

# SQL

## Simple Queries



# SQL Simple Queries

- ☐ Filtering Operator
- ☐ Logical Operator: AND / OR
- ☐ Logical Operator: NOT
- ☐ Advance Filtering: IN
- ☐ Advance Filtering: LIKE
- ☐ Advance Filtering: BETWEEN
- ☐ CASE WHEN Introduction
- ☐ CASE WHEN Use Case
- ☐ Aggregation: COUNT
- ☐ Aggregation: Others
- ☐ Grouping: GROUP BY
- ☐ Filter by Aggregation: HAVING

# Hands-On Required :

## Database :

- [rakamin.tar / rakafood.zip](#) (raw CSVs)

Klik disini untuk mengakses  
folder Database

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



Filter by Aggregation: HAVING

# Advanced Filtering 1 - Operator SQL

Digunakan ketika ingin melakukan filter dengan nilai yang tidak eksak sama.

| Operator | Deskripsi                    |
|----------|------------------------------|
| =        | sama dengan                  |
| !=, <>   | tidak sama dengan            |
| >        | lebih dari                   |
| >=       | lebih dari atau sama dengan  |
| <        | kurang dari                  |
| <=       | kurang dari atau sama dengan |



“

Bro, kita kasih notifikasi lewat email yuk buat customers kita yang **sudah tidak aktif lagi** dan kita kasih hadiah aja kalau mereka bisa **konfirmasi nomor telepon**

Oh, berarti kita butuh list email dari customers yang tidak aktif dan belum konfirmasi nomor telepon mereka ya?

”

# Operator SQL - Tidak Sama Dengan ( != )

Contoh 1:

Ambil seluruh kolom rakamin customers yang sudah tidak aktif ( != 1 )

| Query Editor |                         | Query History                  |                                 |                              |                 |                                  |                            |                               |                   |                           |  |
|--------------|-------------------------|--------------------------------|---------------------------------|------------------------------|-----------------|----------------------------------|----------------------------|-------------------------------|-------------------|---------------------------|--|
| 1            |                         | select *                       |                                 |                              |                 |                                  |                            |                               |                   |                           |  |
| 2            |                         | from rakamin_customer          |                                 |                              |                 |                                  |                            |                               |                   |                           |  |
| 3            |                         | where pengguna_aktif != 1      |                                 |                              |                 |                                  |                            |                               |                   |                           |  |
| Data Output  |                         | Explain Messages Notifications |                                 |                              |                 |                                  |                            |                               |                   |                           |  |
|              | id_pelanggan<br>integer | nama<br>character varying      | email<br>character varying      | telepon<br>character varying | umur<br>integer | bulan_lahir<br>character varying | tanggal_registrasi<br>date | konfirmasi_telepon<br>integer | penipu<br>integer | pengguna_aktif<br>integer |  |
| 1            | 37                      | Faishal Listisni               | faishallistisni@outlook.com     | 6287858020                   | 23              | Mei                              | 2013-07-05                 | 1                             | 0                 | 0                         |  |
| 2            | 38                      | Jova Imania                    | jovaimania@gmail.com            | 628468802                    | 17              | Oktober                          | 2012-10-28                 | 0                             | 0                 | 0                         |  |
| 3            | 46                      | Azrul Satria                   | azrulsatria@yahoo.com           | 6287894873                   | 27              | Agustus                          | 2012-04-16                 | 1                             | 0                 | 0                         |  |
| 4            | 53                      | Dela Harkart                   | delaharkart@outlook.com         | 6287866584                   | 39              | Oktober                          | 2013-10-31                 | 1                             | 0                 | 0                         |  |
| 5            | 57                      | Rianita Santi                  | rianitasanti@yahoo.com          | 6287840324                   | 15              | Oktober                          | 2012-04-10                 | 1                             | 0                 | 0                         |  |
| 6            | 66                      | Clara Amira                    | claraamira@hotmail.com          | 6285328038                   | 35              | Mei                              | 2013-11-23                 | 0                             | 0                 | 0                         |  |
| 7            | 71                      | Moerdiati Ramsihs              | moerdiatiramsihs@rocketmail.com | 6285295213                   | 16              | Maret                            | 2013-08-25                 | 0                             | 0                 | 0                         |  |

# Operator SQL - Tidak Sama Dengan ( != )

Contoh 2 :

Ambil semua nama dan email dari RakaFood customers yang nomor hp nya belum dikonfirmasi

Query Editor

Query History

1

select

nama, email, konfirmasi\_telepon

2

from

rakamin\_customer

3

where

konfirmasi\_telepon <> 1

Data Output

Explain

Messages

Notifications

|   | <div>nama</div> <div>character varying</div> | <div>email</div> <div>character varying</div> | <div>konfirmasi_telepon</div> <div>integer</div> |
|---|--|---|--|
| 1 | Ramanta Pasha                                | ramantapasha@gmail.com                        | 0  |
| 2 | Sebastian Mitsuko                            | sebastianmitsuko@rocketmail.com               | 0  |
| 3 | Rinaldy Octaza                               | rinaldyoctaza@outlook.com                     | 0  |
| 4 | Alfin Chairunisa                             | alfinchairunisa@gmail.com                     | 0  |
| 5 | Jova Imania                                  | jovaimania@gmail.com                          | 0  |
| 6 | Lukman Naufal Simorangkir                    | lukmanaufalsimorangkir@gmail.com              | 0  |
| 7 | Rizki Faishal Apriyani                       | rizkifaishalapriyani@rocketmail.com           | 0  |



“

Bro, kita harus kasih tau customers yang **umurnya di atas 30** nih karena ada promo botol minuman jika beli makanan X, lumayan kan buat anak-anak mereka.

Oh, berarti kita butuh list nama, email dan nomor hp mereka ya buat ngirimin promo gitu misalnya ?

”

# Operator SQL - Lebih Dari (>)

Contoh 1:

Ambil semua nama, phone dan umur dari RakaFood customers yang umurnya lebih dari 30

Query Editor

Query History

```
1 select nama, telepon, umur
2 from rakamin_customer
3 where umur > 30
```

Data Output

Explain

Messages

Notifications

|   | <b>nama</b><br>character varying | <b>telepon</b><br>character varying | <b>umur</b><br>integer |  |
|---|----------------------------------|-------------------------------------|------------------------|--|
| 1 | Ferdiansyah Amalina              | 6285244688                          | 31                     |  |
| 2 | Singgih Kharisma                 | 6285245156                          | 49                     |  |
| 3 | Ridhwan Noerani                  | 6285245624                          | 43                     |  |
| 4 | Okky Oktaviaman                  | 6281906358                          | 35                     |  |
| 5 | Bob Arisa                        | 6281909025                          | 40                     |  |
| 6 | Omar Afini                       | 6281909914                          | 48                     |  |
| 7 | Sutrisno Rizal                   | 6281910803                          | 36                     |  |

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



Filter by Aggregation: HAVING

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



Filter by Aggregation: HAVING

# Advanced Filtering 2 - Logical Operator

Digunakan ketika ingin melakukan filter dengan lebih dari satu kondisi.

| Logical Operator | Deskripsi                                 |
|------------------|---|
| AND              | Kedua kondisi harus terpenuhi (dan)       |
| OR               | Salah satu kondisi harus terpenuhi (atau) |
| NOT              | Ketika kondisi tidak terpenuhi            |



“

Bro, ada kah customer kita  
yang **penipu dan pengguna  
aktif** ini ?

”



# Logical Operator - AND

Contoh 1:

Ambil nama, email dan nomor telepon RakaFood customer yang penipu dan pengguna aktif.

Query Editor

Query History

```
1 select nama, penipu, pengguna_aktif
2 from rakamin_customer
3 where penipu = 1 and pengguna_aktif = 1
```

Data Output

Explain

Messages

Notifications

|   | nama<br>character varying | penipu<br>integer | pengguna_aktif<br>integer |
|---|---------------------------|-------------------|---------------------------|
| 1 | Rifqy Butar-butur         | 1                 | 1                         |
| 2 | Wahyu Hayati              | 1                 | 1                         |
| 3 | Nadia Persadani           | 1                 | 1                         |
| 4 | Natasha Fadholi           | 1                 | 1                         |

“

Bro, adakah customer kita yang **lahirnya di bulan juni atau juli** ini ? Mungkin bisa kita kasih surprise ulang tahun jika mereka order pas tanggal ulang tahunnya

”

# Logical Operator - OR

Contoh 1:

Ambil data customer RakaFood yang lahir di bulan Juni atau Juli.

| Query Editor |                             | Query History   |          |
|--------------|-----------------------------|---|----------|
| 1            | <code>select</code>         | <code>nama, bulan_lahir</code>                            |          |
| 2            | <code>from</code>           | <code>rakamin_customer</code>                             |          |
| 3            | <code>where</code>          | <code>bulan_lahir = 'Juni' or bulan_lahir = 'Juli'</code> |          |
| Data Output  |                             | Explain   | Messages |
|              | nama<br>character varying   | bulan_lahir<br>character varying                          |          |
| 1            | Fakhrul Fandy Widyaningtias | Juni  |          |
| 2            | Andi Mayasopha              | Juni  |          |
| 3            | Yusuf Tilasnuari            | Juli  |          |
| 4            | Lukman Naufal Simorangkir   | Juli  |          |
| 5            | Maruto Asih                 | Juni  |          |
| 6            | Nadia Persadani             | Juli  |          |
| 7            | Rayhana Hidayatul           | Juni  |          |
| 8            | Hilary Adha                 | Juni  |          |

“

Bro, tolong cari ada ga sih customer yang registrasinya 2013 ke atas terus lahirnya di bulan Juni atau Juli? Soalnya mau ada campaign di bulan-bulan itu khusus buat pengguna baru!

”



# Logical Operator - AND + OR

Contoh :

Ambil data customer RakaFood yang registrasi di tahun 2013 ke atas dan lahir di bulan Juni atau Juli.

Query Editor
Query History

```

1 select *
2 from rakamin_customer
3 where tanggal_registrasi > '2013-01-01'
4 and (bulan_lahir = 'Juni' or bulan_lahir = 'Juli')

```

Tanda kurung untuk OR penting karena urutan prioritas AND > OR!

Data Output
Messages
Explain
Notifications

|   | id_pelanggan<br>integer | nama<br>character varying | email<br>character varying       | telepon<br>character varying | umur<br>integer | bulan_lahir<br>character varying | tanggal_registrasi<br>date | konfirmasi_telepon<br>integer | penipu<br>integer | pengguna_aktif<br>integer |
|---|-------------------------|---------------------------|----------------------------------|------------------------------|-----------------|----------------------------------|----------------------------|-------------------------------|-------------------|---------------------------|
| 1 | 43                      | Yusuf Tilasnuari          | yusuftilasnuari@hotmail.com      | 6287888069                   | 31              | Juli                             | 2013-02-01                 |                               | 1                 | 0                         |
| 2 | 44                      | Lukman Naufal Simorangkir | lukmanaufalsimorangkir@gmail.com | 6287890337                   | 20              | Juli                             | 2012-05-19                 |                               | 0                 | 0                         |
| 3 | 58                      | Nadia Persadani           | nadiapersadani@rocketmail.com    | 6287833759                   | 25              | Juli                             | 2012-10-26                 |                               | 1                 | 1                         |
| 4 | 59                      | Rayhana Hidayatul         | rayhanahidayatul@hotmail.com     | 6287827194                   | 25              | Juni                             | 2013-09-30                 |                               | 1                 | 0                         |
| 5 | 67                      | Hilary Adha               | hilaryadha@yahoo.com             | 6285321473                   | 15              | Juni                             | 2013-03-26                 |                               | 1                 | 0                         |

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



Filter by Aggregation: HAVING

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



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Grouping: GROUP BY



Filter by Aggregation: HAVING

# Advanced Filtering 2 - Logical Operator

Digunakan ketika ingin melakukan filter dengan lebih dari satu kondisi.

| Logical Operator | Deskripsi                                 |
|------------------|---|
| AND              | Kedua kondisi harus terpenuhi (dan)       |
| OR               | Salah satu kondisi harus terpenuhi (atau) |
| NOT              | Ketika kondisi tidak terpenuhi            |

“

Bro, ambilin data customer yang bulan lahirnya Desember dong!

”



# Logical Operator - NOT

Contoh 1:

Ambil nama, email, nomor telepon dan umur RakaFood customer yang bukan lahir di bulan Desember.

Query Editor

Query History

```
1 select nama, email, telepon, bulan_lahir
2 from rakamin_customer
3 where not bulan_lahir = 'Desember'
```

Data Output

Explain

Messages

Notifications

|   | <b>nama</b><br>character varying | <b>email</b><br>character varying     | <b>telepon</b><br>character varying | <b>bulan_lahir</b><br>character varying |
|---|----------------------------------|---------------------------------------|-------------------------------------|---|
| 1 | Fakhrul Fandy Widyaningtias      | fakhrulfandywidyaningtias@outlook.com | 6285244454                          | Juni                                    |
| 2 | Ferdiansyah Amalina              | ferdiansyahamalina@yahoo.com          | 6285244688                          | Agustus                                 |
| 3 | Ficky Rizkyananta                | fickyrizkyananta@hotmail.com          | 6285244922                          | Februari                                |
| 4 | Singgih Kharisma                 | singgihkharisma@hotmail.com           | 6285245156                          | Januari                                 |
| 5 | Jeremiah Dinanti                 | jeremiahdinanti@rocketmail.com        | 6285245390                          | Januari                                 |
| 6 | Ridhwan Noerani                  | ridhwannoerani@hotmail.com            | 6285245624                          | Januari                                 |
| 7 | Okky Oktaviaman                  | okkyoktaviaman@rocketmail.com         | 6281906358                          | Maret                                   |
| 8 | Dikposa Yosua Krisnanto          | dikposayosuakrisnanto@hotmail.com     | 6281907247                          | April                                   |
| 9 | Dhanu Rahman                     | dhanurahman@gmail.com                 | 6281908136                          | Mei                                     |

“

Kita pengen exclude customer yang umurnya 20an nih untuk campaign selanjutnya!

”

# Logical Operator - NOT

Contoh :

Ambil customer yang bukan berumur 20an!

Query Editor

Query History











```
1 select *
2 from rakamin_customer
3 where not (umur >= 20 and umur < 30)
4 order by umur
```

Data Output

Messages

Explain

Notifications

|   |  id_pelanggan<br>integer |  nama<br>character varying |  email<br>character varying |  telepon<br>character varying |  umur<br>integer |  bulan_lahir<br>character varying |  tanggal_registrasi<br>date |  konfirmasi_telepon<br>integer |  penipu<br>integer |  pengguna_aktif<br>integer |   |
|---|---|---|--|--|---|--|--|---|---|---|---|
| 1 | 3   | Ficky Rizkyananta   | fickyrizkyananta@hotmail.com   | 6285244922   | 15  | Februari   | 2013-06-04   |   | 1   | 0   | 1 |
| 2 | 57  | Rianita Santi   | rianitasanti@yahoo.com   | 6287840324   | 15  | Oktober  | 2012-04-10   |   | 1   | 0   | 0 |
| 3 | 67  | Hilary Adha   | hilaryadha@yahoo.com   | 6285321473   | 15  | Juni   | 2013-03-26   |   | 1   | 0   | 1 |
| 4 | 83  | Rarahayu Verev  | rarahayuverev@outlook.com  | 6285216433   | 15  | April  | 2013-02-22   |   | 1   | 0   | 1 |
| 5 | 78  | Ovienov Asti Idrus  | ovienovastidrus@outlook.com  | 6285249258   | 15  | Maret  | 2012-04-08   |   | 1   | 0   | 1 |

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



Filter by Aggregation: HAVING

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



Filter by Aggregation: HAVING



# Advanced Filtering 3 - IN

Digunakan ketika ingin melakukan filter suatu kolom dengan lebih dari satu nilai.

## Perintah dalam SQL

```
SELECT kolom_1, kolom_2, ... kolom_10  
FROM <nama tabel>  
WHERE kolom_1 IN ('x','y')
```

“

Bro, adakah customer kita yang **lahirnya di bulan juni, juli atau agustus** ini ?

Mungkin bisa kita kasih surprise ulang tahun jika mereka order pas tanggal ulang tahunnya

”

# IN

## Contoh 1:

Ambil semua kolom pada RakaFood customers yang lahir di bulan juni, juli atau agustus

Query Editor

Query History











```
1 select *
2 from rakamin_customer
3 where bulan_lahir in ('Juni', 'Juli', 'Agustus')
```

Data Output

Explain

Messages

Notifications

|    |  id_pelanggan<br>integer |  nama<br>character varying |  email<br>character varying |  telepon<br>character varying |  umur<br>integer |  bulan_lahir<br>character varying |  tanggal_registrasi<br>date |  konfirmasi_telepon<br>integer |  penipu<br>integer |  pengguna_aktif<br>integer |
|----|---|---|--|--|--|--|--|---|---|---|
| 1  | 1   | Fakhrul Fandy Widyaningti   | fakhrulfandywidyaningti@outlook.com  | 6285244454   | 27   | Juni   | 2012-02-18   | 1   | 0   | 1   |
| 2  | 2   | Ferdiansyah Amalina   | ferdiansyahamalina@yahoo.com   | 6285244688   | 31   | Agustus  | 2012-06-29   | 1   | 0   | 1   |
| 3  | 19  | Andi Mayasopha  | andimayasopha@yahoo.com  | 6289628397   | 36   | Juni   | 2012-10-16   | 1   | 0   | 1   |
| 4  | 20  | Yutama Riahdita   | yutamariahdita@gmail.com   | 6289629610   | 48   | Agustus  | 2012-03-08   | 1   | 0   | 1   |
| 5  | 43  | Yusuf Tilasnuari  | yusuftilasnuari@hotmail.com  | 6287888069   | 31   | Juli   | 2013-02-01   | 1   | 0   | 1   |
| 6  | 44  | Lukman Naufal Simorangkir   | lukmannaufalsimorangkir@gmail.com  | 6287890337   | 20   | Juli   | 2012-05-19   | 0   | 0   | 1   |
| 7  | 45  | Maruto Asih   | marutoasih@yahoo.com   | 6287892605   | 47   | Juni   | 2012-01-16   | 1   | 0   | 1   |
| 8  | 46  | Azrul Satria  | azrulsatria@yahoo.com  | 6287894873   | 27   | Agustus  | 2012-04-16   | 1   | 0   | 0   |
| 9  | 58  | Nadia Persadani   | nadiapersadani@rocketmail.com  | 6287833759   | 25   | Juli   | 2012-10-26   | 1   | 1   | 1   |
| 10 | 59  | Rayhana Hidayatul   | rayhanahidayatul@hotmail.com   | 6287827194   | 25   | Juni   | 2013-09-30   | 1   | 0   | 1   |
| 11 | 60  | Hanifa Ivangkia   | hanifaivangkia@gmail.com   | 6287820629   | 47   | Agustus  | 2012-08-22   | 1   | 0   | 1   |
| 12 | 67  | Hilary Adha   | hilaryadha@yahoo.com   | 6285321473   | 15   | Juni   | 2013-03-26   | 1   | 0   | 1   |
| 13 | 68  | Reny Oktaviany  | renyoktaviany@gmail.com  | 6285314908   | 30   | Agustus  | 2012-10-26   | 1   | 0   | 1   |

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



Filter by Aggregation: HAVING

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



Filter by Aggregation: HAVING



# Advanced Filtering 4 - LIKE

Digunakan ketika ingin melakukan filter suatu kolom dengan hanya menggunakan sebagian/beberapa karakter sebagai referensi.

## Perintah dalam SQL

```
SELECT kolom_1, kolom_2, ... kolom_10  
FROM <nama tabel>  
WHERE kolom_1 LIKE '%x%'
```

- Filter LIKE hanya dapat menggunakan tipe data varchar saja
- karakter % merepresentasikan '*karakter apa saja*'

“

Bro, ada masalah hacker nih di google mail, bisa pastikan ga **customer kita yang pakai gmail.com** masih aman?

Oh oke, coba saya cari dulu email customers yang mengandung kata gmail.com di kolom email mereka..

”

# LIKE

Contoh 1:

Ambil semua email yang memiliki domain @gmail.com

Query Editor

Query History

1

select

nama, email

2

from

rakamin\_customer

3

where

email like '%gmail.com'

Data Output

Explain

Messages

Notifications

|   | <div>nama</div> <div>character varying</div> | <div>email</div> <div>character varying</div> |  |
|---|--|---|--|
| 1 | Dhanu Rahman                                 | dhanurahman@gmail.com                         |  |
| 2 | Omar Afini                                   | omarafini@gmail.com                           |  |
| 3 | Lintang Bertauli                             | lintangbertauli@gmail.com                     |  |
| 4 | Reynard Ramadhansyah                         | reynardramadhansyah@gmail.com                 |  |
| 5 | Wahyu Hayati                                 | wahyuhayati@gmail.com                         |  |
| 6 | Yutama Riahdita                              | yutamariahdita@gmail.com                      |  |

# LIKE - Aturan %

% diinisialkan sebagai kata yang tidak disebutkan/dikandungnya

| posisi kandungan kata | contoh kata                      | perintah SQL |
|-----------------------|----------------------------------|--------------|
| Kanan                 | adeirawan@ <b>gmail.com</b>      | %gmail.com   |
| Kiri                  | <b>gmail.com</b> pribadi         | gmail.com%   |
| Tengah                | punya <b>gmail.com</b><br>banyak | %gmail.com%  |

“

Bro, **provider x** mau ngasih promo ke customers kita nih, bakal ngasih diskon 40% kalau beli dengan point.

Hmm menarik-menarik, berarti customer yang nomor hp nya diawali 62852 itu potensial customer untuk promo ini ya?

”



# LIKE

Contoh 2 :

Ambil nama dan nomor hp dengan awalan 62852 (untuk provider x)

Query Editor

Query History

1

**select** nama, telepon

2

**from** rakamin\_customer

3

**where** telepon **like** '62852%'

Data Output

Explain

Messages

Notifications

|   | <div>nama</div> <div>character varying</div> | <div>telepon</div> <div>character varying</div> |  |
|---|--|---|--|
| 1 | Fakhrul Fandy Widyaningtias                  | 6285244454                                      |  |
| 2 | Ferdiansyah Amalina                          | 6285244688                                      |  |
| 3 | Ficky Rizkylananta                           | 6285244922                                      |  |
| 4 | Singgih Kharisma                             | 6285245156                                      |  |
| 5 | Jeremiah Dinanti                             | 6285245390                                      |  |
| 6 | Ridhwan Noerani                              | 6285245624                                      |  |

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



Filter by Aggregation: HAVING

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



Filter by Aggregation: HAVING

# Advanced Filtering 5 - BETWEEN

Digunakan ketika ingin melakukan filter suatu kolom dengan batas bawah dan batas atas tertentu. Umumnya untuk tipe data angka atau tanggal.

## Perintah dalam SQL

```
SELECT kolom_1, kolom_2, ... kolom_10  
FROM <nama tabel>  
WHERE kolom_1 BETWEEN x AND y
```

“

Bro, ada ga customers kita yang **umurnya mulai 20 tahun hingga 25 tahun ? harusnya sih ada bro**

”



# BETWEEN

Contoh 1:

Ambil semua kolom customers yang umurnya 20 hingga 25 tahun

Query Editor

Query History

1

select nama, umur

2

from rakamin\_customer

3

where umur between 20 and 25

Data Output

Explain

Messages

Notifications

|   | nama<br>character varying | umur<br>integer |  |
|---|---------------------------|-----------------|--|
| 1 | Jeremiah Dinanti          | 25              |  |
| 2 | Wahyu Hayati              | 23              |  |
| 3 | Rian Mufti                | 24              |  |
| 4 | Alfin Chairunisa          | 20              |  |
| 5 | Revi Aswin Fatimah        | 21              |  |
| 6 | Faishal Listisni          | 23              |  |

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



Filter by Aggregation: HAVING

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



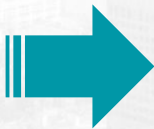
Filter by Aggregation: HAVING

# Select Condition - CASE WHEN

Membuat suatu kolom baru jika kolom lain memenuhi kondisi tertentu.

sebelum

| kolom_1 | kolom_2 |
|---------|---------|
| A       | 1       |
| B       | 2       |
| C       | 3       |
| D       | 4       |



sesudah

| kolom_1 | kolom_2 | kolom_baru |
|---------|---------|------------|
| A       | 1       | benar      |
| B       | 2       | benar      |
| C       | 3       | salah      |
| D       | 4       | salah      |

kolom\_baru : benar ketika  
kolom\_1 bernilai A atau B

# Select Condition - CASE WHEN

| kolom_1 | kolom_2 | kolom_baru |
|---------|---------|------------|
| A       | 1       | benar      |
| B       | 2       | benar      |
| C       | 3       | salah      |
| D       | 4       | salah      |

```

select *,
  case when kolom_1 = 'A' then 'benar'
        when kolom_1 = 'B' then 'benar'
        when kolom_1 = 'C' then 'salah'
        when kolom_1 = 'D' then 'salah'
  end as kolom_baru
FROM (tabel)
  
```



# Select Condition - CASE WHEN

| kolom_1 | kolom_2 | kolom_baru |
|---------|---------|------------|
| A       | 1       | benar      |
| B       | 2       | benar      |
| C       | 3       | salah      |
| D       | 4       | salah      |

```

select *,
    case when kolom_1 in ('A','B') then 'benar'
         when kolom_1 = 'C' then 'salah'
         when kolom_1 = 'D' then 'salah'
    end as kolom_baru
FROM (tabel)
  
```

# Select Condition - CASE WHEN

| kolom_1 | kolom_2 | kolom_baru |
|---------|---------|------------|
| A       | 1       | benar      |
| B       | 2       | benar      |
| C       | 3       | salah      |
| D       | 4       | salah      |

```
select *,
      case when kolom_1 in ('A','B') then 'benar'
            else 'salah'
      end as kolom_baru
FROM (tabel)
```

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



Filter by Aggregation: HAVING

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



Filter by Aggregation: HAVING

“

Bro, gw udah punya nih customers yang pakai **Telkomsel** , cuma umur nya masih bervariasi. Bisa dibuat 3 grup umur aja ga sih ?

Misalnya nih

- umur 1 - 20 : anak
- umur 21 - 70 : bapak
- umur 71 ke atas : kakek

”



# CASE WHEN

Contoh 1:  
kolom baru (grup umur) menjadi 3 bagian

Query Editor

Query History







```
1  select
2      nama,
3      email,
4      telepon,
5      umur,
6      case when umur between 1 and 20 then 'anak'
7           when umur between 21 and 70 then 'bapak'
8           when umur between 71 and 100 then 'kakek'
9      end as grup_umur
10 from rakamin_customer
11 where
12     telepon like '62852%'
```

Data Output

Explain

Messages

Notifications

|   |  nama<br>character varying |  email<br>character varying |  telepon<br>character varying |  umur<br>integer |  grup_umur<br>text |  |
|---|---|--|--|---|---|---|
| 1 | Fakhrul Fandy Widyaningtias   | fakhrulfandywidyaningtias@outlook.com  | 6285244454   | 27  | bapak   |   |
| 2 | Ferdiansyah Amalina   | ferdiansyahamalina@yahoo.com   | 6285244688   | 31  | bapak   |   |
| 3 | Ficky Rizkyananta   | fickyrizkyananta@hotmail.com   | 6285244922   | 15  | anak  |   |
| 4 | Singgih Kharisma  | singghikharisma@hotmail.com  | 6285245156   | 49  | bapak   |   |
| 5 | Jeremiah Dinanti  | jeremiahdinanti@rocketmail.com   | 6285245390   | 25  | bapak   |   |
| 6 | Ridhwan Noerani   | ridhwannoerani@hotmail.com   | 6285245624   | 43  | bapak   |   |
| 7 | Moerdiati Ramsihs   | moerdiatiramsihs@rocketmail.com  | 6285295213   | 16  | anak  |   |
| 8 | Bella Listyani  | bellalistyani@hotmail.com  | 6285288648   | 45  | bapak   |   |
| 9 | Natasha Fadholi   | natashafadholi@gmail.com   | 6285282083   | 49  | hanak   |   |

“

Bro, ini ada **data nomor telepon**, bisa ga kita **definisikan itu dari provider** apa?  
sesederhana ini aja definisinya

Hmm mungkin jadi gini ya bro ?

- diawali 62852 : telkomsel
- diawali 62878 : XL
- diawali 62896 : 3
- sisanya anggap aja “lainnya”

”

# CASE WHEN

Contoh 2:  
kolom baru (provider) sesuai awalan nomor telepon

Query Editor

Query History

```
1 select
2     nama,
3     telepon,
4     case when telepon like '62852%' then 'Telkomsel'
5         when telepon like '62878%' then 'XL'
6         when telepon like '62896%' then '3'
7         else 'Lainnya'
8     end as provider
9 from rakamin_customer
```

Data Output

Explain

Messages

Notifications

|   | <div>nama</div> <div>character varying</div> | <div>telepon</div> <div>character varying</div> | <div>provider</div> <div>text</div> |
|---|--|---|-------------------------------------|
| 1 | Fakhrul Fandy Widyaningtias                  | 6285244454                                      | Telkomsel                           |
| 2 | Ferdiansyah Amalina                          | 6285244688                                      | Telkomsel                           |
| 3 | Ficky Rizkyananta                            | 6285244922                                      | Telkomsel                           |
| 4 | Singgih Kharisma                             | 6285245156                                      | Telkomsel                           |
| 5 | Jeremiah Dinanti                             | 6285245390                                      | Telkomsel                           |

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



Filter by Aggregation: HAVING

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



Filter by Aggregation: HAVING



# Aggregation

Digunakan untuk melakukan akumulasi data atau merangkum data.

“

Bro, coba tebak...  
ada berapa customers kita  
sekarang ?

”

# Aggregation 1 - COUNT(1)

Menghitung total baris / total data pada sebuah tabel

```
SELECT count(1)  
FROM <tabel>
```

# Aggregation 1 - COUNT(1)

Contoh 1:

Ada berapa total customer RakaFood?

Query Editor

Query History

1 select count(1)

2 from rakamin\_customer

Data Output

Explain

Messages

Notifications

|   | count<br>bigint |  |
|---|-----------------|--|
| 1 | 88              |  |

# Aggregation 2 - COUNT(kolom)

Menghitung total baris data tidak kosong pada kolom tertentu.

```
SELECT count(<nama kolom>)  
FROM <tabel>
```

# Aggregation 2 - COUNT(kolom)

Contoh 1:

ada berapa total data tidak kosong pada **kolom bulan\_lahir** dari customers kita ?

Query Editor

Query History

1

select count(bulan\_lahir)

2

from rakamin\_customer

Data Output

Explain

Messages

Notifications

count

bigint

1

85



Query Editor

Query History

1

select count(bulan\_lahir)

2

from rakamin\_customer

Data Output

Explain

Messages

Notifications

|   | count  |    |
|---|--------|----|
| 1 | bigint | 85 |

Nama kolom tidak rapi ?

# Alias kolom (as)

Digunakan untuk mengganti nama kolom setelah diakumulasi

```
SELECT count(kolom_1) AS kolom_baru_1,  
       count(kolom_2) AS kolom_baru_2  
FROM <tabel>
```

# Alias Kolom

Contoh :

ada berapa total customer dan total baris tidak kosong pada kolom **bulan\_lahir** dari customers kita ?  
(rapi kan nama kolom pada hasilnya)

| Query Editor   Query History  |                          |                               |  |
|---|--------------------------|-------------------------------|--|
| <pre> 1  select 2      count(1) as total_customer, 3      count(bulan_lahir) as total_bulan_nonnull 4  from rakamin_customer </pre> |                          |                               |  |
| Data Output   Explain   Messages   Notifications  |                          |                               |  |
|   | total_customer<br>bigint | total_bulan_nonnull<br>bigint |  |
| 1   | 88                       | 85                            |  |

# Aggregation 3 - COUNT(DISTINCT kolom)

Menghitung total **unik (tidak ada duplikat) data tidak kosong** pada sebuah kolom tertentu

```
SELECT count(distinct <kolom>)  
FROM <tabel>
```

# Aggregation 3 - COUNT(DISTINCT kolom)

Contoh 1:

ada berapa total unik data tidak kosong pada **kolom bulan\_lahir** dari customers kita ?

Query Editor

Query History

```

1 select
2     count(distinct bulan_lahir) as bulan_unik
3 from rakamin_customer
  
```

Data Output

Explain

Messages

Notifications

|   | bulan_unik<br>bigint |  |
|---|----------------------|--|
| 1 | 12                   |  |



# COUNT(DISTINCT kolom)

juga bisa digunakan untuk melihat **apakah ada data yang duplikat pada kolom tertentu**

Query Editor

Query History

```
1 select
2     count(bulan_lahir) as total_bulan_nonull,
3     count(distinct bulan_lahir) as bulan_unik
4 from rakamin_customer
```

Data Output

Explain

Messages

Notifications

|   | <div>total_bulan_nonull</div> <div>bigint</div> | <div>bulan_unik</div> <div>bigint</div> |
|---|---|---|
| 1 | 85  | 12                                      |



**Jumlahnya beda !!**

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



Filter by Aggregation: HAVING

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



Filter by Aggregation: HAVING

# Aggregation 4 - MIN(kolom)

digunakan untuk **mendapatkan nilai minimum** dari suatu kolom tertentu

```
SELECT min(kolom)  
FROM <tabel>
```

“

Bro, **customer kita yang paling muda, berapa umurnya?..** kantor kita ingin terapkan batas minimal umur nih buat dapatkan promo spesial.  
nanti umur terkecil itu kita jadikan batasnya

”



# Aggregation 4 - MIN(kolom)

Contoh 1 : Mencari **umur yang paling muda** dari customers.

Query Editor

Query History

```

1  select
2      min(umur) as umur_termuda
3  from rakamin_customer
  
```

Data Output

Explain

Messages

Notifications

|   | umur_termuda |  |
|---|--------------|--|
| 1 | 15           |  |

# Aggregation 5 - MAX(kolom)

digunakan untuk **mendapatkan nilai maksimum** dari suatu kolom tertentu

```
SELECT max(kolom)  
FROM <tabel>
```

“

Bro, customer kita **paling tua** umurnya berapa?

”

# Aggregation 5 - MAX(kolom)

Contoh 1 : Mencari **pengguna tertua** dari customers.

Query Editor

Query History

1

select

2

max(umur) as umur\_tertua

3

from rakamin\_customer

Data Output

Explain

Messages

Notifications

umur\_tertua

integer

1

50

# Aggregation 6 - AVG(kolom)

digunakan untuk **mendapatkan nilai rata-rata** dari suatu kolom tertentu

```
SELECT avg(kolom)  
FROM <tabel>
```



“

Bro, coba tebak...  
berapa umur rata-rata customer kita ?

”

# Aggregation 6 - AVG(kolom)

Contoh 1 : Mencari **rata-rata umur** dari customers.

| Query Editor |   | Query History                  |
|--------------|---|--------------------------------|
| 1            | <b>select</b>   |                                |
| 2            | <b>avg</b> (umur) <b>as</b> rata2_umur                            |                                |
| 3            | <b>from</b> rakamin_customer                                      |                                |
| Data Output  |   | Explain Messages Notifications |
|              | <div> <div>rata2_umur</div> <div>numeric</div> <div></div> </div> |                                |
| 1            | 31.56818181818182   |                                |

# Aggregation 7 - SUM(kolom)

digunakan untuk **mendapatkan nilai penjumlahan** dari suatu kolom tertentu

```
SELECT sum(kolom)  
FROM <tabel>
```

“

Bro, revenue kita dari order selama ini udah berapa banyak ya ?

”

# Aggregation 7 - SUM(kolom)

Contoh 1 : Mencari **total revenue**.

| Query Editor |                                 | Query History                  |
|--------------|---------------------------------|--------------------------------|
| 1            | <code>select sum(harga)</code>  |                                |
| 2            | <code>from rakamin_order</code> |                                |
| Data Output  |                                 | Messages Explain Notifications |
|              | sum<br>bigint                   |                                |
| 1            | 4436878                         |                                |



# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others
















Grouping: GROUP BY



Filter by Aggregation: HAVING

# SQL Simple Queries

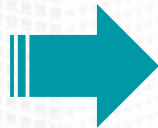
- |   |                            |  |                               |
|---|----------------------------|--|-------------------------------|
|  | Filtering Operator         |    | CASE WHEN Introduction        |
|  | Logical Operator: AND / OR |    | CASE WHEN Use Case            |
|  | Logical Operator: NOT      |    | Aggregation: COUNT            |
|  | Advance Filtering: IN      |    | Aggregation: Others           |
|  | Advance Filtering: LIKE    |   | Grouping: GROUP BY            |
|  | Advance Filtering: BETWEEN |    | Filter by Aggregation: HAVING |

# Aggregation - GROUP BY

digunakan untuk **mendapatkan akumulasi** pada **kolom** tertentu.

## Perubahan pertanyaan :

Berapa total customers  
kita sekarang ?



Berapa total customers  
kita sekarang **yang lahir**  
**pada bulan januari,**  
**februari dan maret ?**

# Aggregation - GROUP BY

digunakan untuk **mendapatkan akumulasi** pada **kolom** tertentu.

```
SELECT kolom_1,  
       count(1) as total  
FROM <tabel>  
GROUP BY kolom_1
```

total baris pada  
tiap kolom\_1

“

Bro, sekarang bulan juli nih..  
ada **berapa customers yang ulang tahun di  
bulan juli** ya?

”



# Aggregation - GROUP BY

Contoh 1 : ada berapa total customers yang lahir di bulan juli?

| Query Editor                     |   | Query History            |          |
|----------------------------------|---|--------------------------|----------|
| 1                                | <code>select</code>                         |                          |          |
| 2                                | <code>    bulan_lahir,</code>               |                          |          |
| 3                                | <code>    count(1) as total_customer</code> |                          |          |
| 4                                | <code>from rakamin_customer</code>          |                          |          |
| 5                                | <code>group by bulan_lahir</code>           |                          |          |
| Data Output                      |   | Explain                  | Messages |
| bulan_lahir<br>character varying |   | total_customer<br>bigint |          |
| 1                                | [null]                                      | 3                        |          |
| 2                                | April                                       | 9                        |          |
| 3                                | September                                   | 4                        |          |
| 4                                | Maret                                       | 14                       |          |
| 5                                | Agustus                                     | 5                        |          |
| 6                                | Januari                                     | 8                        |          |
| 7                                | Juli  | 3                        |          |
| 8                                | Oktober                                     | 5                        |          |
| 9                                | Juni  | 5                        |          |
| 10                               | November                                    | 7                        |          |
| 11                               | Mei   | 13                       |          |
| 12                               | Desember                                    | 10                       |          |
| 13                               | Februari                                    | 2                        |          |

# Aggregation - GROUP BY

Contoh 2 : berapa total **customers yang aktif dan tidak aktif** ?

Query Editor

Query History

```
1 select
2     pengguna_aktif,
3     count(1) as total_customer
4 from rakamin_customer
5 group by pengguna_aktif
```

Data Output

Explain

Messages

Notifications

|  | 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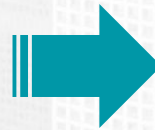
# Aggregation - GROUP BY

Contoh 2 **Modifikasi** :  
 berapa total **customers yang aktif dan tidak aktif** ?

| Query Editor |                                   | Query History |  |
|--------------|-----------------------------------|---------------|--|
| 1            | <b>select</b>                     |               |  |
| 2            | pengguna_aktif,                   |               |  |
| 3            | <b>count(1) as</b> total_customer |               |  |
| 4            | <b>from</b> rakamin_customer      |               |  |
| 5            | <b>group by</b> pengguna_aktif    |               |  |

| Data Output               | Explain | Messages                 | Notifications |
|---------------------------|---------|--------------------------|---------------|
| pengguna_aktif<br>integer |         | total_customer<br>bigint |               |
| 1                         | 0       | 7                        |               |
| 2                         | 1       | 81                       |               |



| Query Editor |                                   | Query History |  |
|--------------|-----------------------------------|---------------|--|
| 1            | <b>select</b>                     |               |  |
| 2            | pengguna_aktif,                   |               |  |
| 3            | <b>count(1) as</b> total_customer |               |  |
| 4            | <b>from</b> rakamin_customer      |               |  |
| 5            | <b>group by</b> 1                 |               |  |

| Data Output               | Explain | Messages                 | Notifications |
|---------------------------|---------|--------------------------|---------------|
| pengguna_aktif<br>integer |         | total_customer<br>bigint |               |
| 1                         | 0       | 7                        |               |
| 2                         | 1       | 81                       |               |

1 = group by kolom pertama

# Aggregation - GROUP BY

Contoh 3 :

berapa total customers memiliki nomor telepon Telkomsel dan XL ?

Query Editor

Query History

```
1 select
2     case when telepon like '62852%' then 'Telkomsel'
3         when telepon like '62878%' then 'XL'
4         when telepon like '62896%' then '3'
5         else 'Lainnya'
6     end as provider,
7     count(1) as total_customer
8 from rakamin_customer
9 group by 1
```

Data Output

Explain

Messages

Notifications

|   | provider<br>text | total_customer<br>bigint |  |
|---|------------------|--------------------------|--|
| 1 | Telkomsel        | 22                       |  |
| 2 | Lainnya          | 20                       |  |
| 3 | XL               | 37                       |  |
| 4 | 3                | 9                        |  |

# Aggregation - GROUP BY

Contoh 4 :

berapa total customers memiliki **nomor telepon Telkomsel dan XL**, yang **lahir di bulan maret** ?

Query Editor

Query History

```

1 select
2     case when telepon like '62852%' then 'Telkomsel'
3         when telepon like '62878%' then 'XL'
4         when telepon like '62896%' then '3'
5         else 'Lainnya'
6     end as provider,
7     bulan_lahir,
8     count(1) as total_customer
9 from rakamin_customer
10 where bulan_lahir = 'Maret'
11 group by 1, 2
    
```

Data Output

Explain

Messages

Notifications

|   | provider<br>text | bulan_lahir<br>character varying | total_customer<br>bigint |
|---|------------------|----------------------------------|--------------------------|
| 1 | Telkomsel        | Maret                            | 6                        |
| 2 | Lainnya          | Maret                            | 4                        |
| 3 | XL               | Maret                            | 4                        |



# Aggregation - GROUP BY

Contoh 4:

berapa total customers memiliki **nomor telepon Telkomsel dan XL**, yang **lahir di bulan maret**, dan **aktif**?

Query Editor

Query History

```
1 select
2     case when telepon like '62852%' then 'Telkomsel'
3         when telepon like '62878%' then 'XL'
4         when telepon like '62896%' then '3'
5         else 'Lainnya'
6     end as provider,
7     bulan_lahir,
8     pengguna_aktif,
9     count(1) as total_customer
10 from rakamin_customer
11 where
12     bulan_lahir = 'Maret'
13     and pengguna_aktif = 1
14 group by 1, 2, 3
```

Data Output

Explain

Messages

Notifications

|   | provider  | bulan_lahir       | pengguna_aktif | total_customer |
|---|-----------|-------------------|----------------|----------------|
|   | text      | character varying | integer        | bigint         |
| 1 | Lainnya   | Maret             | 1              | 4              |
| 2 | Telkomsel | Maret             | 1              | 5              |
| 3 | XL        | Maret             | 1              | 4              |

# SQL Simple Queries

- |                                     |                            |                                     |                               |
|-------------------------------------|----------------------------|-------------------------------------|-------------------------------|
| <input checked="" type="checkbox"/> | Filtering Operator         | <input checked="" type="checkbox"/> | CASE WHEN Introduction        |
| <input checked="" type="checkbox"/> | Logical Operator: AND / OR | <input checked="" type="checkbox"/> | CASE WHEN Use Case            |
| <input checked="" type="checkbox"/> | Logical Operator: NOT      | <input checked="" type="checkbox"/> | Aggregation: COUNT            |
| <input checked="" type="checkbox"/> | Advance Filtering: IN      | <input checked="" type="checkbox"/> | Aggregation: Others           |
| <input checked="" type="checkbox"/> | Advance Filtering: LIKE    | <input checked="" type="checkbox"/> | Grouping: GROUP BY            |
| <input checked="" type="checkbox"/> | Advance Filtering: BETWEEN | <input type="checkbox"/>            | Filter by Aggregation: HAVING |

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



Filter by Aggregation: HAVING

# Aggregation - GROUP BY

Contoh : berapa total customers memiliki nomor telepon Telkomsel dan XL ?

Query EditorQuery History

```

1 select
2     case when telepon like '62852%' then 'Telkomsel'
3         when telepon like '62878%' then 'XL'
4         when telepon like '62896%' then '3'
5         else 'Lainnya'
6     end as provider,
7     count(1) as total_customer
8 from rakamin_customer
9 group by 1

```

Data OutputExplainMessagesNotifications

|   | provider<br>text | total_customer<br>bigint |
|---|------------------|--------------------------|
| 1 | Telkomsel        | 22                       |
| 2 | Lainnya          | 20                       |
| 3 | XL               | 37                       |
| 4 | 3                | 9                        |

**Gimana ya caranya kalau bikin filter dari total customer yang sudah di agregat ini?**



# Aggregation - HAVING

digunakan untuk **melakukan filter terhadap hasil akumulasi** yang telah dilakukan aggregate.

```
select kolom_1,  
       count(1) as total  
FROM <tabel>  
GROUP BY kolom_1  
HAVING count(1) > x
```

← total baris pada  
tiap kolom\_1

← filter untuk kolom  
yang telah  
diakumulasi dari  
hasil aggregate



# Aggregation - HAVING

Contoh: Bagaimana persebaran total customer pada masing-masing provider yang jumlah customernya lebih dari 20?

Query EditorQuery History

```

1 select
2     case when telepon like '62852%' then 'Telkomsel'
3         when telepon like '62878%' then 'XL'
4         when telepon like '62896%' then '3'
5         else 'Lainnya'
6     end as provider,
7     count(1) as total_customer
8 from rakamin_customer
9 group by 1
10 having count(1) > 20

```

Data OutputExplainMessagesNotifications

|   | provider<br>text | total_customer<br>bigint |
|---|------------------|--------------------------|
| 1 | Telkomsel        | 22                       |
| 2 | XL               | 37                       |

# SQL Simple Queries



Filtering Operator



Logical Operator: AND / OR



Logical Operator: NOT



Advance Filtering: IN



Advance Filtering: LIKE



Advance Filtering: BETWEEN



CASE WHEN Introduction



CASE WHEN Use Case



Aggregation: COUNT



Aggregation: Others



Grouping: GROUP BY



Filter by Aggregation: HAVING