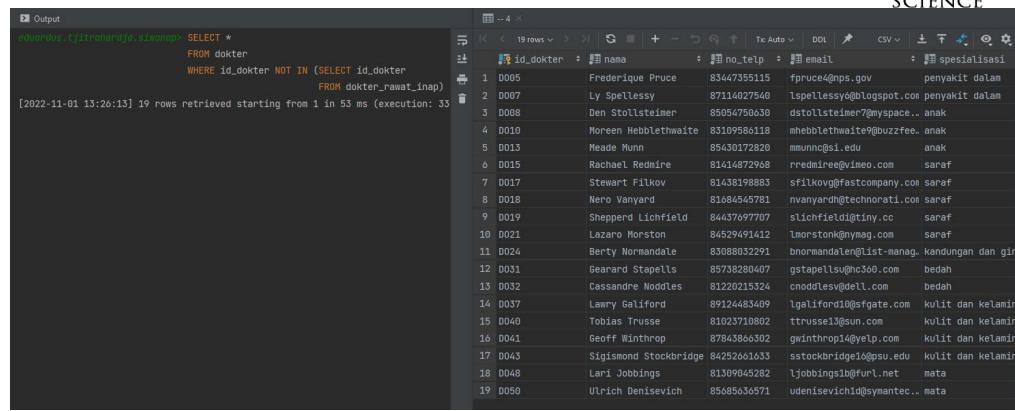
-- 3 --
nama
1 TITANIUM DIOXIDE
2 benzoyl peroxide
3 Codeine Phosphate, Phe..
4 Levothyroxine Sodium
5 levofloxacin
6 BENZOYL PEROXIDE
7 Benzalkonium Chloride
8 Glipizide
9 HYDROCODONE BITARTRATE...
10 Phenobarbital
11 ANTIPYRINE AND BENZOC...
12 Titanium Dioxide
13 OCTINOXATE, OCTISALATE
14 sus scrofa small intes...
15 Salsalate
16 calcipotriene 0.005% a...
17 Benzethonium chloride
18 azithromycin
19 calcitonin salmon
20 Penicillium notatum
21 Acetaminophen
22 Estazolam
23 Natural Medicine
24 LOVASTATIN
25 Cefprozil
26 Menthol, Capsicum extr...
27 SILVER NITRATE, AVENA S...
```

4. [SQL] Tampilkan daftar dokter yang tidak pernah merawat pasien rawat inap.

# Laporan Tutorial Lab 2

## Basis Data

### Semester Ganjil 2022/2023



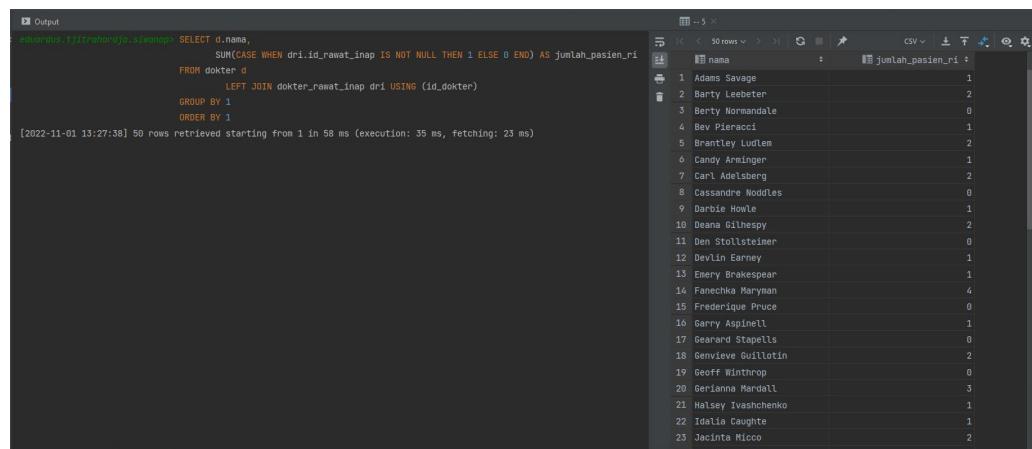
```
eduardus@tjitraraja:~$ psql -U eduardus -d tjiwanaps -c "SELECT * FROM dokter WHERE id_dokter NOT IN (SELECT id_dokter FROM dokter_rawat_inap)"
```

The screenshot shows a PostgreSQL terminal window with the output of a SQL query. The query selects all columns from the 'dokter' table where the 'id\_dokter' is not present in the 'id\_dokter' column of the 'dokter\_rawat\_inap' table. The results are sorted by 'id\_dokter' in ascending order. The columns displayed are 'id\_dokter', 'nama', 'no\_telp', 'email', and 'spesialisasi'. The data includes various doctor names like Frederique Pruce, Ly Spellasy, Den Stollsteimer, etc., along with their contact information and specialization.

5. [SQL] Tampilkan nama dokter dengan total jumlah pasien rawat inap yang telah ditugaskan kepada dokter tersebut diurutkan berdasarkan ascending alphabetical order (A-Z) dari namanya, tanpa peduli jika dokter tersebut memiliki pasien rawat inap atau tidak.

**ASUMSI:**

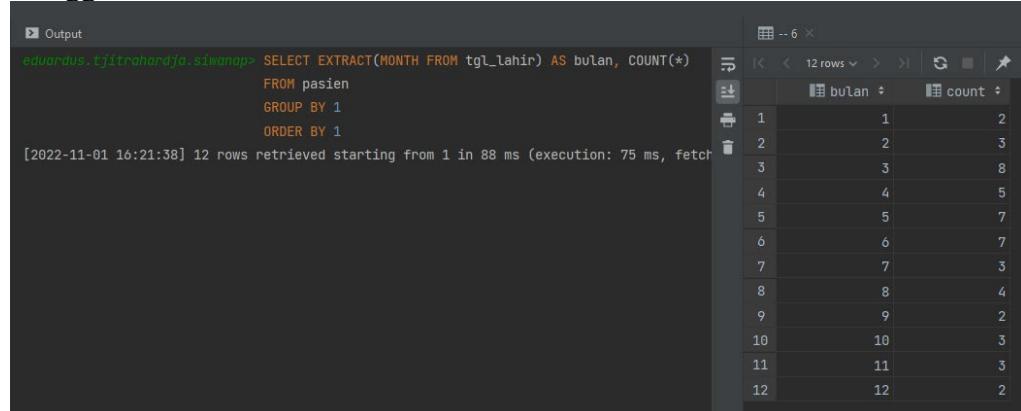
Jumlah pasien dihitung berdasarkan **id\_rawat\_inap**, jadi Pasien yang dirawat tidak harus unik.



```
eduardus@tjitraraja:~$ psql -U eduardus -d tjiwanaps -c "SELECT d.nama, SUM(CASE WHEN dri.id_rawat_inap IS NOT NULL THEN 1 ELSE 0 END) AS jumlah_pasien_ri FROM dokter d LEFT JOIN dokter_rawat_inap dri ON (d.id_dokter) GROUP BY 1 ORDER BY 1"
```

The screenshot shows a PostgreSQL terminal window with the output of a SQL query. The query counts the number of patients ('jumlah\_pasien\_ri') associated with each doctor ('d.nama'). It uses a LEFT JOIN between the 'dokter' table and the 'dokter\_rawat\_inap' table on the 'id\_dokter' column. The results are grouped by doctor name and ordered alphabetically. The data shows the name of the doctor and the count of patients they have treated.

6. [SQL] Tampilkan jumlah pasien yang lahir pada setiap bulan. Anda disarankan menggunakan EXTRACT



```
eduardus@tjitraraja:~$ psql -U eduardus -d tjiwanaps -c "SELECT EXTRACT(MONTH FROM tgl_lahir) AS bulan, COUNT(*) FROM pasien GROUP BY 1 ORDER BY 1"
```

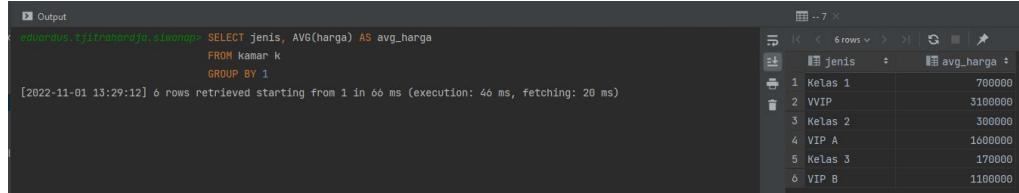
The screenshot shows a PostgreSQL terminal window with the output of a SQL query. The query counts the number of patients ('count') born in each month ('bulan'). It uses the 'EXTRACT' function to extract the month from the 'tgl\_lahir' column and groups the results by month. The data shows the month number and the count of patients born in that month.

# Laporan Tutorial Lab 2

## Basis Data

### Semester Ganjil 2022/2023

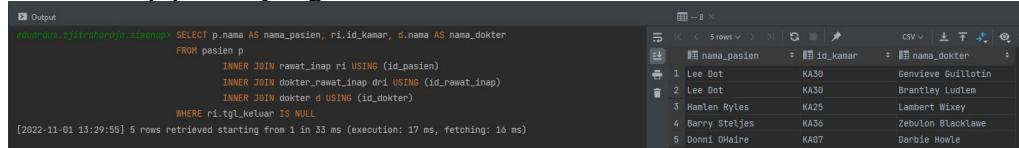
7. [SQL] Tampilkan **jenis kamar** dan **harga rata-rata** kamar untuk setiap jenis kamar.



```
eduardus.tjitrahardja.siwana> SELECT jenis, AVG(harga) AS avg_harga
   FROM kamar K
  GROUP BY 1
[2022-11-01 13:29:12] 6 rows retrieved starting from 1 in 66 ms (execution: 46 ms, fetching: 20 ms)
```

jenis	avg_harga
Kelas 1	700000
VVIP	3100000
Kelas 2	300000
VIP A	1600000
Kelas 3	170000
VIP B	1100000

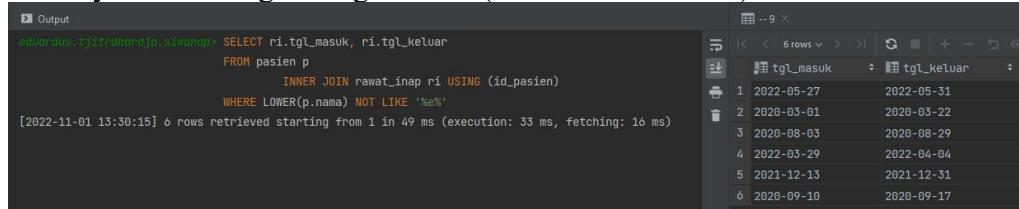
8. [SQL] Tampilkan **nama pasien**, **id kamar**, dan **nama dokter** yang bertugas untuk setiap pasien yang masih dirawat di rumah sakit.



```
eduardus.tjitrahardja.siwana> SELECT p.nama AS nama_pasien, ri.id_kamar, d.nama AS nama_dokter
   FROM pasien p
  INNER JOIN rawat_inap ri USING (id_pasien)
  INNER JOIN dokter rawat_inap drs USING (id_rawat_inap)
  INNER JOIN dokter d USING (id_dokter)
 WHERE ri.tgl_keluar IS NULL
[2022-11-01 13:29:55] 5 rows retrieved starting from 1 in 33 ms (execution: 17 ms, fetching: 16 ms)
```

nama_pasien	id_kamar	nama_dokter
Lee Dot	KA30	Genvieve Guillotin
Lee Dot	KA30	Brantley Ludlam
Hamlen Ryles	KA25	Lambert Wixey
Barry Stetjes	KA30	Zebulon Blacklawe
Donnti O'haire	KA07	Darbie Howle

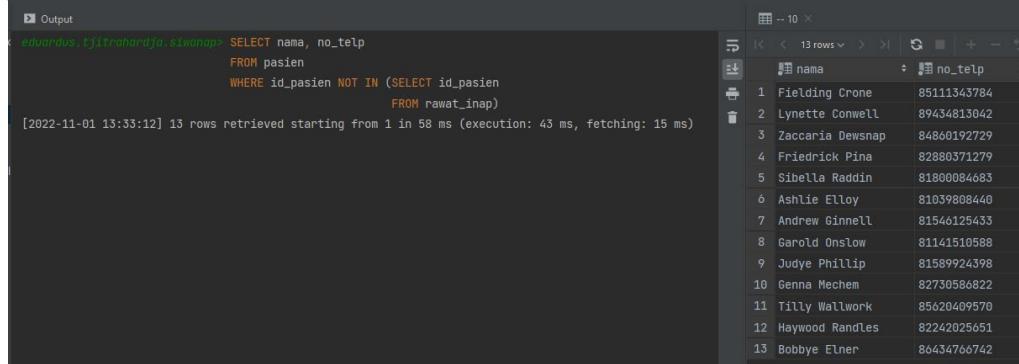
9. [SQL] Tampilkan **tanggal masuk** dan **tanggal keluar** setiap pasien yang namanya tidak mengandung huruf E (tidak case sensitive).



```
eduardus.tjitrahardja.siwana> SELECT ri.tgl_masuk, ri.tgl_keluar
   FROM pasien p
  INNER JOIN rawat_inap ri USING (id_pasien)
 WHERE LOWER(p.nama) NOT LIKE '%E%'
[2022-11-01 13:30:15] 6 rows retrieved starting from 1 in 49 ms (execution: 33 ms, fetching: 16 ms)
```

tgl_masuk	tgl_keluar
2022-05-27	2022-05-31
2020-03-01	2020-03-22
2020-08-03	2020-08-29
2022-03-29	2022-04-04
2021-12-13	2021-12-31
2020-09-10	2020-09-17

10. [SQL] Tampilkan **nama** dan **nomor telepon** pasien yang tidak pernah menjadi pasien rawat inap.



```
eduardus.tjitrahardja.siwana> SELECT nama, no_telp
   FROM pasien
  WHERE id_pasien NOT IN (SELECT id_pasien
                           FROM rawat_inap)
[2022-11-01 13:33:12] 13 rows retrieved starting from 1 in 58 ms (execution: 43 ms, fetching: 15 ms)
```

nama	no_telp
Fielding Crone	85111343784
Lynette Cornwell	89434813042
Zaccaria Dewsnap	84860192729
Friedrick Pina	82880371279
Sibella Raddin	81800084683
Ashlie Elloy	81039808440
Andrew Ginnell	81546125433
Garold Onslow	81141510588
Judyre Phillip	81589924398
Genna Mechem	82730586822
Tilly Wallwork	85620409570
Haywood Randles	82242025651
Bobbye Elner	86434766742

11. [SQL] Tampilkan daftar pasien yang pernah menjadi pasien rawat inap di kamar jenis VIP atau VVIP. Anda harus menggunakan keyword **UNION**.

# Laporan Tutorial Lab 2

## Basis Data

### Semester Ganjil 2022/2023

```
eduardus.tjitrahardja.siwanap> SELECT p.*  
      FROM pasien p  
            INNER JOIN rawat_inap ri USING (id_pasien)  
            INNER JOIN kamar k USING (id_kamar)  
      WHERE k.jenis LIKE 'VIP%'  
      UNION  
      SELECT p.*  
      FROM pasien p  
            INNER JOIN rawat_inap ri USING (id_pasien)  
            INNER JOIN kamar k USING (id_kamar)  
      WHERE k.jenis = 'VVIP'
```

<code>id_pasien</code>	<code>nama</code>	<code>alamat</code>	<code>no_telp</code>	<code>email</code>	<code>tgl_lahir</code>	<code>jenis_kelamin</code>
PA01	Rey Ferrieri	Jl Raya PKP, Dki Jakarta	87667076022	rferrieri@latimes.com	1960-07-29	L
PA02	Englebert Glassard	Jl. Pluit Raya No. 19, Jakarta Raya	83613307057	eglassard1@imdb.com	1972-08-09	L
PA05	Cesar Witard	Plaza City View, Building	83060150583	cwitard4@ca.gov	1969-03-12	L
PA06	Jayme Clew	Jl Bisma Raya Bl D-1/22, Dki Jakarta	82731096705	jclew5@exblog.jp	1982-08-18	L
PA07	Rodney Di Biasio	Jl Jatinegara Brt 122, Dki Jakarta	86987105340	rdi@amazon.de	1966-06-27	L
PA09	Gilemette Gresswell	Jl Adam 103 Sukabumi Utara, Dki Jaka.	86224127948	ggresswell8@amazon.co.uk	1981-05-27	P
PA11	Padraig De Francisci	Jl H Agus Salim 69, Jakarta	87388709917	pdea@slideshare.net	1994-06-03	P
PA14	Clarisse Pennuzzi	Jl Rawagedam IV 7, Dki Jakarta	86444824850	cpennuzzid@pbs.org	1963-04-24	P
PA20	Chariot Huffadine	Jl Mangga Dua Raya Psr Pagi Mangga D.	81254024034	chuffadinej@ebay.com	1972-11-22	L
PA22	Lee Dot	Jl Pembangunan II 15 A/1, Dki Jakarta	89774964683	ldot@etsy.com	2002-12-18	L
PA25	Hamlen Ryles	Jl Jend A Yani 286 Ged Graha Pangeran.	89078717955	hryleso@xblog.jp	1995-10-15	P
PA27	Archibaldo Wanklyn	Jl Jelambar Jaya II 8, Dki Jakarta	87948788158	awanklynq@prweb.com	1968-07-21	P
PA28	Stewart Mustard	Jl KH Hasyim Ashari 33-0, Dki Jakarta	88177679007	smustard9@phpb.com	1964-01-10	L
PA29	Bevin Carlin	Jl Jelambar Brt III/20, Dki Jakarta	87072282157	bcarlinos@paypal.com	1960-05-15	L
PA30	Orson MacGiffin	Psr Kecapi 12, Dki Jakarta	83721927052	onacgiffint@marriott.com	1977-04-13	P
PA32	Barry Steljes	Jl Kramat Raya 148 F, Dki Jakarta	86378562628	bsteljes@bigcartel.com	1984-03-28	L
PA33	Meade Redington	Jl Sunan Muria 7 RT 007/015, Dki Jak.	83145220454	mredingtonw@wikipedia.org	1992-02-15	L
PA34	Maitilde Cundey	Jl Melayu Besar 68, Dki Jakarta	89473689365	mcundeyx@xrea.com	1996-04-06	P
PA36	Karel Stoggell	Jl Batu Tulis 16, Dki Jakarta	85872264465	kstoggell@olobo.com	1969-06-04	L
PA40	Yard Fiddler	Jl Cengkeh 16/17, Dki Jakarta	81354446380	yfiddler13@delicious.com	1967-10-10	L
PA42	Fiona Passmore	Jl Tenggiri 2, Dki Jakarta	81858210291	fpassmore15@gmpg.org	1970-11-19	P
PA44	Elena Badgers	Plaza Ciputat Mas Bl C/5 A Kaw CDEF,	82734861577	ebadgers17@mit.edu	1994-03-15	P
PA45	Welsh Landeaux	Jl Krekot Jaya Bl E/3, Dki Jakarta	81289839793	wlandeaux18@google.de	1974-03-03	L
PA46	Win Piggford	Jl Muara Baru Ujung BL S, Jakarta	81394260350	wpiggyford19@addtoany.com	1967-05-26	P
PA47	Raddy Klaengsa	Jl Suryoprabono 2 Kompl Harmoni Plaz.	89925774888	rklaengsa@live.com	1982-06-13	P
PA48	Tracey Varey	Jl Bekasi Tmr II 30 RT 015/04, Dki J.	81307584054	tvareyb@arizona.edu	1971-10-17	P
PA49	Morie Davisson	Jl Kuningan Brt 56, Dki Jakarta	88928959829	mdavisonic@census.gov	1979-04-17	P

12. [SQL] Tampilkan `nama` dan `jenis_kelamin` perawat yang merawat semua pasien wanita.

```
eduardus.tjitrahardja.siwanap> SELECT p2.nama, p2.jenis_kelamin  
      FROM perawat p2  
            INNER JOIN shift_perawat sp USING (id_perawat)  
            INNER JOIN rawat_inap ri USING (id_rawat_inap)  
            INNER JOIN pasien p USING (id_pasien)  
      WHERE p.jenis_kelamin = 'P'  
      GROUP BY 1, 2  
      HAVING COUNT(DISTINCT id_pasien) = (SELECT COUNT(*) FROM pasien WHERE jenis_kelamin = 'P')
```

13. [Trivia] Apakah kita mungkin mendapatkan data tertentu dari operasi inner join menggunakan keyword `IN`?

Mungkin, kita tinggal query suatu table yang ada `WHERE id IN (SELECT id FROM [table] WHERE [condition])` dimana idnya itu adalah PK-nya

# Laporan Tutorial Lab 2

## Basis Data

### Semester Ganjil 2022/2023

menghubungi kedua table tersebut. Contohnya seperti di nomor 2 bisa ditulis dengan INNER JOIN semua, seperti:

```
SELECT o.nama
FROM obat o
    INNER JOIN pemberian_obat po USING (id_obat)
    INNER JOIN shift_perawat sp USING (id_shift_perawat)
    INNER JOIN perawat p USING (id_perawat)
WHERE p.jenis_kelamin = 'P';
```

Bisa juga ditulis dengan salah satu dari INNER JOINnya diganti dengan IN, seperti:

```
SELECT o.nama
FROM obat o
    INNER JOIN pemberian_obat po USING (id_obat)
WHERE po.id_shift_perawat IN (SELECT sp.id_shift_perawat
                                FROM shift_perawat sp
                                INNER JOIN perawat p USING (id_perawat)
                                WHERE p.jenis_kelamin = 'P');
```

## Latihan 2

1. [SQL] Jalankan SQL Query pada Contoh 27 hingga Contoh 35 di atas dan cantumkan hasilnya pada laporan.

```
eduardus.tjitrabhardja.siwanap> -- 27
CREATE VIEW daftar_dokter AS
SELECT id_dokter, nama
FROM dokter
[2022-11-01 13:51:30] completed in 81 ms
```

```
eduardus.tjitrabhardja.siwanap> SELECT *
                           FROM daftar_dokter
[2022-11-01 13:51:56] 50 rows retrieved starting from 1 in 186 ms (execution: 165 ms, fetching: 27.5 ms)
```

#	id_dokter	nama
1	0001	Lorry Jervois
2	0002	Brantley Ludlem
3	0003	Fanechka Maryman
4	0004	Ronda Hargitt
5	0005	Frederique Pruce
6	0006	Barty Leebeter
7	0007	Ly Spellessy
8	0008	Den Stollsteimer
9	0009	Jenda Chaudret
10	0010	Moreen Heblethwaite
11	0011	Idalia Caughtte
12	0012	Darbie Howle
13	0013	Meade Munn
14	0014	Josephine Schnieder
...	...	...

# Laporan Tutorial Lab 2

## Basis Data

### Semester Ganjil 2022/2023

```
eduardus.tjitrahardja.siwanap> DROP VIEW daftar_dokter
[2022-11-01 13:52:09] completed in 81 ms
```

29.

```
eduardus.tjitrahardja.siwanap> CREATE INDEX index_jenis_kamar ON kamar (jenis)
[2022-11-01 13:52:16] completed in 91 ms
```

30.

```
eduardus.tjitrahardja.siwanap> CREATE INDEX index_nama_pasien
ON pasien USING HASH (nama)
[2022-11-01 13:52:29] completed in 104 ms
```

31.

```
eduardus.tjitrahardja.siwanap> CREATE INDEX index_perawat
ON perawat (id_perawat, nama DESC)
[2022-11-01 13:53:15] completed in 178 ms
```

32.

33.

```
eduardus.tjitrahardja.siwanap> CREATE INDEX index_nama_dokter
ON dokter (nama)
[2022-11-01 13:53:31] completed in 120 ms
```

a.

```
eduardus.tjitrahardja.siwanap> CREATE INDEX index_spesialisasi_dokter
ON dokter (spesialisasi)
[2022-11-01 13:53:53] completed in 145 ms
```

b.

```
eduardus.tjitrahardja.siwanap> DROP INDEX index_nama_dokter
[2022-11-01 13:54:20] completed in 36 ms
```

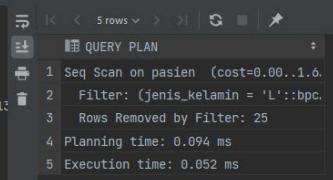
34.

```
eduardus.tjitrahardja.siwanap> EXPLAIN ANALYZE
SELECT *
FROM PASIEN
WHERE jenis_kelamin = 'L'
[2022-11-01 13:54:43] 5 rows retrieved starting from 1 in 53 ms (execution: 40 ms, fetching: 13 ms)
```

35.

## 2. View

- [Trivia] Apa yang akan terjadi jika kita membuat View menggunakan nama yang sama dengan nama tabel yang ada pada database? Jelaskan!  
**Tidak bisa, console akan mengeluarkan error “ERROR: relation “dokter” already exists” seperti ini:**



# Laporan Tutorial Lab 2

## Basis Data

### Semester Ganjil 2022/2023



```
eduardus.tjitrahardja.siwanap> -- 1
CREATE VIEW dokter AS
SELECT *
FROM dokter
[2022-11-01 13:57:26] [42P07] ERROR: relation "dokter" already exists
```

karena **VIEW** berguna sebagai **table sementara**, sehingga jika kita menamakannya sama dengan salah satu **table** yang sudah ada akan bertabrakan namanya.

2. [Trivia] Apa fungsi TEMP atau TEMPORARY di View?

**TEMP** atau **TEMPORARY** di View berguna untuk memberitahu SQL server bahwa View ini adalah *temporary*/sementara. Dimana setelah sesi sekarang berakhir, view *temporary* tersebut akan didrop.

3. [SQL] Buatlah View yang menyimpan **nama** beserta **durasi bekerja** yang dilakukan oleh perawat.

	nama	durasi_kerja
1	Ula Lardeux	36
2	Kelcy Fraschini	36
3	Federica Blanden	36
4	Thorndike Quiddinton	12
5	Andrei Sandland	36
6	Jandy Bassingham	24
7	Noreen Agostini	60
8	Jarrett Bompass	36
9	Sanderson Worg	36
10	Ella Arndell	48
11	Ossie Merriday	24
12	Teodor Schlag	12
13	Mair Riddich	36

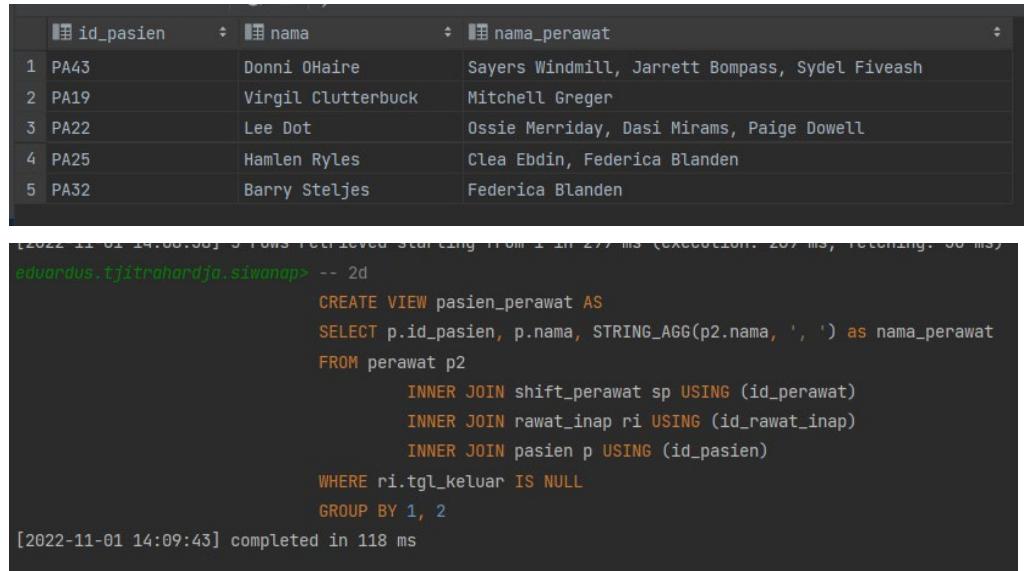
```
eduardus.tjitrahardja.siwanap> -- 2c
-- ASUMSI: durasi bekerja yang dilakukan oleh perawat itu maksudnya
-- total jam kerja yang sudah dilakukan perawat
CREATE VIEW perawat_durasikerja AS
SELECT p.nama, SUM(EXTRACT(HOURS FROM sp.waktu_akhir - sp.waktu_mulai)) AS durasi_kerja
FROM perawat p
INNER JOIN shift_perawat sp USING (id_perawat)
GROUP BY 1
[2022-11-01 14:05:25] completed in 76 ms
```

# Laporan Tutorial Lab 2

## Basis Data

### Semester Ganjil 2022/2023

4. [SQL] Buatlah View yang menyimpan **nama-nama perawat** yang merawat pasien dikelompokkan berdasarkan id pasien dan **nama pasien** yang belum keluar dari rumah sakit (HINT: string\_agg)



The screenshot shows a PostgreSQL terminal window. At the top, there is a table with columns: id\_pasien, nama, and nama\_perawat. The data in the table is as follows:

	id_pasien	nama	nama_perawat
1	PA43	Donni OHaire	Sayers Windmill, Jarrett Bompass, Sydel Fiveash
2	PA19	Virgil Clutterbuck	Mitchell Greger
3	PA22	Lee Dot	Ossie Merriday, Dasi Mirams, Paige Dowell
4	PA25	Hamlen Ryles	Clea Ebdin, Federica Blanden
5	PA32	Barry Steljes	Federica Blanden

Below the table, the terminal shows the SQL command used to create the view:

```
[2022-11-01 14:00:38] 5 rows retrieved starting from 1 in 277 ms (execution: 287 ms, fetching: 50 ms)
eduardus.tjitrabhardja.sivanap> -- 2d
CREATE VIEW pasien_perawat AS
SELECT p.id_pasien, p.nama, STRING_AGG(p2.nama, ', ') as nama_perawat
FROM perawat p2
INNER JOIN shift_perawat sp USING (id_perawat)
INNER JOIN rawat_inap ri USING (id_rawat_inap)
INNER JOIN pasien p USING (id_pasien)
WHERE ri.tgl_keluar IS NULL
GROUP BY 1, 2
[2022-11-01 14:09:43] completed in 118 ms
```

### 3. Indexing and Analyze

Diberikan query berikut.

```
SELECT * FROM kamar ORDER BY harga DESC;
```

```
SELECT * FROM rawat_inap WHERE tgl_keluar IS NULL;
```

```
SELECT * FROM perawat WHERE nama LIKE 'T%';
```

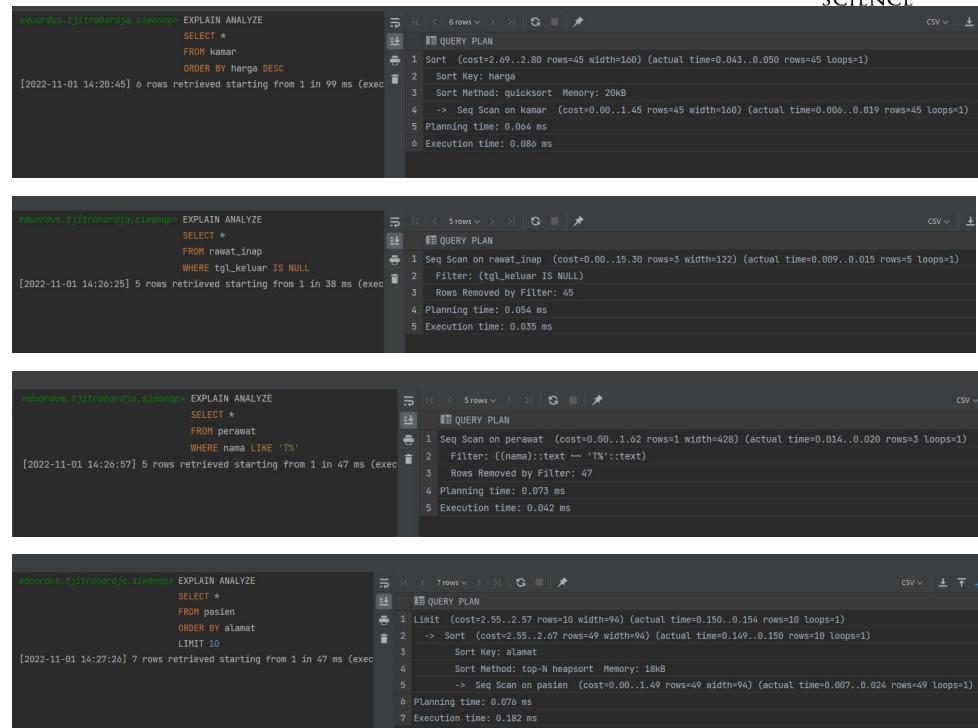
```
SELECT * FROM pasien ORDER BY alamat LIMIT 10;
```

- a. [SQL] Jalankan perintah EXPLAIN ANALYZE untuk setiap *query* di atas. *Screenshot* eksekusinya dan tulis hasilnya pada tabel di bawah, sertakan dalam laporan submisi Anda.

# Laporan Tutorial Lab 2

## Basis Data

### Semester Ganjil 2022/2023

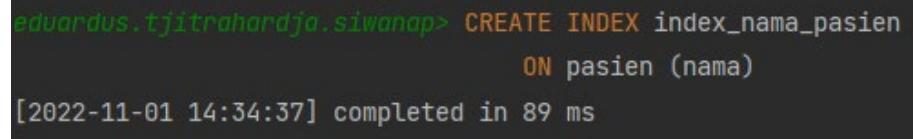


The figure consists of four vertically stacked screenshots of a PostgreSQL terminal window. Each screenshot shows a SQL query followed by its EXPLAIN ANALYZE output. The first three queries show simple SELECT statements with ORDER BY clauses, while the fourth shows a SELECT with a LIMIT clause.

- Query 1:** SELECT \* FROM kamar ORDER BY harga DESC
- Query 2:** SELECT \* FROM rawat\_inap WHERE tgl\_keluar IS NULL
- Query 3:** SELECT \* FROM perawat WHERE nama LIKE 'T%'
- Query 4:** SELECT \* FROM pasien ORDER BY alamat LIMIT 10

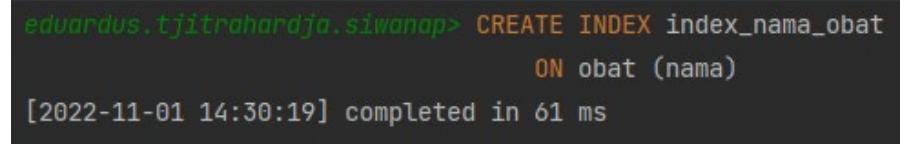
b. [SQL] Buat *index* berikut (*method* nya terserah Anda):

- index\_nama\_pasien pada tabel **PASIEN** kolom **nama**.



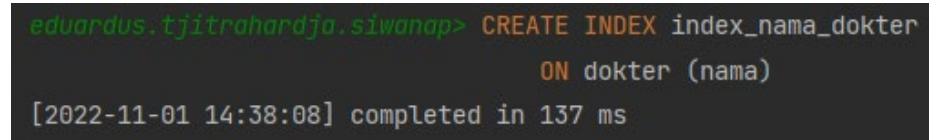
```
eduardus.tjitrahardja.siwanap> CREATE INDEX index_nama_pasien
                                ON pasien (nama)
[2022-11-01 14:34:37] completed in 89 ms
```

- index\_nama\_obat pada tabel **OBAT** kolom **nama**.



```
eduardus.tjitrahardja.siwanap> CREATE INDEX index_nama_obat
                                ON obat (nama)
[2022-11-01 14:30:19] completed in 61 ms
```

- index\_nama\_dokter pada tabel **DOKTER** kolom **nama**.



```
eduardus.tjitrahardja.siwanap> CREATE INDEX index_nama_dokter
                                ON dokter (nama)
[2022-11-01 14:38:08] completed in 137 ms
```

- index\_nama\_perawat pada tabel **PERAWAT** kolom **nama**.

# Laporan Tutorial Lab 2

## Basis Data

### Semester Ganjil 2022/2023

```
eduardus.tjitrahardja.siwanap> CREATE INDEX index_nama_perawat
                                ON perawat (nama)
[2022-11-01 14:38:31] completed in 113 ms
```

Tampilkan *query* dan *index* untuk setiap tabel di dalam laporan submisi Anda.

- c. [SQL] Jalankan kembali setiap *query* SELECT di atas dari pertanyaan nomor 3 menggunakan perintah EXPLAIN ANALYZE. Screenshot eksekusinya dan tulis hasilnya pada tabel di bawah, sertakan dalam laporan submisi Anda.

```
eduardus.tjitrahardja=> \d KAMAR
                                         Table "siwanap.kamar"
      Column   |          Type           | Collation | Nullable | Default
-----+-----+-----+-----+-----+
id_kamar | character varying(10) |           | not null |
nama     | character varying(30) |           | not null |
jenis    | character varying(10) |           | not null |
kapasitas | smallint            |           | not null |
harga    | integer              |           | not null |
Indexes:
    "kamar_pkey" PRIMARY KEY, btree (id_kamar)
Referenced by:
    TABLE "rawat_inap" CONSTRAINT "rawat_inap_id_kamar_fkey" FOREIGN KEY (id_kamar) REFERENCES kamar(id_kamar) ON DELETE CASCADE
```

```
eduardus.tjitrahardja.siwanap> EXPLAIN ANALYZE
SELECT *
  FROM kamar
 ORDER BY harga DESC
[2022-11-01 14:39:11] 6 rows retrieved starting from 1 in 33 ms (exec
|< < 6 rows > >|CSV| QUERY PLAN
1 Sort  (cost=2.69..2.80 rows=45 width=160) (actual time=0.068..0.079 rows=45 loops=1)
2  Sort Key: harga
3  Sort Method: quicksort Memory: 20KB
4  -> Seq Scan on kamar  (cost=0.00..1.45 rows=45 width=160) (actual time=0.009..0.019 rows=45 loops=1)
5 Planning time: 0.064 ms
6 Execution time: 0.116 ms
```

# Laporan Tutorial Lab 2

## Basis Data

### Semester Ganjil 2022/2023

```
eduardus.tjitrabhardja=> \d RAWAT_INAP
                                         Table "siwanap.rawat_inap"
      Column   |    Type     | Collation | Nullable | Default
-----+-----+-----+-----+-----+
id_rawat_inap | character varying(10) |          | not null |
id_kamar      | character varying(10) |          | not null |
id_pasien     | character varying(10) |          | not null |
tgl_masuk     | date                  |          | not null |
tgl_keluar    | date                  |          |           |
Indexes:
"rawat_inap_pkey" PRIMARY KEY, btree (id_rawat_inap)
Foreign-key constraints:
"rawat_inap_id_kamar_fkey" FOREIGN KEY (id_kamar) REFERENCES kamar(id_kamar) ON DELETE CASCADE
"rawat_inap_id_pasien_fkey" FOREIGN KEY (id_pasien) REFERENCES pasien(id_pasien) ON DELETE CASCADE
Referenced by:
TABLE "dokter_rawat_inap" CONSTRAINT "dokter_rawat_inap_id_rawat_inap_fkey" FOREIGN KEY (id_rawat_inap) REFERENCES rawat_inap(id_rawat_inap) ON DELETE CASCADE
TABLE "shift_perawat" CONSTRAINT "shift_perawat_id_rawat_inap_fkey" FOREIGN KEY (id_rawat_inap) REFERENCES rawat_inap(id_rawat_inap) ON DELETE CASCADE
```

```
eduardus.tjitrabhardja.siwonap> EXPLAIN ANALYZE
SELECT *
FROM rawat_inap
WHERE tgl_keluar IS NULL
[2022-11-01 14:39:30] 5 rows retrieved starting from 1 in 39 ms (exec
```

QUERY PLAN	
1	Seq Scan on rawat_inap (cost=0.00..15.30 rows=3 width=122) (actual time=0.009..0.016 rows=5 loops=1)
2	Filter: (tgl_keluar IS NULL)
3	Rows Removed by Filter: 46
4	Planning time: 0.054 ms
5	Execution time: 0.035 ms

```
eduardus.tjitrabhardja=> \d PERAWAT
                                         Table "siwanap.perawat"
      Column   |    Type     | Collation | Nullable | Default
-----+-----+-----+-----+-----+
id_perawat  | character varying(10) |          | not null |
nama        | character varying(100) |          | not null |
no_telp     | character varying(14) |          | not null |
email       | character varying(50) |          | not null |
jenis_kelamin | character(1) |          | not null |
Indexes:
"perawat_pkey" PRIMARY KEY, btree (id_perawat)
Referenced by:
TABLE "shift_perawat" CONSTRAINT "shift_perawat_id_perawat_fkey" FOREIGN KEY (id_perawat) REFERENCES perawat(id_perawat) ON DELETE CASCADE
```

```
eduardus.tjitrabhardja.siwonap> EXPLAIN ANALYZE
SELECT *
FROM perawat
WHERE nama LIKE 'T%'
[2022-11-01 14:39:48] 5 rows retrieved starting from 1 in 38 ms (exec
```

QUERY PLAN	
1	Seq Scan on perawat (cost=0.00..1.62 rows=1 width=428) (actual time=0.014..0.020 rows=3 loops=1)
2	Filter: (((nama)::text ~ 'T%'))::text
3	Rows Removed by Filter: 47
4	Planning time: 0.073 ms
5	Execution time: 0.041 ms

```
eduardus.tjitrabhardja=> \d PASTIEN
                                         Table "siwanap.pasien"
      Column   |    Type     | Collation | Nullable | Default
-----+-----+-----+-----+-----+
id_pasien   | character varying(10) |          | not null |
nama        | character varying(100) |          | not null |
alamat      | text                  |          | not null |
no_telp     | character varying(14) |          | not null |
email       | character varying(50) |          | not null |
tgl_lahir   | date                  |          | not null |
jenis_kelamin | character(1) |          | not null |
Indexes:
"pasien_pkey" PRIMARY KEY, btree (id_pasien)
"index_nama_pasien" btree (nama)
Referenced by:
TABLE "rawat_inap" CONSTRAINT "rawat_inap_id_pasien_fkey" FOREIGN KEY (id_pasien) REFERENCES pasien(id_pasien) ON DELETE CASCADE
```

```
eduardus.tjitrabhardja.siwonap> EXPLAIN ANALYZE
SELECT *
FROM pasien
ORDER BY alamat
LIMIT 10
[2022-11-01 14:40:16] 7 rows retrieved starting from 1 in 59 ms (exec
```

QUERY PLAN	
1	Limit (cost=2.55..2.57 rows=10 width=94) (actual_time=0.138..0.145 rows=10 loops=1)
2	-> Sort (cost=2.55..2.67 rows=49 width=94) (actual_time=0.137..0.141 rows=10 loops=1)
3	Sort Key: alamat
4	Sort Method: top-N heapsort Memory: 18KB
5	-> Seq Scan on pasien (cost=0.00..1.49 rows=49 width=94) (actual_time=0.008..0.021 rows=49 loops=1)
6	Planning time: 0.079 ms
7	Execution time: 0.170 ms

# Laporan Tutorial Lab 2

## Basis Data

### Semester Ganjil 2022/2023

- d. [Trivia] Bandingkan *planning time* dan *execution time* (menggunakan tabel di bawah) dari *query* saat tanpa index dan setelah menggunakan *index*. Mana yang lebih baik? Berikan penjelasan!

Query	Planning Time		Execution Time	
	TANPA INDEX	DENGAN INDEX	TANPA INDEX	DENGAN INDEX
1	0.064ms	0.064ms	0.086ms	0.116ms
2	0.054ms	0.054ms	0.035ms	0.035ms
3	0.073ms	0.073ms	0.042ms	0.041ms
4	0.076ms	0.079ms	0.182ms	0.170ms

Seharusnya, dengan index akan lebih cepat execution timenya. Namun, di saya relatif sama untuk planning dan execution timenya. Lalu untuk *planning time*-nya juga relative sama hanya ada yang lebih lama mungkin karena SQL melakukan beberapa modifikasi pada table yang kita index jadi menambah waktu itu *planning time*.