

**LAPORAN TUTORIAL LAB 2
BASIS DATA**



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DEPOK
2022/2023**

Laporan Tutorial Lab 2

Basis Data

Semester Ganjil 2022/2023

Latihan 1

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

1.

```
Output
eduardus.tjitrahardja.silwanop> SELECT nama
                                FROM DOKTER
                                WHERE id_dokter = 'D004'
[2022-11-01 11:35:27] 1 row retrieved starting from 1 in
```

nama
1 Ronda Hargitt

2.

3.

```
Output
eduardus.tjitrahardja.silwanop> 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
1 Merpati 1	Kelas 3	6
2 Merpati 2	Kelas 3	6
3 Merpati 3	Kelas 3	6
4 Merpati 4	Kelas 3	6
5 Merpati 5	Kelas 3	6
6 Jalak 1	Kelas 2	4
7 Jalak 2	Kelas 2	4
8 Jalak 3	Kelas 2	4
9 Jalak 4	Kelas 2	4
10 Jalak 5	Kelas 2	4
11 Murai 1	Kelas 1	2
12 Murai 2	Kelas 1	2
13 Murai 3	Kelas 1	2
14 Murai 4	Kelas 1	2
15 Murai 5	Kelas 1	2
16 Merak 1	VIP B	1
17 Merak 2	VIP B	1
18 Merak 3	VIP B	1
19 Merak 4	VIP B	1
20 Merak 5	VIP B	1
21 Merak 6	VIP B	1
22 Merak 7	VIP B	1
23 Merak 8	VIP B	1
24 Merak 9	VIP B	1
25 Merak 10	VIP B	1
26 Merak 11	VIP B	1
27 Merak 12	VIP B	1
28 Merak 13	VIP B	1
29 Merak 14	VIP B	1
30 Merak 15	VIP B	1

a.

```
Output
eduardus.tjitrahardja.silwanop> 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	
1	KA06	Jalak 1	Kelas 2	4	300000
2	KA07	Jalak 2	Kelas 2	4	300000
3	KA08	Jalak 3	Kelas 2	4	300000
4	KA09	Jalak 4	Kelas 2	4	300000
5	KA10	Jalak 5	Kelas 2	4	300000
6	KA11	Murai 1	Kelas 1	2	700000
7	KA12	Murai 2	Kelas 1	2	700000
8	KA13	Murai 3	Kelas 1	2	700000
9	KA14	Murai 4	Kelas 1	2	700000
10	KA15	Murai 5	Kelas 1	2	700000

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Output

```

[2022-11-01 13:22:38] 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
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

b.

Output

```

[2022-11-01 11:38:41] 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
Karen Cotillard	kcotillardk@omniture.com

4.

Output

```

[2022-11-01 13:21:57] (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
D008	Den Stollsteimer	85054750630	dstollsteimer7@myspace.com	anak
D009	Jenda Chaudret	87860070111	jchaudret8@example.com	anak
D010	Moreen Hebblethwaite	83109586118	mhebblethwaite9@buzzfeed.com	anak
D011	Idalia Caughte	88041581978	icaughte@samsung.com	anak
D012	Darbie Howle	84548778195	dhowle@gzimbio.com	anak
D013	Heade Munn	85430172820	mmunn@si.edu	anak
D014	Josephine Schneider	84551802662	jschneider@qum.edu	anak
D029	Devlin Earney	81003195082	dearney@sbwire.com	bedah
D030	Carl Adelsberg	87917206718	cadelsberg@networksolutions.com	bedah
D031	Gearard Stapells	85738280407	gstapells@hc360.com	bedah
D032	Cassandra Noddles	81220215324	cnoddles@edell.com	bedah
D033	Genieve Guillotin	81315397179	gguillotin@theatlantic.com	bedah
D034	Tiena Klimmek	89104117514	tklimek@ocn.ne.jp	bedah
D035	Garry Aspinell	89869528031	gaspinell@gargocollective.com	bedah

5.

Output

```

[2022-11-01 11:38:18] SELECT *
FROM KAMAR
WHERE (kapasitas BETWEEN 2 AND 4)
[2022-11-01 11:38:18] 10 rows retrieved starting from 1 in 434 ms
[2022-11-01 11:38:41] 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
[2022-11-01 11:39:05] (SELECT *
FROM DOKTER
WHERE spesialisasi = 'anak')
UNION
(SELECT *
FROM DOKTER
WHERE spesialisasi = 'bedah')
[2022-11-01 11:39:05] 14 rows retrieved starting from 1 in 398 ms

```

id_dokter	nama	no_telp	email	spesialisasi
D008	Den Stollsteimer	85054750630	dstollsteimer7@myspace.com	anak
D009	Jenda Chaudret	87860070111	jchaudret8@example.com	anak
D010	Moreen Hebblethwaite	83109586118	mhebblethwaite9@buzzfeed.com	anak
D011	Idalia Caughte	88041581978	icaughte@samsung.com	anak
D012	Darbie Howle	84548778195	dhowle@gzimbio.com	anak
D013	Heade Munn	85430172820	mmunn@si.edu	anak
D014	Josephine Schneider	84551802662	jschneider@qum.edu	anak
D029	Devlin Earney	81003195082	dearney@sbwire.com	bedah
D030	Carl Adelsberg	87917206718	cadelsberg@networksolutions.com	bedah
D031	Gearard Stapells	85738280407	gstapells@hc360.com	bedah
D032	Cassandra Noddles	81220215324	cnoddles@edell.com	bedah
D033	Genieve Guillotin	81315397179	gguillotin@theatlantic.com	bedah
D034	Tiena Klimmek	89104117514	tklimek@ocn.ne.jp	bedah
D035	Garry Aspinell	89869528031	gaspinell@gargocollective.com	bedah

6.

Output

```

[2022-11-01 11:39:05] 14 rows retrieved starting from 1 in 398 ms
[2022-11-01 11:39:05] (SELECT *
FROM DOKTER
WHERE nama LIKE 'C%')
INTERSECT
(SELECT *
FROM DOKTER
WHERE spesialisasi = 'bedah')
[2022-11-01 11:39:37] 2 rows retrieved starting from 1 in 355 ms

```

id_dokter	nama	no_telp	email	spesialisasi
D030	Carl Adelsberg	87917206718	cadelsberg@networksolutions.com	bedah
D032	Cassandra Noddles	81220215324	cnoddles@edell.com	bedah

7.

Output

```

[2022-11-01 11:39:37] 2 rows retrieved starting from 1 in 355 ms
[2022-11-01 11:40:08] (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 164 ms (e

```

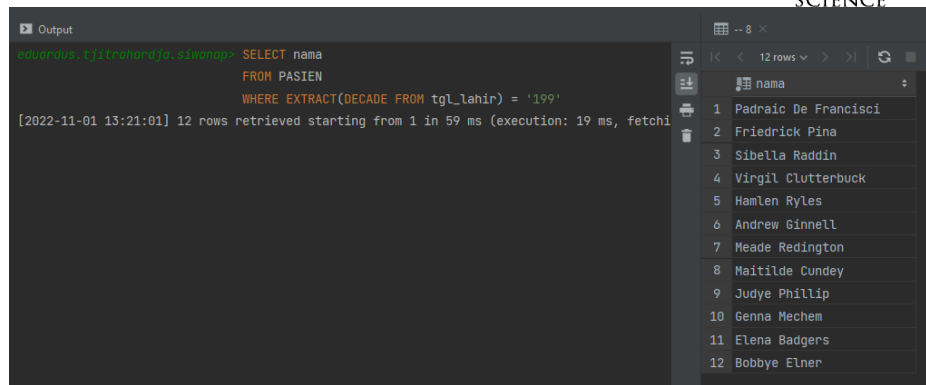
id_dokter	nama	no_telp	email	spesialisasi
D020	Candy Arzinger	84319934032	carzingerj@abc.net.au	saraf

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8.



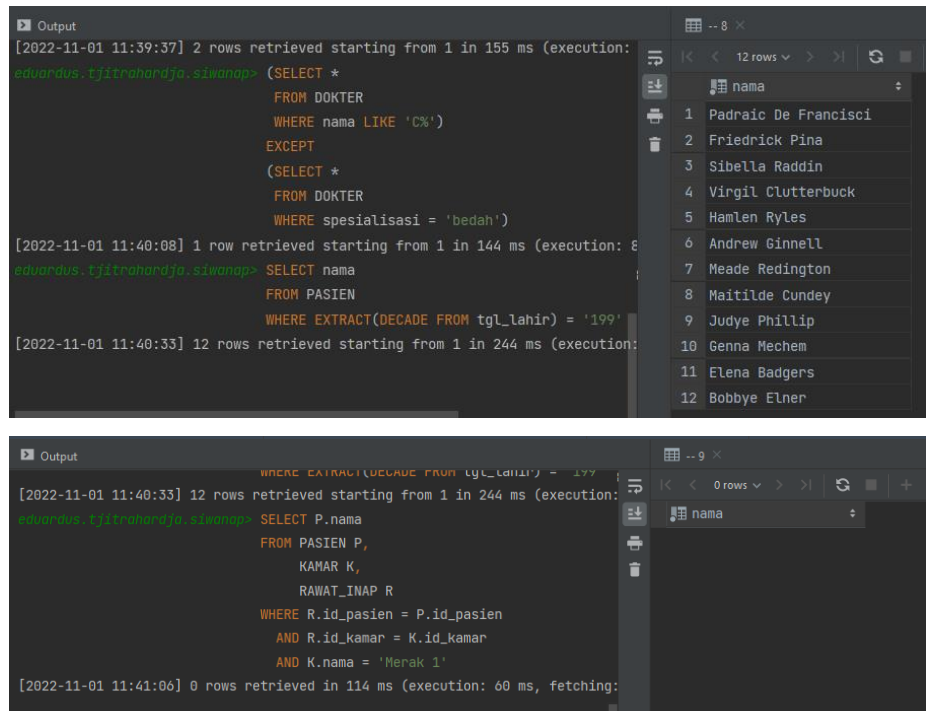
Output

```
eduardus.tjitrahardjo.siwanaap> 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 Padraic De Francisci
2 Friedrich 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 Bobby Elner

9.



Output

```
[2022-11-01 11:39:37] 2 rows retrieved starting from 1 in 155 ms (execution:
eduardus.tjitrahardjo.siwanaap> (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 (execution: 8
eduardus.tjitrahardjo.siwanaap> SELECT nama
FROM PASIEN
WHERE EXTRACT(DECADE FROM tgl_lahir) = '199'
```

[2022-11-01 11:40:33] 12 rows retrieved starting from 1 in 244 ms (execution:

nama
1 Padraic De Francisci
2 Friedrich 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 Bobby Elner

Output

```
WHERE EXTRACT(DECADE FROM tgl_lahir) = '199'
[2022-11-01 11:40:33] 12 rows retrieved starting from 1 in 244 ms (execution:
eduardus.tjitrahardjo.siwanaap> 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:
```

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10.

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

	perawat_id_perawat	nama	no_telp	email	jenis_kelamin	id_shift_perawat	shift_perawat_id_perawat	id_perawat_inap	nama_mafal	id_shift_mafal
1	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP01	PE01	R123		
2	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP02	PE02	R124		
3	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP03	PE03	R149		
4	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP04	PE04	R142		
5	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP05	PE05	R130		
6	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP06	PE06	R136		
7	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP07	PE07	R105		
8	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP08	PE08	R101		
9	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP09	PE09	R109		
10	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP10	PE10	R124		
11	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP11	PE11	R115		
12	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP12	PE12	R104		
13	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP13	PE13	R101		
14	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP14	PE14	R124		
15	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP15	PE15	R116		
16	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP16	PE16	R122		
17	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP17	PE17	R113		
18	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP18	PE18	R145		
19	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP19	PE19	R130		
20	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP20	PE20	R127		
21	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP21	PE21	R136		
22	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP22	PE22	R124		
23	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP23	PE23	R118		
24	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP24	PE24	R136		
25	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP25	PE25	R131		
26	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP26	PE26	R129		
27	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP27	PE27	R129		
28	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP28	PE28	R127		
29	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP29	PE29	R126		
30	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP30	PE30	R125		
31	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP31	PE31	R125		
32	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP32	PE32	R137		
33	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP33	PE33	R107		
34	PER01	Asa Mudalstone	8607830435	asmudalstone@businessinsider.com	L	SP34	PE34	R143		

11.

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

	P.id_perawat	nama	no_telp	email	jenis_kelamin	id_shift_perawat	shift_perawat_id_perawat	id_perawat_inap	nama_mafal	id_shift_mafal
1	PER02	Erin Georgio	8522780184	ergeo@bigpulp.com	P	SP01	PE02			
2	PER05	Erin Wiley	8687714044	ewiley@igips.com	P	SP02	PE05			
3	PER39	Neilson Crowley	8664772452	ncrowley@bigpulp.co.jp	L	SP03	PE39	R149		
4	PER27	Jeth Barlow	8552661761	jbarlow@igips.com	P	SP04	PE27	R142		
5	PER39	Neilson Crowley	8664772452	ncrowley@bigpulp.co.jp	L	SP05	PE39	R130		
6	PER04	Gavie Stewart	8214113148	gstewart@igips.com	L	SP06	PE04	R136		
7	PER32	Kelcy Franchini	8465992729	kfranchini@bigpulp.it	L	SP07	PE32	R120		
8	PER34	Shaughy Bernhardt	8485220884	sbernhardt@bigpulpontpost.com	P	SP08	PE34	R105		
9	PER47	Andrej Sandland	8580541364	asandland@qoncom.com	L	SP09	PE47	R109		
10	PER34	Shaughy Bernhardt	8485220884	sbernhardt@bigpulpontpost.com	P	SP10	PE34	R124		
11	PER42	Paul Adams	8281837842	padams@bigpulp.com	P	SP11	PE42	R115		
12	PER35	Brandon Sabring	8546789168	bsabring@bigpulp.com	L	SP12	PE35	R104		
13	PER35	Ella Arnold	8748324219	earnold@bigpulp.me	P	SP13	PE35	R101		
14	PER28	Michelle Greger	8651318639	mgreger@bigpulpme.com	L	SP14	PE28	R124		
15	PER44	Ezzy Gelfert	8954552159	egelfert@bigpulpardian.com	L	SP15	PE44	R128		
16	PER38	Clarendelle Song	8113737628	csong@bigpulp.com	L	SP16	PE38	R122		
17	PER27	Jeth Barlow	8552661761	jbarlow@igips.com	P	SP17	PE27	R113		
18	PER47	Andrej Sandland	8580541364	asandland@qoncom.com	L	SP18	PE47	R124		
19	PER35	Ella Arnold	8748324219	earnold@bigpulp.me	P	SP19	PE35	R125		
20	PER26	Willow De Cuce	8517952174	wdeuce@bigpulp.com	L	SP20	PE26	R127		
21	PER33	Liette Rodolfo	8584974184	lrodolfo@bigpulp.edu	P	SP21	PE33	R136		
22	PER24	Jandy Basingham	8895308488	jbasingham@bigpulp.io	L	SP22	PE24	R124		
23	PER05	Erin Wiley	8687714044	ewiley@igips.com	P	SP23	PE05	R120		
24	PER34	Shaughy Bernhardt	8485220884	sbernhardt@bigpulpontpost.com	P	SP24	PE34	R124		
25	PER33	Noreen Agostini	8259258889	nagostini@bigpulp.com	P	SP25	PE33	R131		
26	PER34	Jarrett Bussars	8749537959	jbussars@bigpulpont.com	L	SP26	PE34	R126		
27	PER42	Ossie Merriday	8477241361	omerriday@bigpulp.org	P	SP27	PE42	R129		
28	PER05	Jenna Bartlow	8683780651	jbartlow@bigpulp.net	L	SP28	PE05	R127		
29	PER34	Tendon Soling	8539547887	tsoling@bigpulpnews.com	P	SP29	PE34	R120		
30	PER33	Noreen Agostini	8259258889	nagostini@bigpulp.com	P	SP30	PE33	R124		
31	PER11	Maiz Riddish	8927617478	mriddish@bigpulp.co.uk	L	SP31	PE11	R125		
32	PER17	Sanderson Weng	8277816461	sweng@bigpulp.com	P	SP32	PE17	R129		
33	PER02	Erin Georgio	8522780184	ergeo@bigpulp.com	P	SP33	PE02	R107		
34	PER22	Clea Elnia	8381743443	celnia@bigpulp.gov	L	SP34	PE22	R143		

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12.

```
[2022-11-01 13:05:25] 100 rows retrieved starting from 1 in 103 ms (execution: 47 ms, fe
eduardus.tjitrahardjo.siwanoip> SELECT *
FROM PERAWAT P
LEFT OUTER JOIN SHIFT_PERAWAT S
ON P.id_perawat = S.id_perawat
```

P.id_perawat	P.nama	P.no_ktp	P.email	P.jenis_kelamin	S.id_shift_perawat	S.id_perawat	S.id_shift_inap	S.waktu_mulai	S.waktu_selesai
PE02	Erina Georgiou	85227801894	egorgiou@yelp.com	P	SP01	PE02	R123	2021-12-07 00:00:00.000000	2021-12-07 12:00:00.000000
PE08	Eren Wiley	86587180468	ewiley@gigay.com	P	SP02	PE08	R124	2022-02-02 00:00:00.000000	2022-02-02 12:00:00.000000
PE39	Mellicent Crawley	89047721652	mcrawley12@google.co.jp	L	SP03	PE39	R148	2020-09-11 00:00:00.000000	2020-09-11 12:00:00.000000
PE27	Jeth Barlow	85529041701	jbarlow@tynpic.com	P	SP04	PE27	R142	2022-04-29 00:00:00.000000	2022-04-29 12:00:00.000000
PE39	Mellicent Crawley	89047721652	mcrawley12@google.co.jp	L	SP05	PE39	R138	2020-12-03 00:00:00.000000	2020-12-03 12:00:00.000000
PE04	Gania Stewart	8211133165	gstewart@tph.com	L	SP06	PE04	R136	2021-09-04 00:00:00.000000	2021-09-04 12:00:00.000000
PE21	Kelcy Fraschini	8469987329	kfraschini@google.it	L	SP07	PE21	R105	2021-04-29 00:00:00.000000	2021-04-29 12:00:00.000000
PE34	Shaughn Bernadotte	84852720894	stbernadotte@huffingtonpost.com	P	SP08	PE34	R101	2022-08-11 00:00:00.000000	2022-08-11 12:00:00.000000
PE47	Andrei Santland	85005435094	asantland@xnet.com	L	SP09	PE47	R105	2021-04-29 12:00:00.000000	2021-04-29 00:00:00.000000
PE34	Shaughn Bernadotte	84852720894	stbernadotte@huffingtonpost.com	P	SP10	PE34	R128	2020-04-05 00:00:00.000000	2020-04-05 12:00:00.000000
PE41	Dani Miran	81892579962	dmiran@icloud.com	P	SP11	PE41	R125	2020-04-27 00:00:00.000000	2020-04-27 12:00:00.000000
PE15	Brannon Sebring	85647709166	bsebring@ustoday.com	L	SP12	PE15	R136	2020-11-13 00:00:00.000000	2020-11-13 12:00:00.000000
PE15	Ella Arnoldi	87453242129	earnoldi@outlook.se	P	SP13	PE15	R101	2022-08-11 12:00:00.000000	2022-08-11 00:00:00.000000
PE28	Mitchell Greger	86521338439	mgreger@chromengine.com	L	SP14	PE28	R126	2020-03-22 00:00:00.000000	2020-03-22 12:00:00.000000
PE46	Gippy Sollefant	89545827319	gsollefant@theguardian.com	L	SP15	PE46	R126	2022-03-28 00:00:00.000000	2022-03-28 12:00:00.000000
PE28	Claraelle Song	81173374328	csong@tph.com	L	SP16	PE28	R122	2020-10-18 00:00:00.000000	2020-10-18 12:00:00.000000
PE27	Jeth Barlow	85529041701	jbarlow@tynpic.com	P	SP17	PE27	R133	2022-01-20 00:00:00.000000	2022-01-20 12:00:00.000000
PE47	Andrei Santland	85005435094	asantland@xnet.com	L	SP18	PE47	R124	2022-05-26 00:00:00.000000	2022-05-26 12:00:00.000000
PE15	Ella Arnoldi	87453242129	earnoldi@outlook.se	P	SP19	PE15	R145	2022-03-30 00:00:00.000000	2022-03-30 12:00:00.000000
PE29	Willow De Cruce	85179393141	wde@bufffeed.com	L	SP20	PE29	R127	2021-01-16 00:00:00.000000	2021-01-16 12:00:00.000000
PE33	Lizette Rodolico	85849743864	lrodolico@xnet.com	P	SP21	PE33	R130	2020-03-02 00:00:00.000000	2020-03-02 12:00:00.000000
PE24	Jenny Basingham	88953059488	jbsingham@en.com	L	SP22	PE24	R124	2022-05-26 12:00:00.000000	2022-05-27 00:00:00.000000
PE05	Eren Wiley	86587180468	ewiley@gigay.com	P	SP23	PE05	R110	2020-12-03 12:00:00.000000	2020-12-04 00:00:00.000000
PE34	Shaughn Bernadotte	84852720894	stbernadotte@huffingtonpost.com	P	SP24	PE34	R136	2022-04-26 12:00:00.000000	2022-04-27 00:00:00.000000
PE13	Noreen Agostini	81892579962	negostini@outlook.com	P	SP25	PE13	R121	2021-08-13 00:00:00.000000	2021-08-13 12:00:00.000000
PE39	Jerrett Bonpass	87455757595	jbonpass@tharcaste.com	L	SP26	PE39	R136	2022-09-07 00:00:00.000000	2022-09-07 12:00:00.000000
PE42	Gasia Merriday	84572421361	gmerriday@gigay.org	P	SP27	PE42	R129	2021-12-28 00:00:00.000000	2021-12-28 12:00:00.000000
PE03	Joanna Beutlone	89638398853	jbeutlone@tph.net	L	SP28	PE03	R127	2021-01-16 12:00:00.000000	2021-01-17 00:00:00.000000
PE36	Teodor Schlag	81495678087	tschlag@xnet.com	P	SP29	PE36	R128	2020-11-30 00:00:00.000000	2020-11-30 12:00:00.000000
PE12	Noreen Agostini	81892579962	negostini@outlook.com	P	SP30	PE12	R124	2022-02-02 12:00:00.000000	2022-02-03 00:00:00.000000
PE11	Mair Riddich	89736194780	mriddich@google.co.uk	L	SP31	PE11	R125	2022-01-03 00:00:00.000000	2022-01-03 12:00:00.000000
PE17	Sanderson Burg	83770914051	sburg@xnet.com	P	SP32	PE17	R137	2022-09-18 00:00:00.000000	2022-09-18 12:00:00.000000
PE02	Erina Georgiou	85227801894	egorgiou@yelp.com	P	SP33	PE02	R107	2021-08-01 00:00:00.000000	2021-08-01 12:00:00.000000
PE22	Clea Eshin	83821743363	ceshin@tph.gov	L	SP34	PE22	R143	2021-12-04 00:00:00.000000	2021-12-04 12:00:00.000000

13.

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

S.id_shift_perawat	S.id_perawat	S.id_shift_inap	S.waktu_mulai	S.waktu_selesai	P.id_perawat	P.nama	P.no_ktp	P.email	P.jenis_kelamin
SP01	PE02	R123	2021-12-07 00:00:00.000000	2021-12-07 12:00:00.000000	PE02	Erina Georgiou	85227801894	egorgiou@yelp.com	P
SP02	PE05	R114	2022-02-02 00:00:00.000000	2022-02-02 12:00:00.000000	PE05	Eren Wiley	86587180468	ewiley@gigay.com	P
SP03	PE39	R148	2020-09-11 00:00:00.000000	2020-09-11 12:00:00.000000	PE39	Mellicent Crawley	89047721652	mcrawley12@google.co.jp	L
SP04	PE27	R142	2022-04-29 00:00:00.000000	2022-04-29 12:00:00.000000	PE27	Jeth Barlow	85529041701	jbarlow@tynpic.com	P
SP06	PE04	R136	2022-04-29 00:00:00.000000	2022-04-29 12:00:00.000000	PE04	Gania Stewart	8211133165	gstewart@tph.com	L
SP07	PE21	R105	2021-04-29 00:00:00.000000	2021-04-29 12:00:00.000000	PE21	Kelcy Fraschini	8469987329	kfraschini@google.it	L
SP08	PE34	R101	2022-08-11 00:00:00.000000	2022-08-11 12:00:00.000000	PE34	Shaughn Bernadotte	84852720894	stbernadotte@huffingtonpost.com	P
SP09	PE47	R105	2021-04-29 12:00:00.000000	2021-04-29 00:00:00.000000	PE47	Andrei Santland	85005435094	asantland@xnet.com	L
SP10	PE34	R128	2020-04-05 00:00:00.000000	2020-04-05 12:00:00.000000	PE34	Shaughn Bernadotte	84852720894	stbernadotte@huffingtonpost.com	P
SP11	PE41	R125	2020-04-27 00:00:00.000000	2020-04-27 12:00:00.000000	PE41	Dani Miran	81892579962	dmiran@icloud.com	P
SP12	PE15	R136	2020-11-13 00:00:00.000000	2020-11-13 12:00:00.000000	PE15	Brannon Sebring	85647709166	bsebring@ustoday.com	L
SP13	PE15	R101	2022-08-11 12:00:00.000000	2022-08-11 00:00:00.000000	PE15	Ella Arnoldi	87453242129	earnoldi@outlook.se	P
SP14	PE28	R126	2020-03-22 00:00:00.000000	2020-03-22 12:00:00.000000	PE28	Mitchell Greger	86521338439	mgreger@chromengine.com	L
SP15	PE46	R126	2022-03-28 00:00:00.000000	2022-03-28 12:00:00.000000	PE46	Gippy Sollefant	89545827319	gsollefant@theguardian.com	L
SP16	PE28	R122	2020-10-18 00:00:00.000000	2020-10-18 12:00:00.000000	PE28	Claraelle Song	81173374328	csong@tph.com	L
SP17	PE27	R133	2022-01-20 00:00:00.000000	2022-01-20 12:00:00.000000	PE27	Jeth Barlow	85529041701	jbarlow@tynpic.com	P
SP18	PE47	R124	2022-05-26 00:00:00.000000	2022-05-26 12:00:00.000000	PE47	Andrei Santland	85005435094	asantland@xnet.com	L
SP19	PE15	R145	2022-03-30 00:00:00.000000	2022-03-30 12:00:00.000000	PE15	Ella Arnoldi	87453242129	earnoldi@outlook.se	P
SP20	PE29	R127	2021-01-16 00:00:00.000000	2021-01-16 12:00:00.000000	PE29	Willow De Cruce	85179393141	wde@bufffeed.com	L
SP21	PE33	R130	2020-03-02 00:00:00.000000	2020-03-02 12:00:00.000000	PE33	Lizette Rodolico	85849743864	lrodolico@xnet.com	P
SP22	PE24	R124	2022-05-26 12:00:00.000000	2022-05-27 00:00:00.000000	PE24	Jenny Basingham	88953059488	jbsingham@en.com	L
SP23	PE05	R110	2020-12-03 12:00:00.000000	2020-12-04 00:00:00.000000	PE05	Eren Wiley	86587180468	ewiley@gigay.com	P
SP24	PE34	R136	2022-04-26 12:00:00.000000	2022-04-27 00:00:00.000000	PE34	Shaughn Bernadotte	84852720894	stbernadotte@huffingtonpost.com	P
SP25	PE13	R121	2021-08-13 00:00:00.000000	2021-08-13 12:00:00.000000	PE13	Noreen Agostini	81892579962	negostini@outlook.com	P
SP26	PE39	R136	2022-09-07 00:00:00.000000	2022-09-07 12:00:00.000000	PE39	Jerrett Bonpass	87455757595	jbonpass@tharcaste.com	L
SP27	PE42	R129	2021-12-28 00:00:00.000000	2021-12-28 12:00:00.000000	PE42	Gasia Merriday	84572421361	gmerriday@gigay.org	P
SP28	PE03	R127	2021-01-16 12:00:00.000000	2021-01-17 00:00:00.000000	PE03	Joanna Beutlone	89638398853	jbeutlone@tph.net	L
SP29	PE36	R128	2020-11-30 00:00:00.000000	2020-11-30 12:00:00.000000	PE36	Teodor Schlag	81495678087	tschlag@xnet.com	P
SP30	PE12	R124	2022-02-02 12:00:00.000000	2022-02-03 00:00:00.000000	PE12	Noreen Agostini	81892579962	negostini@outlook.com	P
SP31	PE11	R125	2022-01-03 00:00:00.000000	2022-01-03 12:00:00.000000	PE11	Mair Riddich	89736194780	mriddich@google.co.uk	L
SP32	PE17	R137	2022-09-18 00:00:00.000000	2022-09-18 12:00:00.000000	PE17	Sanderson Burg	83770914051	sburg@xnet.com	P
SP33	PE02	R107	2021-08-01 00:00:00.000000	2021-08-01 12:00:00.000000	PE02	Erina Georgiou	85227801894	egorgiou@yelp.com	P
SP34	PE22	R143	2021-12-04 00:00:00.000000	2021-12-04 12:00:00.000000	PE22	Clea Eshin	83821743363	ceshin@tph.gov	L

Laporan Tutorial Lab 2

Basis Data

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14.

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

id_obat	nama	id_pemberian_obat	id_shift_perawat	id_obat	dosis
0801	calcitonin salmon	P040	SP32	0801	7 mg
0801	calcitonin salmon	P011	SP22	0801	53 mg
0802	Estazolam	P060	SP89	0802	54 mg
0802	Estazolam	P043	SP15	0802	50 mg
0802	Estazolam	P022	SP13	0802	43 mg
0802	Estazolam	P014	SP01	0802	70 mg
0803	ARNICA MONTANA - RHUS TOXICODENDRON - RUTA GRAVEOLENS	<null>	<null>	<null>	<null>
0804	ANTIPYRINE AND BENZOCAINE	P075	SP77	0804	86 mg
0804	ANTIPYRINE AND BENZOCAINE	P032	SP22	0804	45 mg
0805	Phenobarbital	P083	SP34	0805	66 mg
0805	Phenobarbital	P019	SP22	0805	20 mg
0806	levofloxacin	P073	SP42	0806	36 mg
0806	levofloxacin	P066	SP91	0806	68 mg
0806	levofloxacin	P007	SP78	0806	66 mg
0807	Albuterol Sulfate	P071	SP68	0807	36 mg
0808	RISPERIDONE	P0100	SP94	0808	60 mg
0808	RISPERIDONE	P067	SP62	0808	42 mg
0808	RISPERIDONE	P049	SP52	0808	45 mg
0808	RISPERIDONE	P036	SP91	0808	15 mg
0808	RISPERIDONE	P028	SP13	0808	94 mg
0809	Levothyroxine Sodium	P063	SP20	0809	20 mg
0810	calcipotriene 0.005% and betamethasone dipropionate 0.064%	P093	SP32	0810	25 mg
0810	calcipotriene 0.005% and betamethasone dipropionate 0.064%	P027	SP12	0810	5 mg
0811	sus scrofa small intestine mucosa lymph follicle	P009	SP01	0811	76 mg
0812	Benzalkonium Chloride	P086	SP64	0812	91 mg
0812	Benzalkonium Chloride	P081	SP55	0812	56 mg
0812	Benzalkonium Chloride	P065	SP29	0812	43 mg
0812	Benzalkonium Chloride	P058	SP03	0812	33 mg
0812	Benzalkonium Chloride	P010	SP98	0812	68 mg
0813	HYDROCODONE BITARTRATE AND ACETAMINOPHEN	P091	SP33	0813	98 mg
0813	HYDROCODONE BITARTRATE AND ACETAMINOPHEN	P003	SP57	0813	14 mg
0814	Natural Medicine	P088	SP80	0814	80 mg
0814	Natural Medicine	P042	SP05	0814	49 mg
0814	Natural Medicine	P020	SP88	0814	99 mg

15.

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

id_perawat	nama	no_telp	email	jenis_kelamin	id_shift_perawat	id_rumet_inap	waktu_mulai	waktu_akhir
PER01	Erina Georghinu	8527802894	egeorghinu@yelp.com	P	SP01	R123	2022-12-07 00:00:00.000000	2022-12-07 12:00:00.000000
PER05	Efren Wiley	80587160468	ewiley4@igsys.com	P	SP02	R149	2022-02-02 08:00:00.000000	2022-02-02 12:00:00.000000
PER39	Mellicent Crawley	89047721632	mcrawley1@google.co.jp	L	SP03	R149	2020-09-11 00:00:00.000000	2020-09-11 12:00:00.000000
PER27	Jeth Barlow	85229042701	jbarlow@tintypic.com	P	SP04	R142	2022-04-29 00:00:00.000000	2022-04-29 12:00:00.000000
PER39	Mellicent Crawley	89047721632	mcrawley1@google.co.jp	L	SP05	R118	2020-12-03 00:00:00.000000	2020-12-03 12:00:00.000000
PER04	Gennie Stewart	82141131165	gstewart3@eb.com	L	SP06	R136	2022-09-06 00:00:00.000000	2022-09-06 12:00:00.000000
PER31	Kelcy Fraschini	84059987329	kfraschini@google.it	L	SP07	R105	2021-04-29 00:00:00.000000	2021-04-29 12:00:00.000000
PER34	Shaughn Bernadotte	84852728894	sbernadotte@huffingtonpost.com	P	SP08	R101	2022-08-13 00:00:00.000000	2022-08-13 12:00:00.000000
PER47	Andrej Sandland	85005433694	asandland@usnews.com	L	SP09	R105	2021-04-29 12:00:00.000000	2021-04-30 00:00:00.000000
PER34	Shaughn Bernadotte	84852728894	sbernadotte@huffingtonpost.com	P	SP10	R128	2020-06-05 00:00:00.000000	2020-06-05 12:00:00.000000
PER41	Deil Mirams	81945179642	dmirams4@ired.com	P	SP11	R115	2022-04-27 00:00:00.000000	2020-04-27 12:00:00.000000
PER18	Draxton Sebring	85404798048	dsebring@outlook.com	L	SP12	R104	2020-11-13 00:00:00.000000	2020-11-23 12:00:00.000000
PER35	Ella Arndell	87433241219	earndell@about.me	P	SP13	R101	2022-08-13 12:00:00.000000	2022-08-14 00:00:00.000000
PER18	Mitchell Dregan	86521338439	mdregan@chicronengline.com	L	SP14	R136	2020-03-22 00:00:00.000000	2020-03-22 12:00:00.000000
PER46	Gipsy Gullefant	8945827319	ggullefant1@theguardian.com	L	SP15	R116	2022-03-28 00:00:00.000000	2022-03-28 12:00:00.000000
PER20	Clarebelle Song	8117374328	csong1@iglobo.com	L	SP16	R122	2020-10-18 00:00:00.000000	2020-10-18 12:00:00.000000
PER27	Jeth Barlow	85229041701	jbarlow@tintypic.com	P	SP17	R113	2022-01-20 00:00:00.000000	2022-01-20 12:00:00.000000
PER47	Andrej Sandland	85005433694	asandland@usnews.com	L	SP18	R124	2022-05-26 00:00:00.000000	2022-05-26 12:00:00.000000
PER39	Ella Arndell	87433241219	earndell@about.me	P	SP19	R145	2022-03-30 00:00:00.000000	2022-03-30 12:00:00.000000
PER26	Willow De Grece	85126912941	wdegrece@usnews.com	L	SP20	R127	2022-01-15 00:00:00.000000	2022-01-15 12:00:00.000000
PER33	Lizette Woodlice	80848741984	lwoodlice@us.edu	P	SP21	R130	2020-03-02 00:00:00.000000	2020-03-02 12:00:00.000000
PER24	Jandy Bassingham	84953069088	jbassingham@epic.io	L	SP22	R124	2022-05-26 12:00:00.000000	2022-05-27 00:00:00.000000
PER05	Efren Wiley	80587160468	ewiley4@igsys.com	P	SP23	R129	2022-12-03 12:00:00.000000	2022-12-04 00:00:00.000000
PER34	Shaughn Bernadotte	84852728894	sbernadotte@huffingtonpost.com	P	SP24	R136	2022-09-06 12:00:00.000000	2022-09-07 00:00:00.000000
PER13	Noreen Agostini	81599259095	nagostini@about.com	P	SP25	R131	2022-08-13 00:00:00.000000	2022-08-13 12:00:00.000000
PER30	Jarrett Bonpass	87495579595	jbonpass@shareasale.com	L	SP26	R136	2022-09-07 00:00:00.000000	2022-09-07 12:00:00.000000
PER42	Ussie Merrilay	84972431361	umerrilay1@gogp.org	P	SP27	R129	2022-12-28 00:00:00.000000	2022-12-28 12:00:00.000000
PER03	Deane Badstone	80823390853	dbadstone2@ur.net	L	SP28	R127	2022-01-16 12:00:00.000000	2022-01-16 00:00:00.000000
PER36	Tendor Schleg	81485768007	tschleg@ucnes.com	P	SP29	R120	2020-11-30 00:00:00.000000	2020-11-30 12:00:00.000000
PER13	Noreen Agostini	81599259095	nagostini@about.com	P	SP30	R114	2022-02-02 12:00:00.000000	2022-02-03 00:00:00.000000
PER11	Hair Ridlich	89726194780	hridlich@google.co.uk	L	SP31	R125	2022-01-03 00:00:00.000000	2022-01-03 12:00:00.000000
PER17	Sanderson Wurg	83770916651	swurg@about.com	P	SP32	R137	2022-05-18 00:00:00.000000	2022-05-18 12:00:00.000000
PER02	Erina Georghinu	8527802894	egeorghinu@yelp.com	P	SP33	R107	2022-08-01 00:00:00.000000	2022-08-01 12:00:00.000000

Laporan Tutorial Lab 2

Basis Data

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16.

Output

eduardus.tjitrahardja.siwonop> SELECT id_pasien
FROM RAWAT_INAP
WHERE tgl_keluar IS NOT NULL
[2022-11-01 13:14:42] 45 rows retrieved starting from 1 in 43 ms (execut

-- 16 ×

< < 45 rows > > ↺

id_pasien

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

17.

```
Output
eduardus.tjitrahardja.siwonop> SELECT id_pasien
                                FROM RAWAT_INAP
                                WHERE tgl_keluar IS NULL
[2022-11-01 13:15:00] 5 rows retrieved starting from 1 in 61 ms (execution: 61 ms, fetching: 0 ms)
```

id_pasien
1 PA43
2 PA22
3 PA19
4 PA25
5 PA32

18.

```
Output
eduardus.tjitrahardja.siwonop> SELECT O.nama
FROM OBAT O
WHERE O.id_obat IN (SELECT PO.id_obat
FROM PEMBERIAN_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 Greger')
[2022-11-01 13:15:17] 5 rows retrieved starting from 1 in 36 ms (execution: 20 ms, fetching: 16 ms)
```

19.

Output

```
eduardus.tjitrahardja.siwonop> SELECT P.id_perawat, P.nama
                                FROM PERAWAT P
                                WHERE NOT EXISTS(
                                    SELECT *
                                    FROM PEMBERIAN_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
1	PE01
2	PE04
3	PE06
4	PE08
5	PE16
6	PE18
7	PE21
8	PE23
9	PE29
10	PE32
11	PE37
12	PE48
13	PE50

20.

```
Output
eduardus.tjitrahardja.siwonop> SELECT MIN(harga)
                                FROM KAMAR
[2022-11-01 13:15:55] 1 row retrieved starting from 1 in 1 ms (execution: 1 ms, fetching: 0 ms)
```

min
170000

Laporan Tutorial Lab 2

Basis Data

Semester Ganjil 2022/2023

21.

Output

```
eduardus.tjitrahardja.sivanap> SELECT MAX(harga)
                                FROM KAMAR
```

[2022-11-01 13:17:27] 1 row retrieved starting from 1 in

	max
1	3100000

22.

Output

```
eduardus.tjitrahardja.sivanap> SELECT COUNT(*)
                                FROM KAMAR
```

[2022-11-01 13:17:40] 1 row retrieved starting from 1 in

	count
1	45

23.

Output

```
eduardus.tjitrahardja.sivanap> SELECT SUM(kapasitas)
                                FROM KAMAR
```

[2022-11-01 13:18:20] 1 row retrieved starting from 1 in

	sum
1	90

24.

Output

```
eduardus.tjitrahardja.sivanap> SELECT AVG(harga)
                                FROM KAMAR
```

[2022-11-01 13:18:56] 1 row retrieved starting from 1 in

	avg
1	1196666.66666666666667

25.

a.

Output

```
eduardus.tjitrahardja.sivanap> SELECT jenis, SUM(kapasitas)
                                FROM KAMAR
                                GROUP BY jenis
```

[2022-11-01 13:19:16] 6 rows retrieved starting from 1 in

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

b.

Output

```
eduardus.tjitrahardja.sivanap> 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, fetchi

	tahun	count
1	1979	4
2	1994	3
3	1968	1
4	1969	2
5	1966	2
6	1982	3
7	1960	2
8	1963	1
9	1999	1
10	1964	1
11	1995	2
12	1977	1
13	1974	1
14	1988	1
15	1993	1
16	1981	1
17	1964	1

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26.

```

Output
[2022-11-01 13:20:28] SELECT K.jenis, COUNT(K.id_kamar)
FROM KAMAR K,
RAWAT_INAP RI
WHERE RI.id_kamar = K.id_kamar
GROUP BY K.jenis
HAVING COUNT(K.id_kamar) >= 5
[2022-11-01 13:20:28] 4 rows retrieved starting from 1 in 32 ms (execution: 17 ms, fetchin

```

jenis	count
1 Kelas 1	5
2 Kelas 2	9
3 VIP A	13
4 VIP B	18

- [SQL] Tampilkan nama obat yang telah diresepkan oleh perawat wanita dengan menggunakan keyword **IN**.

```

Output
[2022-11-01 14:50:26] 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)

```

nama
1 Salicylic acid
2 calcipotriene 0.005% and betamethasone dip.
3 Rivastigmine Tartrate
4 Benzetonium 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

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

```

Output
[2022-11-01 13:25:46] 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: 20 ms, fetching: 14 ms)

```

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 BENZOCA..
12 Titanium Dioxide
13 OCTINOXATE, OCTISALATE
14 sus scrofa small intes..
15 Salsalate
16 calcipotriene 0.005% a..
17 Benzetonium 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..

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

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Output

```

--> postgresql:postgres> SELECT *
FROM dokter
WHERE id_dokter NOT IN (SELECT id_dokter
FROM dokter_rawat_inap)
[2022-11-01 13:20:13] 19 rows retrieved starting from 1 in 53 ms (execution: 33

```

id_dokter	nama	no_telp	email	spesialisasi
1 D005	Frederique Pruce	83447355115	fpruce4@nps.gov	penyakit dalam
2 D007	Ly Spelllessy	87114027540	lspelllessy@blogspot.com	penyakit dalam
3 D008	Den Stollsteiner	85054750630	dstollsteiner7@myspace..	anak
4 D010	Moreen Hebblethwaite	83109586118	mhebblethwaite9@buzzfee..	anak
5 D013	Heade Munn	85430172820	mmunn@si.edu	anak
6 D015	Rachael Redmire	81414872968	rredmire@vineo.com	saraf
7 D017	Stewart Filkov	81438198883	sfilkov@fastcompany.com	saraf
8 D018	Nero Vanyard	81684545781	nvanyard@technorat1.com	saraf
9 D019	Shepperd Lichfield	84437697707	slichfield@tiny.cc	saraf
10 D021	Lazaro Morston	84529491412	lmorston@nymag.com	saraf
11 D024	Berty Normandale	83888032291	bnormandale@list-manag..	kandungan dan gir
12 D031	Gearard Stapells	85738286407	gstapells@ghc360.com	bedah
13 D032	Cassandra Noddles	81220215324	cnoddles@deli.com	bedah
14 D037	Lewry Galiford	89124483409	lgaliford1@sfgate.com	kulit dan kelamin
15 D040	Tobias Trusse	81023710802	ttrusse13@sun.com	kulit dan kelamin
16 D041	Geoff Winthrop	87843866302	gwinthrop14@yelp.com	kulit dan kelamin
17 D043	Sigismund Stockbridge	84252661633	sstockbridge16@psu.edu	kulit dan kelamin
18 D048	Lari Jobbings	81309045282	ljobbings1@furl.net	mata
19 D050	Ulrich Denisevich	85685636571	udenisevich1@symantec..	mata

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.

Output

```

--> postgresql:postgres> SELECT d.nama,
SUM(CASE WHEN dri.id_rawat_inap IS NOT NULL THEN 1 ELSE 0 END) AS jumlah_pasien_r1
FROM dokter d
LEFT JOIN dokter_rawat_inap dri USING (id_dokter)
GROUP BY 1
ORDER BY 1
[2022-11-01 13:27:38] 50 rows retrieved starting from 1 in 58 ms (execution: 35 ms, fetching: 23 ms)

```

nama	jumlah_pasien_r1
1 Adams Savage	1
2 Barty Leebeter	2
3 Berty Normandale	0
4 Bev Pieracci	1
5 Brantley Ludlam	2
6 Candy Armlinger	1
7 Carl Adelsberg	2
8 Cassandra Noddles	0
9 Darbie Howle	1
10 Deana Gilhespy	2
11 Den Stollsteiner	0
12 Devlin Earney	1
13 Emery Brakespear	1
14 Fanetcha Maryman	4
15 Frederique Pruce	0
16 Garry Aspinell	1
17 Gearard Stapells	0
18 Genvieve Guillotin	2
19 Geoff Winthrop	0
20 Gerianna Mardall	3
21 Halsey Ivashchenko	1
22 Idalia Caughte	1
23 Jacinta Micco	2

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

Output

```

--> postgresql:postgres> SELECT EXTRACT(MONTH FROM tgl_lahir) AS bulan, COUNT(*)
FROM pasien
GROUP BY 1
ORDER BY 1
[2022-11-01 16:21:38] 12 rows retrieved starting from 1 in 88 ms (execution: 75 ms, fetch

```

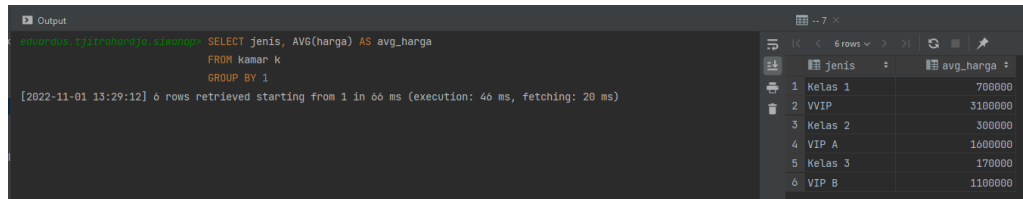
bulan	count
1	2
2	3
3	8
4	5
5	7
6	7
7	3
8	4
9	2
10	3
11	3
12	2

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

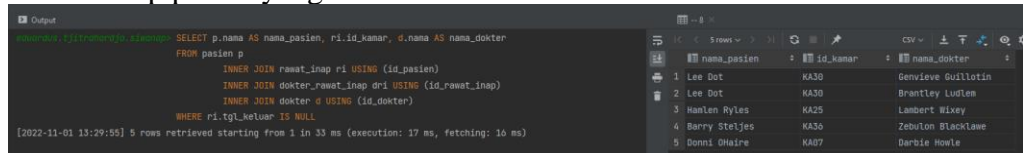


```
SELECT jenis, AVG(harga) AS avg_harga
FROM kamar k
GROUP BY 1
```

[2022-11-01 13:29:12] 6 rows retrieved starting from 1 in 66 ms (execution: 46 ms, fetching: 20 ms)

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

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

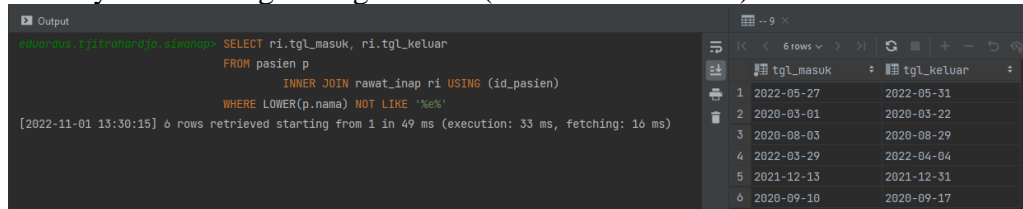


```
SELECT p.nama AS nama_pasien, ri.id_kamar, d.nama AS nama_dokter
FROM pasien p
INNER JOIN rawat_inap ri USING (id_pasien)
INNER JOIN dokter_rawat_inap dri USING (id_rawat_inap)
INNER JOIN dokter d USING (id_dokter)
WHERE ri.tgl_keluar IS NULL
```

[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
1 Lee Dot	KA30	Gervieve Guilletin
2 Lee Dot	KA30	Brantley Ludlen
3 Hamlen Ryles	KA25	Lambert Wiley
4 Barry Steljes	KA36	Zebulon Blacklaw
5 Donni O'Haire	KA07	Barbie Mowle

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

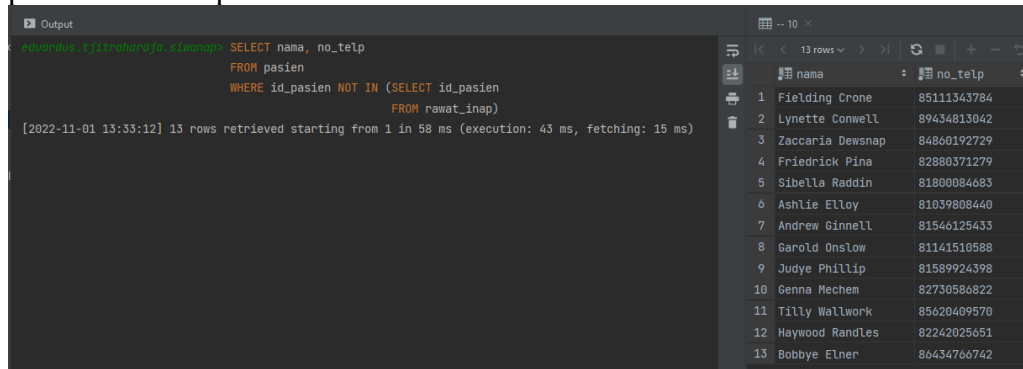


```
SELECT ri.tgl_masuk, ri.tgl_keluar
FROM pasien p
INNER JOIN rawat_inap ri USING (id_pasien)
WHERE LOWER(p.nama) NOT LIKE '%e%'
```

[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
1 2022-05-27	2022-05-31
2 2020-03-01	2020-03-22
3 2020-08-03	2020-08-29
4 2022-03-29	2022-04-04
5 2021-12-13	2021-12-31
6 2020-09-10	2020-09-17

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



```
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
1 Fielding Crone	85111343784
2 Lynette Conwell	89434813042
3 Zaccaria Dewsnap	84860192729
4 Friedrich Pina	82880371279
5 Sibella Raddin	81800084683
6 Ashlie Elloy	81039808440
7 Andrew Ginnell	81546125433
8 Garold Onslow	81141510588
9 Judy Phillip	81589924398
10 Genna Mechem	82730586822
11 Tilly Wallwork	85620409570
12 Haywood Randles	82242025651
13 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**.

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```
eduardus.tjitrahardja.sivanap> 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'
```

id_pasien	nama	alamat	no_telp	email	tgl_lahir	jenis_kelamin
1 PA01	Rey Ferrieri	Jl Raya PKP, Dki Jakarta	87667076022	rferrieri0@latimes.com	1960-07-29	L
2 PA02	Englebert Glassard	Jl. Pluit Raya No. 19, Jakarta Raya	83613307057	eglassard1@indb.com	1972-08-09	L
3 PA05	Cesar Witard	Plaza City View, Building	83060150583	cwitard4@ca.gov	1969-03-12	L
4 PA06	Jayne Clew	Jl Bisma Raya Bl D-1/22, Dki Jakarta	82731096705	jclew5@exblog.jp	1982-08-18	L
5 PA07	Rodney Di Biasio	Jl Jatinegara Brt 122, Dki Jakarta	86987105340	rdio@amazon.de	1960-06-27	L
6 PA09	Gilemte Gresswell	Jl Adam 103 Sukabumi Utara, Dki Jaka.	86224127948	ggresswell8@amazon.co.uk	1981-05-27	P
7 PA11	Padraic De Francisci	Jl H Agus Salim 69, Jakarta	87388709917	pdea@slideshare.net	1994-06-03	P
8 PA14	Clarisse Pennuzzi	Jl Rawagelam IV 7, Dki Jakarta	86444824850	cpennuzzi2@pbs.org	1963-04-24	P
9 PA20	Chariot Huffadine	Jl Mangga Dua Raya Psr Pagi Mangga D.	81254024034	chuffadinej@ebay.com	1972-11-22	L
10 PA22	Lee Dot	Jl Pembangunan II 15 A/1, Dki Jakarta	89774964683	ldotl@etsy.com	2002-12-18	L
11 PA25	Hamlen Ryles	Jl Jend A Yani 286 Ged Graha Pangera.	89078717955	hryleso@exblog.jp	1995-10-15	P
12 PA27	Archibaldo Wanklyn	Jl Jelambar Jaya II 8, Dki Jakarta	87948788158	awanklynq@prweb.com	1968-07-21	P
13 PA28	Stewart Mustard	Jl KH Hasyim Ashari 33-0, Dki Jakarta	88177679807	smustardn@phpbb.com	1964-01-10	L
14 PA29	Bevin Carlino	Jl Jelambar Brt III/20, Dki Jakarta	87072282157	bcarlinos@paypal.com	1960-05-15	L
15 PA30	Orson MacGiffin	Psr Kecapi 12, Dki Jakarta	83721927052	omacgiffint@marriott.com	1977-04-13	P
16 PA32	Barry Steljes	Jl Kramat Raya 148 F, Dki Jakarta	86378562628	bsteljesv@bigcartel.com	1984-03-28	L
17 PA33	Meade Redington	Jl Sunan Muria 7 RT 007/015, Dki Jak.	83145220454	mredingtonw@wikipedia.org	1992-02-15	L
18 PA34	Maitilde Cundey	Jl Melayu Besar 68, Dki Jakarta	89473689365	mcundeyx@xrea.com	1996-04-06	P
19 PA36	Karel Stoggell	Jl Batu Tulis 16, Dki Jakarta	85872264445	kstoggellz@globo.com	1969-06-04	L
20 PA40	Yard Fiddler	Jl Cengkeh 16/17, Dki Jakarta	81354446380	yfiddler13@delicious.com	1967-10-10	L
21 PA42	Fiona Passmore	Jl Tenggiri 2, Dki Jakarta	81858210291	fpassmore15@gmpg.org	1970-11-19	P
22 PA44	Elena Badgers	Plaza Ciputat Mas Bl C/5 A Kav CDEF.,	82734861577	ebadgers17@mit.edu	1994-03-15	P
23 PA45	Welsh Landeaux	Jl Krekot Jaya Bl E/3, Dki Jakarta	81289839793	wlandeaux18@google.de	1974-03-03	L
24 PA46	Win Piggford	Jl Muara Baru Ujung Bl S, Jakarta	81394260350	wpiggford19@addtoany.com	1967-05-26	P
25 PA47	Raddy Klazenga	Jl Suryopranoto 2 Kompl Harmoni Plaz.	89925774888	rklazengala@live.com	1982-06-13	P
26 PA48	Tracey Varey	Jl Bekasi Tmr II 30 RT 015/04, Dki J.	81307584054	tvarey1b@arizona.edu	1971-10-17	P
27 PA49	Morie Davisson	Jl Kuningan Brt 56, Dki Jakarta	88928959829	mdavisson1c@census.gov	1979-04-17	P

12. [SQL] Tampilkan **nama** dan **jenis kelamin** perawat yang merawat semua pasien wanita.

```
Output
eduardus.tjitrahardja.sivanap> 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')
```

[2022-11-01 13:34:58] 0 rows retrieved in 264 ms (execution: 247 ms, fetching: 17 ms)

nama	jenis_kelamin
------	---------------

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

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

```
eduardus.tjitrahardja.siwanap> SELECT *
                                FROM daftar_dokter
[2022-11-01 13:51:50] 50 rows retrieved starting from 1 in 180 ms (execution: 165 ms, fetching:
28. 

| id_dokter | nama                 |
|-----------|----------------------|
| 1 D001    | Lorry Jervois        |
| 2 D002    | Brantley Ludlem      |
| 3 D003    | Fanechka Maryman     |
| 4 D004    | Ronda Hargitt        |
| 5 D005    | Frederique Puce      |
| 6 D006    | Barty Leebeter       |
| 7 D007    | Ly Spelllessy        |
| 8 D008    | Den Stollsteimer     |
| 9 D009    | Jenda Chaudret       |
| 10 D010   | Moreen Hebblethwaite |
| 11 D011   | Idalia Caughte       |
| 12 D012   | Darbie Howle         |
| 13 D013   | Meade Munn           |
| 14 D014   | Josephine Schnieder  |
| 15 D015   | Barthol Bardefol     |


```

```
eduardus.tjitrahardja.siwanap> DROP VIEW daftar_dokter
29. [2022-11-01 13:52:09] completed in 81 ms
```


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

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

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

33.

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

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

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

35. `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)

QUERY PLAN

1	Seq Scan on pasien	(cost=0.00..1.6)
2	Filter: (jenis_kelamin = 'L')::bpc	
3	Rows Removed by Filter: 25	
4	Planning time: 0.094 ms	
5	Execution time: 0.052 ms	

2. View

1. [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:

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

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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 Bompas	36
9	Sanderson Worg	36
10	Ella Arndell	48
11	Ossie Merriday	24
12	Teodor Schlag	12
13	Mair Riddich	36

```
-- 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
```

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)

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	id_pasien	nama	nama_perawat
1	PA43	Donni OHaire	Sayers Windmill, Jarrett Bompas, 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

```
[2022-11-01 14:09:38] 3 rows retrieved starting from 1 in 277 ms (execution: 207 ms, fetching: 69 ms)
eduardus.tjitrarandjo.sikunop> -- 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.

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```
eduardus.tjitrahardja.siwanap> EXPLAIN ANALYZE
SELECT *
FROM kamar
ORDER BY harga DESC
[2022-11-01 14:20:45] 6 rows retrieved starting from 1 in 99 ms (exec)

QUERY PLAN
1 Sort (cost=2.69..2.80 rows=45 width=100) (actual time=0.043..0.050 rows=45 loops=1)
2 Sort Key: harga
3 Sort Method: quicksort Memory: 29kB
4 -> Seq Scan on kamar (cost=0.00..1.45 rows=45 width=100) (actual time=0.006..0.019 rows=45 loops=1)
5 Planning time: 0.064 ms
6 Execution time: 0.086 ms

eduardus.tjitrahardja.siwanap> EXPLAIN ANALYZE
SELECT *
FROM rawat_inap
WHERE tgl_keluar IS NULL
[2022-11-01 14:20:25] 5 rows retrieved starting from 1 in 38 ms (exec)

QUERY PLAN
1 Seq Scan on rawat_inap (cost=0.00..15.30 rows=3 width=122) (actual time=0.009..0.015 rows=5 loops=1)
2 Filter: (tgl_keluar IS NULL)
3 Rows Removed by Filter: 45
4 Planning time: 0.054 ms
5 Execution time: 0.035 ms

eduardus.tjitrahardja.siwanap> EXPLAIN ANALYZE
SELECT *
FROM perawat
WHERE nama LIKE 'TN%'
[2022-11-01 14:20:57] 5 rows retrieved starting from 1 in 47 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 ~ 'TN% '::text)
3 Rows Removed by Filter: 47
4 Planning time: 0.073 ms
5 Execution time: 0.042 ms

eduardus.tjitrahardja.siwanap> EXPLAIN ANALYZE
SELECT *
FROM pasien
ORDER BY alamat
LIMIT 10
[2022-11-01 14:27:26] 7 rows retrieved starting from 1 in 47 ms (exec)

QUERY PLAN
1 Limit (cost=2.55..2.57 rows=10 width=94) (actual time=0.150..0.154 rows=10 loops=1)
2 -> Sort (cost=2.55..2.67 rows=49 width=94) (actual time=0.149..0.150 rows=10 loops=1)
3 Sort Key: alamat
4 Sort Method: top-N heapsort Memory: 10kB
5 -> Seq Scan on pasien (cost=0.00..1.49 rows=49 width=94) (actual time=0.007..0.024 rows=49 loops=1)
6 Planning time: 0.076 ms
7 Execution time: 0.182 ms
```

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

i. 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
```

ii. 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
```

iii. 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
```

iv. index_nama_perawat pada tabel **PERAWAT** kolom **nama**.

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```
eduardus.tjitrahardja.siwonap> 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.

The screenshots show the following queries and their results:

- Query 1:** `SELECT * FROM kamar ORDER BY harga DESC`. 6 rows retrieved. Planning time: 0.064 ms, Execution time: 0.116 ms.
- Query 2:** `SELECT * FROM rawat_inap WHERE tgl_keluar IS NULL`. 5 rows retrieved. Planning time: 0.054 ms, Execution time: 0.035 ms.
- Query 3:** `SELECT * FROM perawat WHERE nama LIKE 'TN'`. 5 rows retrieved. Planning time: 0.073 ms, Execution time: 0.041 ms.
- Query 4:** `SELECT * FROM pasien ORDER BY alamat LIMIT 10`. 7 rows retrieved. Planning time: 0.079 ms, Execution time: 0.170 ms.

- 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

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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.