[SOAL]

1. **Keterangan**
   a. **Keterangan Cabang**
      i. Nama cabang
      ii. Nama Kota Cabang
      iii. Nama Propinsi Cabang

   b. **Keterangan Produk**
      i. Nama Produk
      ii. Nama Kategori Produk

   c. **Keterangan kasir (karyawan)**
      i. Nama karyawan
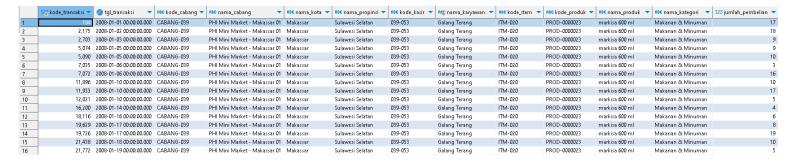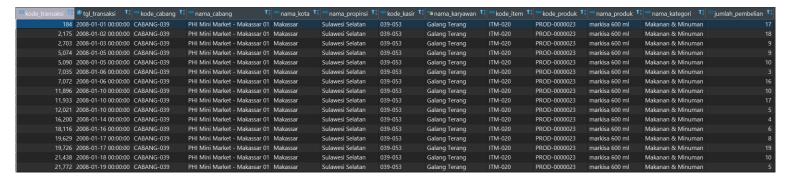   ii. Jenis Kelamin Karyawan

Jawaban :

SQL QUERY :

```sql
SELECT
    SUM(DISTINCT tp.kode_transaksi) AS kode_transaksi, tp.tgl_transaksi,
tp.kode_cabang,
    mc.nama_cabang, mk.nama_kota, mp.nama_propinsi, tp.kode_kasir,
    concat(mkr.nama_depan, ' ', mkr.nama_belakang) AS nama_karyawan,
    tp.kode_item, tp.kode_produk, mpr.nama_produk, mkt.nama_kategori,
    tp.jumlah_pembelian
FROM tr_penjualan tp
JOIN ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
JOIN ms_kota mk ON mk.kode_kota = mc.kode_kota
JOIN ms_propinsi mp ON mp.kode_propinsi = mk.kode_propinsi
JOIN ms_karyawan mkr ON mkr.kode_cabang = tp.kode_cabang
JOIN ms_produk mpr ON mpr.kode_produk = tp.kode_produk
JOIN ms_kategori mkt ON mpr.kode_kategori = mkt.kode_kategori
WHERE
    mc.nama_cabang LIKE '%Makassar%' AND
    tp.kode_kasir = '039-053'AND
    tp.kode_item = 'ITM-020' AND
    concat(mkr.nama_depan, ' ', mkr.nama_belakang) = 'Galang Terang' AND
    mkr.jenis_kelamin = 'P'
GROUP BY
    tp.tgl_transaksi, tp.kode_cabang,
    mc.nama_cabang, mk.nama_kota,
    mp.nama_propinsi, tp.kode_kasir,
    concat(mkr.nama_depan, ' ', mkr.nama_belakang), tp.kode_item,
    tp.kode_produk, mpr.nama_produk,
    mkt.nama_kategori, tp.jumlah_pembelian
ORDER BY SUM(DISTINCT tp.kode_transaksi);
```

1. Keterangan.sql

Screenshot hasil Query

Screenshot Validasi/Pembanding

2a. Quantitas (Jumlah Pembelian)

    i.   **Total jumlah pembelian (keseluruhan)**

Jawaban :

SQL QUERY :

```sql
SELECT
	SUM(tp.jumlah_pembelian) AS total_jumlah_pembelian
FROM public.tr_penjualan tp
JOIN public.ms_produk mp ON tp.kode_produk = mp.kode_produk
JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang = mhh.kode_cabang;
```


2a.i. Total jumlah
pembelian.sql

Screenshot hasil Query

Screenshot Validasi/Pembanding

ii. Total jumlah pembelian per cabang

Jawaban :

SQL QUERY :

```sql
SELECT
    mc.nama_cabang,
    SUM(tp.jumlah_pembelian) AS total_jumlah_pembelian
FROM public.tr_penjualan tp
JOIN public.ms_produk mp ON tp.kode_produk = mp.kode_produk
JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi
    AND tp.kode_cabang = mhh.kode_cabang
GROUP BY mc.nama_cabang;
```

2a.ii. Total jumlah pembelian per Caba

Screenshot hasil Query

nama_cabang	total_jumlah_pembelian
PHI Mini Market - Jakarta Pusat 01	1,531,354
PHI Mini Market - Makassar 01	1,531,616
PHI Mini Market - Surabaya 01	1,538,807

Screenshot Validasi/Pembanding

nama_cabang	total_jumlah_pembelian
PHI Mini Market - Jakarta Pusat 01	1,531,354
PHI Mini Market - Makassar 01	1,531,616
PHI Mini Market - Surabaya 01	1,538,807

iii. Total jumlah pembelian per kota

Jawaban :

SQL QUERY :

```sql
SELECT
    mk.nama_kota,
    SUM(tp.jumlah_pembelian) AS total_jumlah_pembelian
FROM public.tr_penjualan tp
JOIN public.ms_produk mp ON tp.kode_produk = mp.kode_produk
JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi
    AND tp.kode_cabang = mhh.kode_cabang
JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
```
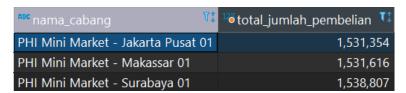
```
GROUP BY mk.nama_kota;
```


2a.iii. Total jumlah
pembelian per Kota.

Screenshot hasil Query

nama_kota	total_jumlah_pembelian
Jakarta Pusat	1,531,354
Makassar	1,531,616
Surabaya	1,538,807

Screenshot Validasi/Pembanding

	nama_kota	total_jumlah_pembelian
1	Jakarta Pusat	1,531,354
2	Makassar	1,531,616
3	Surabaya	1,538,807

iv.   Total jumlah pembelian per propinsi

Jawaban :

SQL QUERY :

```
SELECT
    mpv.nama_propinsi,
    SUM(tp.jumlah_pembelian) AS total_jumlah_pembelian
FROM public.tr_penjualan tp
JOIN public.ms_produk mp ON tp.kode_produk = mp.kode_produk
JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi
    AND tp.kode_cabang = mhh.kode_cabang
JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
JOIN public.ms_propinsi mpv ON mpv.kode_propinsi = mk.kode_propinsi
GROUP BY mpv.nama_propinsi;
```


2a.iv. Total jumlah
pembelian per Propi

Screenshot hasil Query

nama_propinsi	total_jumlah_pembelian
DKI Jakarta	1,531,354
Jawa Timur	1,538,807
Sulawesi Selatan	1,531,616

Screenshot Validasi/Pembanding

	nama_propinsi	total_jumlah_pembelian
1	DKI Jakarta	1,531,354
2	Jawa Timur	1,538,807
3	Sulawesi Selatan	1,531,616

v.   Total jumlah pembelian per produk
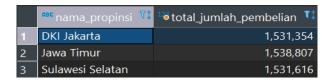
Jawaban :

SQL QUERY :

```sql
SELECT
      mp.nama_produk,
      SUM(tp.jumlah_pembelian) AS total_jumlah_pembelian
FROM public.tr_penjualan tp
JOIN public.ms_produk mp ON tp.kode_produk = mp.kode_produk
JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi
      AND tp.kode_cabang = mhh.kode_cabang
JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
JOIN public.ms_propinsi mpv ON mpv.kode_propinsi = mk.kode_propinsi
GROUP BY mp.nama_produk;
```

2a.v. Total jumlah
pembelian per Prod

Screenshot hasil Query

	nama_produk	total_jumlah_pembelian
1	air mineral 600 ml	112,107
2	alpukat 1 kg	113,156
3	apel 1 kg	113,405
4	bawang merah 1kg	112,074
5	bawang putih 1 kg	111,374
6	belimbing 1 kg	110,628
7	bumbu fried chicken	112,653
8	buncis 1 kg	110,142
9	durian 1 kg	112,810
10	jeruk 1 kg	112,415
11	jus kesehatan 600 ml	115,061
12	kacang goreng 1 kg	114,584
13	kacang hijau 1 kg	111,444
14	kacang mete 1 kg	111,403
15	kacang panjang 1 kg	110,613
16	kelapa muda	112,856
17	kentang 1 kg	112,828

Screenshot Validasi/Pembanding

	ABC nama_produk	123 total_jumlah_pembelian
1	air mineral 600 ml	112,107
2	alpukat 1 kg	113,156
3	apel 1 kg	113,405
4	bawang merah 1kg	112,074
5	bawang putih 1 kg	111,374
6	belimbing 1 kg	110,628
7	bumbu fried chicken	112,653
8	buncis 1 kg	110,142
9	durian 1 kg	112,810
10	jeruk 1 kg	112,415
11	jus kesehatan 600 ml	115,061
12	kacang goreng 1 kg	114,584
13	kacang hijau 1 kg	111,444
14	kacang mete 1 kg	111,403
15	kacang panjang 1 kg	110,613
16	kelapa muda	112,856
17	kentang 1 kg	112,828

vi. Total jumlah pembelian per kategori produk

Jawaban :

SQL QUERY :

```
SELECT
      mkt.nama_kategori,
      SUM(tp.jumlah_pembelian) AS total_jumlah_pembelian
FROM public.tr_penjualan tp
JOIN public.ms_produk mp ON tp.kode_produk = mp.kode_produk
JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi
      AND tp.kode_cabang = mhh.kode_cabang
JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
JOIN public.ms_propinsi mpv ON mpv.kode_propinsi = mk.kode_propinsi
JOIN ms_kategori mkt ON mkt.kode_kategori = mp.kode_kategori
GROUP BY mkt.nama_kategori;
```


2a.vi. Total jumlah
pembelian per Kateg

Screenshot hasil Query

	ABC nama_kategori	123 total_jumlah_pembelian
1	Buah	1,683,884
2	Makanan & Minuman	1,579,742
3	Sayur-Sayuran	1,338,151

Screenshot Validasi/Pembanding

nama_kategori	total_jumlah_pembelian
Buah	1,683,884
Makanan & Minuman	1,579,742
Sayur-Sayuran	1,338,151

2b. Nilai Transaksi (amount)

    i.   Total amount dan profit (keseluruhan)

Jawaban :

SQL QUERY :

```
SELECT
  SUM(tp.jumlah_pembelian * mhh.harga_berlaku_cabang) AS total_amount,
  SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang - mhh.modal_cabang -
mhh.biaya_cabang)) AS total_profit
FROM public.tr_penjualan tp
JOIN public.ms_produk mp ON tp.kode_produk = mp.kode_produk
JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi
    AND tp.kode_cabang = mhh.kode_cabang;
```

2b.i. Total amount
dan profit.sql

Screenshot hasil Query

total_amount	total_profit
65,109,181,120	2,459,942,130

Screenshot Validasi/Pembanding

total_amount	total_profit
65,109,181,120	2,459,942,130

ii.   Total amount dan profit per cabang

Jawaban :

SQL QUERY :

```
SELECT
  mc.nama_cabang,
  SUM(tp.jumlah_pembelian * mhh.harga_berlaku_cabang) AS total_amount,
  SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang - mhh.modal_cabang -
mhh.biaya_cabang)) AS total_profit
FROM public.tr_penjualan tp
JOIN public.ms_produk mp ON tp.kode_produk = mp.kode_produk
JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang = mhh.kode_cabang
```

GROUP BY mc.nama_cabang;

2b.ii. Total amount
dan profit per cabar

Screenshot hasil Query

ABC nama_cabang	123 total_amount	123 total_profit
PHI Mini Market - Jakarta Pusat 01	21,511,059,950	816,288,640
PHI Mini Market - Makassar 01	21,731,260,500	819,945,390
PHI Mini Market - Surabaya 01	21,866,860,670	823,708,100

Screenshot Validasi/Pembanding

ABC nama_cabang	123 total_amount	123 total_profit
PHI Mini Market - Jakarta Pusat 01	21,511,059,950	816,288,640
PHI Mini Market - Makassar 01	21,731,260,500	819,945,390
PHI Mini Market - Surabaya 01	21,866,860,670	823,708,100

iii.   Total amount dan profit per kota

Jawaban :

SQL QUERY :

SELECT
  mk.nama_kota,
  SUM(tp.jumlah_pembelian * mhh.harga_berlaku_cabang) **AS** total_amount,
  SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang - mhh.modal_cabang - mhh.biaya_cabang)) **AS** total_profit
FROM public.tr_penjualan tp
JOIN public.ms_produk mp **ON** tp.kode_produk = mp.kode_produk
JOIN public.ms_cabang mc **ON** tp.kode_cabang = mc.kode_cabang
JOIN public.ms_harga_harian mhh **ON** mhh.kode_produk = tp.kode_produk **AND** mhh.tgl_berlaku = tp.tgl_transaksi **AND** tp.kode_cabang = mhh.kode_cabang
JOIN public.ms_kota mk **ON** mk.kode_kota = mc.kode_kota
JOIN public.ms_propinsi mpv **ON** mpv.kode_propinsi = mk.kode_propinsi
GROUP BY mk.nama_kota;

2b.iii. Total amount
dan profit per kota.

Screenshot hasil Query

ABC nama_kota	123 total_amount	123 total_profit
Jakarta Pusat	21,511,059,950	816,288,640
Makassar	21,731,260,500	819,945,390
Surabaya	21,866,860,670	823,708,100

Screenshot Validasi/Pembanding

ABC nama_kota	123 total_amount	123 total_profit
Jakarta Pusat	21,511,059,950	816,288,640
Makassar	21,731,260,500	819,945,390
Surabaya	21,866,860,670	823,708,100

iv. **Total amount dan profit per propinsi**

Jawaban :

SQL QUERY :

```
SELECT
  mpv.nama_propinsi,
  SUM(tp.jumlah_pembelian * mhh.harga_berlaku_cabang) AS total_amount,
  SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang - mhh.modal_cabang -
mhh.biaya_cabang)) AS total_profit
FROM public.tr_penjualan tp
JOIN public.ms_produk mp ON tp.kode_produk = mp.kode_produk
JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang = mhh.kode_cabang
JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
JOIN public.ms_propinsi mpv ON mpv.kode_propinsi = mk.kode_propinsi
GROUP BY mpv.nama_propinsi;
```
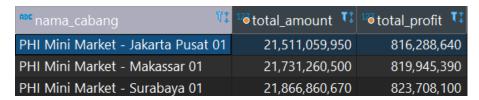
2b.iv. Total amount
dan profit per propi

Screenshot hasil Query

ABC nama_propinsi	123 total_amount	123 total_profit
DKI Jakarta	21,511,059,950	816,288,640
Jawa Timur	21,866,860,670	823,708,100
Sulawesi Selatan	21,731,260,500	819,945,390

Screenshot Validasi/Pembanding

ABC nama_propinsi	123 total_amount	123 total_profit
DKI Jakarta	21,511,059,950	816,288,640
Jawa Timur	21,866,860,670	823,708,100
Sulawesi Selatan	21,731,260,500	819,945,390

v. **Total amount dan profit per produk**

Jawaban :

SQL QUERY

```
SELECT
  mp.nama_produk ,
```

```
    SUM(tp.jumlah_pembelian * mhh.harga_berlaku_cabang) AS total_amount,
    SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang - mhh.modal_cabang -
mhh.biaya_cabang)) AS total_profit
FROM public.tr_penjualan tp
JOIN public.ms_produk mp ON tp.kode_produk = mp.kode_produk
JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang = mhh.kode_cabang
JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
JOIN public.ms_propinsi mpv ON mpv.kode_propinsi = mk.kode_propinsi
GROUP BY mp.nama_produk;
```

2b.v. Total amount
dan profit per nama

Screenshot hasil Query

	nama_produk	total_amount	total_profit
1	air mineral 600 ml	140,973,700	5,286,900
2	alpukat 1 kg	717,539,240	27,067,870
3	apel 1 kg	6,390,224,950	242,311,790
4	bawang merah 1kg	1,298,144,760	48,941,090
5	bawang putih 1 kg	476,860,770	17,915,190
6	belimbing 1 kg	457,184,540	17,293,110
7	bumbu fried chicken	1,706,900,300	64,413,590
8	buncis 1 kg	698,965,590	26,584,790
9	durian 1 kg	2,080,889,070	78,844,840
10	jeruk 1 kg	1,388,560,230	52,263,650

Screenshot Validasi/Pembanding

	nama_produk	total_amount	total_profit
1	air mineral 600 ml	140,973,700	5,286,900
2	alpukat 1 kg	717,539,240	27,067,870
3	apel 1 kg	6,390,224,950	242,311,790
4	bawang merah 1kg	1,298,144,760	48,941,090
5	bawang putih 1 kg	476,860,770	17,915,190
6	belimbing 1 kg	457,184,540	17,293,110
7	bumbu fried chicken	1,706,900,300	64,413,590
8	buncis 1 kg	698,965,590	26,584,790
9	durian 1 kg	2,080,889,070	78,844,840
10	jeruk 1 kg	1,388,560,230	52,263,650

vi.   **Total amount dan profit per kategori produk**

Jawaban :

SQL QUERY

```
SELECT
  mkt.nama_kategori,
```

```
    SUM(tp.jumlah_pembelian * mhh.harga_berlaku_cabang) AS total_amount,
    SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang - mhh.modal_cabang -
mhh.biaya_cabang)) AS total_profit
FROM public.tr_penjualan tp
JOIN public.ms_produk mp ON tp.kode_produk = mp.kode_produk
JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang = mhh.kode_cabang
JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
JOIN public.ms_propinsi mpv ON mpv.kode_propinsi = mk.kode_propinsi
JOIN public.ms_kategori mkt ON mkt.kode_kategori = mp.kode_kategori
GROUP BY mkt.nama_kategori;
```

2b.vi. Total amount
dan profit per kateg

Screenshot hasil Query

nama_kategori	total_amount	total_profit
Buah	24,996,399,640	944,754,890
Makanan & Minuman	33,138,237,540	1,251,923,680
Sayur-Sayuran	6,974,543,940	263,263,560

Screenshot Validasi/Pembanding

	nama_kategori	total_amount	total_profit
1	Buah	24,996,399,640	944,754,890
2	Makanan & Minuman	33,138,237,540	1,251,923,680
3	Sayur-Sayuran	6,974,543,940	263,263,560

2c. Total Nilai

Transaksi (amount) total profit, jumlah pembelian setiap bulan per setiap

    i.   **Cabang**

Jawaban :

SQL QUERY :

```
SELECT
        mk.nama_kota,
        date_part('year', date(tp.tgl_transaksi)) AS tahun,
        date_part('month', date(tp.tgl_transaksi)) AS bulan,
        sum(tp.jumlah_pembelian) AS jumlah_pembelian,
    sum(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang)) AS total_profit
FROM public.tr_penjualan tp
JOIN public.ms_cabang mc ON mc.kode_cabang = tp.kode_cabang
JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
    mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang =
mhh.kode_cabang
JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
```

GROUP BY 1,2,3;

2c.i.
Total_Nilai_Transaks

Screenshot hasil Query

	nama_cabang	tahun	bulan	jumlah_pembelian	profit
1	PHI Mini Market - Jakarta Pusat 01	2,008	1	130,921	65,836,750
2	PHI Mini Market - Jakarta Pusat 01	2,008	2	121,111	64,577,880
3	PHI Mini Market - Jakarta Pusat 01	2,008	3	129,191	67,432,280
4	PHI Mini Market - Jakarta Pusat 01	2,008	4	128,346	64,788,000
5	PHI Mini Market - Jakarta Pusat 01	2,008	5	129,802	69,079,650
6	PHI Mini Market - Jakarta Pusat 01	2,008	6	125,181	67,931,860
7	PHI Mini Market - Jakarta Pusat 01	2,008	7	130,493	70,173,270
8	PHI Mini Market - Jakarta Pusat 01	2,008	8	130,145	70,385,270
9	PHI Mini Market - Jakarta Pusat 01	2,008	9	125,081	66,459,850
10	PHI Mini Market - Jakarta Pusat 01	2,008	10	130,263	70,318,830
11	PHI Mini Market - Jakarta Pusat 01	2,008	11	125,124	69,798,540
12	PHI Mini Market - Jakarta Pusat 01	2,008	12	125,696	69,506,460
13	PHI Mini Market - Makassar 01	2,008	1	129,868	67,019,150
14	PHI Mini Market - Makassar 01	2,008	2	122,627	65,483,000
15	PHI Mini Market - Makassar 01	2,008	3	129,667	68,632,790
16	PHI Mini Market - Makassar 01	2,008	4	125,396	64,787,910
17	PHI Mini Market - Makassar 01	2,008	5	130,634	69,113,650
18	PHI Mini Market - Makassar 01	2,008	6	124,493	64,895,950
19	PHI Mini Market - Makassar 01	2,008	7	130,732	68,361,300
20	PHI Mini Market - Makassar 01	2,008	8	130,507	72,331,260
21	PHI Mini Market - Makassar 01	2,008	9	127,425	70,605,390
22	PHI Mini Market - Makassar 01	2,008	10	129,066	72,505,710
23	PHI Mini Market - Makassar 01	2,008	11	125,653	66,971,960
24	PHI Mini Market - Makassar 01	2,008	12	125,548	69,237,320

Screenshot Validasi/Pembanding

	nama_cabang	tahun	bulan	jumlah_pembelian	total_profit
1	PHI Mini Market - Jakarta Pusat 01	2,008	1	130,921	65,836,750
2	PHI Mini Market - Jakarta Pusat 01	2,008	2	121,111	64,577,880
3	PHI Mini Market - Jakarta Pusat 01	2,008	3	129,191	67,432,280
4	PHI Mini Market - Jakarta Pusat 01	2,008	4	128,346	64,788,000
5	PHI Mini Market - Jakarta Pusat 01	2,008	5	129,802	69,079,650
6	PHI Mini Market - Jakarta Pusat 01	2,008	6	125,181	67,931,860
7	PHI Mini Market - Jakarta Pusat 01	2,008	7	130,493	70,173,270
8	PHI Mini Market - Jakarta Pusat 01	2,008	8	130,145	70,385,270
9	PHI Mini Market - Jakarta Pusat 01	2,008	9	125,081	66,459,850
10	PHI Mini Market - Jakarta Pusat 01	2,008	10	130,263	70,318,830
11	PHI Mini Market - Jakarta Pusat 01	2,008	11	125,124	69,798,540
12	PHI Mini Market - Jakarta Pusat 01	2,008	12	125,696	69,506,460
13	PHI Mini Market - Makassar 01	2,008	1	129,868	67,019,150
14	PHI Mini Market - Makassar 01	2,008	2	122,627	65,483,000
15	PHI Mini Market - Makassar 01	2,008	3	129,667	68,632,790
16	PHI Mini Market - Makassar 01	2,008	4	125,396	64,787,910
17	PHI Mini Market - Makassar 01	2,008	5	130,634	69,113,650
18	PHI Mini Market - Makassar 01	2,008	6	124,493	64,895,950
19	PHI Mini Market - Makassar 01	2,008	7	130,732	68,361,300
20	PHI Mini Market - Makassar 01	2,008	8	130,507	72,331,260
21	PHI Mini Market - Makassar 01	2,008	9	127,425	70,605,390
22	PHI Mini Market - Makassar 01	2,008	10	129,066	72,505,710
23	PHI Mini Market - Makassar 01	2,008	11	125,653	66,971,960
24	PHI Mini Market - Makassar 01	2,008	12	125,548	69,237,320

ii.Kota

Jawaban :

SQL QUERY :

```sql
SELECT
  mk.nama_kota,
  date_part('year', date(tp.tgl_transaksi)) AS tahun,
  date_part('month', date(tp.tgl_transaksi)) AS bulan,
  SUM(tp.jumlah_pembelian * mhh.harga_berlaku_cabang) AS total_amount,
  SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang - mhh.modal_cabang -
mhh.biaya_cabang)) AS total_profit
FROM public.tr_penjualan tp
JOIN public.ms_produk mp ON tp.kode_produk = mp.kode_produk
JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang = mhh.kode_cabang
JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
GROUP BY 1,2,3;
```
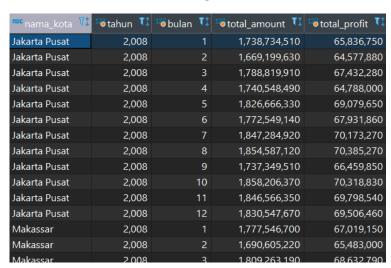
2c.ii.
Total_Nilai_Transaks

Screenshot hasil Query

	nama_kota	tahun	bulan	total_amount	total_profit
1	Jakarta Pusat	2,008	1	1,738,734,510	65,836,750
2	Jakarta Pusat	2,008	2	1,669,199,630	64,577,880
3	Jakarta Pusat	2,008	3	1,788,819,910	67,432,280
4	Jakarta Pusat	2,008	4	1,740,548,490	64,788,000
5	Jakarta Pusat	2,008	5	1,826,666,330	69,079,650
6	Jakarta Pusat	2,008	6	1,772,549,140	67,931,860
7	Jakarta Pusat	2,008	7	1,847,284,920	70,173,270
8	Jakarta Pusat	2,008	8	1,854,587,120	70,385,270
9	Jakarta Pusat	2,008	9	1,737,349,510	66,459,850
10	Jakarta Pusat	2,008	10	1,858,206,370	70,318,830
11	Jakarta Pusat	2,008	11	1,846,566,350	69,798,540
12	Jakarta Pusat	2,008	12	1,830,547,670	69,506,460
13	Makassar	2,008	1	1,777,546,700	67,019,150
14	Makassar	2,008	2	1,690,605,220	65,483,000
15	Makassar	2,008	3	1,809,263,190	68,632,790

Screenshot Validasi/Pembanding

nama_kota	tahun	bulan	total_amount	total_profit
Jakarta Pusat	2,008	1	1,738,734,510	65,836,750
Jakarta Pusat	2,008	2	1,669,199,630	64,577,880
Jakarta Pusat	2,008	3	1,788,819,910	67,432,280
Jakarta Pusat	2,008	4	1,740,548,490	64,788,000
Jakarta Pusat	2,008	5	1,826,666,330	69,079,650
Jakarta Pusat	2,008	6	1,772,549,140	67,931,860
Jakarta Pusat	2,008	7	1,847,284,920	70,173,270
Jakarta Pusat	2,008	8	1,854,587,120	70,385,270
Jakarta Pusat	2,008	9	1,737,349,510	66,459,850
Jakarta Pusat	2,008	10	1,858,206,370	70,318,830
Jakarta Pusat	2,008	11	1,846,566,350	69,798,540
Jakarta Pusat	2,008	12	1,830,547,670	69,506,460
Makassar	2,008	1	1,777,546,700	67,019,150
Makassar	2,008	2	1,690,605,220	65,483,000
Makassar	2,008	3	1,809,263,190	68,632,790

iii. Propinsi

Jawaban :

SQL QUERY :

```sql
SELECT
  mpv.nama_propinsi,
  date_part('year', date(tp.tgl_transaksi)) AS tahun,
  date_part('month', date(tp.tgl_transaksi)) AS bulan,
  SUM(tp.jumlah_pembelian * mhh.harga_berlaku_cabang) AS total_amount,
  SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang - mhh.modal_cabang -
mhh.biaya_cabang)) AS total_profit
FROM public.tr_penjualan tp
JOIN public.ms_produk mp ON tp.kode_produk = mp.kode_produk
JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang = mhh.kode_cabang
JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
JOIN public.ms_propinsi mpv ON mpv.kode_propinsi = mk.kode_propinsi
GROUP BY 1,2,3;
```

2c.iii.
Total_Nilai_Transaks

Screenshot hasil Query

	nama_propinsi	tahun	bulan	total_amount	total_profit
1	DKI Jakarta	2,008	1	1,738,734,510	65,836,750
2	DKI Jakarta	2,008	2	1,669,199,630	64,577,880
3	DKI Jakarta	2,008	3	1,788,819,910	67,432,280
4	DKI Jakarta	2,008	4	1,740,548,490	64,788,000
5	DKI Jakarta	2,008	5	1,826,666,330	69,079,650
6	DKI Jakarta	2,008	6	1,772,549,140	67,931,860
7	DKI Jakarta	2,008	7	1,847,284,920	70,173,270
8	DKI Jakarta	2,008	8	1,854,587,120	70,385,270
9	DKI Jakarta	2,008	9	1,737,349,510	66,459,850
10	DKI Jakarta	2,008	10	1,858,206,370	70,318,830
11	DKI Jakarta	2,008	11	1,846,566,350	69,798,540
12	DKI Jakarta	2,008	12	1,830,547,670	69,506,460
13	Jawa Timur	2,008	1	1,813,913,540	68,263,860

Screenshot Validasi/Pembanding

nama_propinsi	tahun	bulan	total_amount	total_profit
DKI Jakarta	2,008	1	1,738,734,510	65,836,750
DKI Jakarta	2,008	2	1,669,199,630	64,577,880
DKI Jakarta	2,008	3	1,788,819,910	67,432,280
DKI Jakarta	2,008	4	1,740,548,490	64,788,000
DKI Jakarta	2,008	5	1,826,666,330	69,079,650
DKI Jakarta	2,008	6	1,772,549,140	67,931,860
DKI Jakarta	2,008	7	1,847,284,920	70,173,270
DKI Jakarta	2,008	8	1,854,587,120	70,385,270
DKI Jakarta	2,008	9	1,737,349,510	66,459,850
DKI Jakarta	2,008	10	1,858,206,370	70,318,830
DKI Jakarta	2,008	11	1,846,566,350	69,798,540
DKI Jakarta	2,008	12	1,830,547,670	69,506,460
Jawa Timur	2,008	1	1,813,913,540	68,263,860

iv. Produk

Jawaban :

SQL QUERY :

```sql
SELECT
  mp.nama_produk,
  date_part('year', date(tp.tgl_transaksi)) AS tahun,
  date_part('month', date(tp.tgl_transaksi)) AS bulan,
  SUM(tp.jumlah_pembelian * mhh.harga_berlaku_cabang) AS total_amount,
  SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang - mhh.modal_cabang -
mhh.biaya_cabang)) AS total_profit
FROM public.tr_penjualan tp
JOIN public.ms_produk mp ON tp.kode_produk = mp.kode_produk
JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang = mhh.kode_cabang
JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
JOIN public.ms_propinsi mpv ON mpv.kode_propinsi = mk.kode_propinsi
GROUP BY 1,2,3;
```

2c.iv.
Total_Nilai_Transaks

Screenshot hasil Query

	nama_produk	tahun	bulan	total_amount	total_profit
1	air mineral 600 ml	2,008	1	11,700,110	442,950
2	air mineral 600 ml	2,008	2	11,524,120	431,070
3	air mineral 600 ml	2,008	3	11,692,000	429,900
4	air mineral 600 ml	2,008	4	11,223,420	404,940
5	air mineral 600 ml	2,008	5	11,254,370	421,440
6	air mineral 600 ml	2,008	6	11,090,000	420,420
7	air mineral 600 ml	2,008	7	12,017,570	439,730
8	air mineral 600 ml	2,008	8	12,342,790	460,720
9	air mineral 600 ml	2,008	9	11,907,930	457,010
10	air mineral 600 ml	2,008	10	11,672,790	442,730
11	air mineral 600 ml	2,008	11	11,783,760	438,110
12	air mineral 600 ml	2,008	12	12,764,840	497,880
13	alpukat 1 kg	2,008	1	55,996,340	2,096,460
14	alpukat 1 kg	2,008	2	48,819,880	1,844,510
15	alpukat 1 kg	2,008	3	58,831,380	2,260,530
16	alpukat 1 kg	2,008	4	63,756,740	2,400,200
17	alpukat 1 kg	2,008	5	63,722,440	2,548,520
18	alpukat 1 kg	2,008	6	57,716,370	2,179,930
19	alpukat 1 kg	2,008	7	61,941,980	2,303,750
20	alpukat 1 kg	2,008	8	60,777,050	2,238,150
21	alpukat 1 kg	2,008	9	61,158,330	2,254,400
22	alpukat 1 kg	2,008	10	63,122,080	2,359,310
23	alpukat 1 kg	2,008	11	60,942,340	2,246,560
24	alpukat 1 kg	2,008	12	60,754,310	2,335,550

Screenshot Validasi/Pembanding

ABC nama_produk	123 tahun	123 bulan	123 total_amount	123 total_profit
air mineral 600 ml	2,008	1	11,700,110	442,950
air mineral 600 ml	2,008	2	11,524,120	431,070
air mineral 600 ml	2,008	3	11,692,000	429,900
air mineral 600 ml	2,008	4	11,223,420	404,940
air mineral 600 ml	2,008	5	11,254,370	421,440
air mineral 600 ml	2,008	6	11,090,000	420,420
air mineral 600 ml	2,008	7	12,017,570	439,730
air mineral 600 ml	2,008	8	12,342,790	460,720
air mineral 600 ml	2,008	9	11,907,930	457,010
air mineral 600 ml	2,008	10	11,672,790	442,730
air mineral 600 ml	2,008	11	11,783,760	438,110
air mineral 600 ml	2,008	12	12,764,840	497,880
alpukat 1 kg	2,008	1	55,996,340	2,096,460
alpukat 1 kg	2,008	2	48,819,880	1,844,510
alpukat 1 kg	2,008	3	58,831,380	2,260,530
alpukat 1 kg	2,008	4	63,756,740	2,400,200
alpukat 1 kg	2,008	5	63,722,440	2,548,520
alpukat 1 kg	2,008	6	57,716,370	2,179,930
alpukat 1 kg	2,008	7	61,941,980	2,303,750
alpukat 1 kg	2,008	8	60,777,050	2,238,150
alpukat 1 kg	2,008	9	61,158,330	2,254,400
alpukat 1 kg	2,008	10	63,122,080	2,359,310
alpukat 1 kg	2,008	11	60,942,340	2,246,560
alpukat 1 kg	2,008	12	60,754,310	2,335,550

2d. Total Nilai Transaksi (amount) total profit, jumlah pembelian dalam YTD tahunan (kumulatif) setiap bulan per setiap

i. Cabang

Jawaban :

SQL Query

```
SELECT
  mc.nama_cabang,
  date_part('year', date(mhh.tgl_berlaku)) AS tahun,
  date_part('month', date(mhh.tgl_berlaku)) AS bulan,
  SUM(tp.jumlah_pembelian) AS jumlah_pembelian,
  SUM(SUM(tp.jumlah_pembelian)) OVER(PARTITION BY mc.nama_cabang ORDER BY
mc.nama_cabang, date_part('year', date(mhh.tgl_berlaku)),
          date_part('month', date(mhh.tgl_berlaku))) AS
jumlah_pembelian_ytd,
  SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang - mhh.modal_cabang -
mhh.biaya_cabang)) AS total_profit,
  SUM(SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang))) OVER(PARTITION BY mc.nama_cabang
ORDER BY mc.nama_cabang, date_part('year', date(mhh.tgl_berlaku)),
          date_part('month', date(mhh.tgl_berlaku))) AS total_profit_ytd
FROM public.tr_penjualan tp
JOIN public.ms_produk mp ON tp.kode_produk = mp.kode_produk
JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang = mhh.kode_cabang
GROUP BY 1,2,3;
```

Screenshot hasil Query

	nama_cabang	tahun	bulan	jumlah_pembelian	jumlah_pembelian_ytd	total_profit	total_profit_ytd
1	PHI Mini Market - Jakarta Pusat 01	2,008	1	130,921	130,921	65,836,750	65,836,750
2	PHI Mini Market - Jakarta Pusat 01	2,008	2	121,111	252,032	64,577,880	130,414,630
3	PHI Mini Market - Jakarta Pusat 01	2,008	3	129,191	381,223	67,432,280	197,846,910
4	PHI Mini Market - Jakarta Pusat 01	2,008	4	128,346	509,569	64,788,000	262,634,910
5	PHI Mini Market - Jakarta Pusat 01	2,008	5	129,802	639,371	69,079,650	331,714,560
6	PHI Mini Market - Jakarta Pusat 01	2,008	6	125,181	764,552	67,931,860	399,646,420
7	PHI Mini Market - Jakarta Pusat 01	2,008	7	130,493	895,045	70,173,270	469,819,690
8	PHI Mini Market - Jakarta Pusat 01	2,008	8	130,145	1,025,190	70,385,270	540,204,960
9	PHI Mini Market - Jakarta Pusat 01	2,008	9	125,081	1,150,271	66,459,850	606,664,810
10	PHI Mini Market - Jakarta Pusat 01	2,008	10	130,263	1,280,534	70,318,830	676,983,640
11	PHI Mini Market - Jakarta Pusat 01	2,008	11	125,124	1,405,658	69,798,540	746,782,180
12	PHI Mini Market - Jakarta Pusat 01	2,008	12	125,696	1,531,354	69,506,460	816,288,640
13	PHI Mini Market - Makassar 01	2,008	1	129,868	129,868	67,019,150	67,019,150
14	PHI Mini Market - Makassar 01	2,008	2	122,627	252,495	65,483,000	132,502,150
15	PHI Mini Market - Makassar 01	2,008	3	129,667	382,162	68,632,790	201,134,940
16	PHI Mini Market - Makassar 01	2,008	4	125,396	507,558	64,787,910	265,922,850
17	PHI Mini Market - Makassar 01	2,008	5	130,634	638,192	69,113,650	335,036,500
18	PHI Mini Market - Makassar 01	2,008	6	124,493	762,685	64,895,950	399,932,450
19	PHI Mini Market - Makassar 01	2,008	7	130,732	893,417	68,361,300	468,293,750
20	PHI Mini Market - Makassar 01	2,008	8	130,507	1,023,924	72,331,260	540,625,010
21	PHI Mini Market - Makassar 01	2,008	9	127,425	1,151,349	70,605,390	611,230,400
22	PHI Mini Market - Makassar 01	2,008	10	129,066	1,280,415	72,505,710	683,736,110
23	PHI Mini Market - Makassar 01	2,008	11	125,653	1,406,068	66,971,960	750,708,070
24	PHI Mini Market - Makassar 01	2,008	12	125,548	1,531,616	69,237,320	819,945,390

Screenshot Validasi/Pembanding

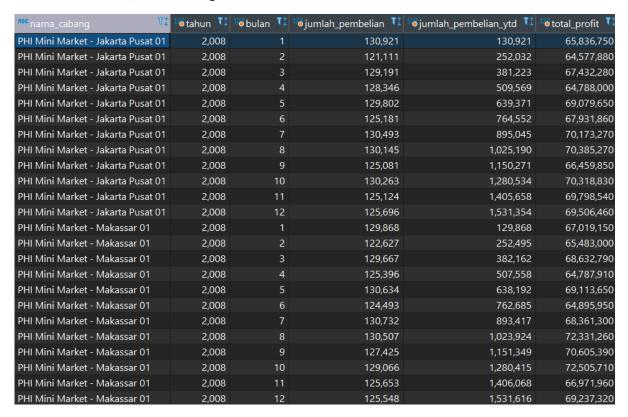| nama_cabang	tahun	bulan	jumlah_pembelian	jumlah_pembelian_ytd	total_profit
PHI Mini Market - Jakarta Pusat 01	2,008	1	130,921	130,921	65,836,750
PHI Mini Market - Jakarta Pusat 01	2,008	2	121,111	252,032	64,577,880
PHI Mini Market - Jakarta Pusat 01	2,008	3	129,191	381,223	67,432,280
PHI Mini Market - Jakarta Pusat 01	2,008	4	128,346	509,569	64,788,000
PHI Mini Market - Jakarta Pusat 01	2,008	5	129,802	639,371	69,079,650
PHI Mini Market - Jakarta Pusat 01	2,008	6	125,181	764,552	67,931,860
PHI Mini Market - Jakarta Pusat 01	2,008	7	130,493	895,045	70,173,270
PHI Mini Market - Jakarta Pusat 01	2,008	8	130,145	1,025,190	70,385,270
PHI Mini Market - Jakarta Pusat 01	2,008	9	125,081	1,150,271	66,459,850
PHI Mini Market - Jakarta Pusat 01	2,008	10	130,263	1,280,534	70,318,830
PHI Mini Market - Jakarta Pusat 01	2,008	11	125,124	1,405,658	69,798,540
PHI Mini Market - Jakarta Pusat 01	2,008	12	125,696	1,531,354	69,506,460
PHI Mini Market - Makassar 01	2,008	1	129,868	129,868	67,019,150
PHI Mini Market - Makassar 01	2,008	2	122,627	252,495	65,483,000
PHI Mini Market - Makassar 01	2,008	3	129,667	382,162	68,632,790
PHI Mini Market - Makassar 01	2,008	4	125,396	507,558	64,787,910
PHI Mini Market - Makassar 01	2,008	5	130,634	638,192	69,113,650
PHI Mini Market - Makassar 01	2,008	6	124,493	762,685	64,895,950
PHI Mini Market - Makassar 01	2,008	7	130,732	893,417	68,361,300
PHI Mini Market - Makassar 01	2,008	8	130,507	1,023,924	72,331,260
PHI Mini Market - Makassar 01	2,008	9	127,425	1,151,349	70,605,390
PHI Mini Market - Makassar 01	2,008	10	129,066	1,280,415	72,505,710
PHI Mini Market - Makassar 01	2,008	11	125,653	1,406,068	66,971,960
PHI Mini Market - Makassar 01	2,008	12	125,548	1,531,616	69,237,320

ii.   Kota

Jawaban :

SQL Query

```sql
SELECT
  mk.nama_kota,
  date_part('year', date(mhh.tgl_berlaku)) AS tahun,
  date_part('month', date(mhh.tgl_berlaku)) AS bulan,
  SUM(tp.jumlah_pembelian) AS jumlah_pembelian,
  SUM(SUM(tp.jumlah_pembelian)) OVER(PARTITION BY mk.nama_kota ORDER BY
mk.nama_kota, date_part('year', date(mhh.tgl_berlaku)),
         date_part('month', date(mhh.tgl_berlaku))) AS
jumlah_pembelian_ytd,
  SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang - mhh.modal_cabang -
mhh.biaya_cabang)) AS total_profit,
  SUM(SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang))) OVER(PARTITION BY mk.nama_kota
ORDER BY mk.nama_kota, date_part('year', date(mhh.tgl_berlaku)),
         date_part('month', date(mhh.tgl_berlaku))) AS total_profit_ytd
FROM public.tr_penjualan tp
JOIN public.ms_produk mp ON tp.kode_produk = mp.kode_produk
JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang = mhh.kode_cabang
JOIN ms_kota mk ON mk.kode_kota = mc.kode_kota
GROUP BY 1,2,3;
```

2d.ii.
Jumlah_pembelian_`

Screenshot hasil Query

	nama_kota	tahun	bulan	jumlah_pembelian	jumlah_pembelian_ytd	total_profit	total_profit_ytd
1	Jakarta Pusat	2,008	1	130,921	130,921	65,836,750	65,836,750
2	Jakarta Pusat	2,008	2	121,111	252,032	64,577,880	130,414,630
3	Jakarta Pusat	2,008	3	129,191	381,223	67,432,280	197,846,910
4	Jakarta Pusat	2,008	4	128,346	509,569	64,788,000	262,634,910
5	Jakarta Pusat	2,008	5	129,802	639,371	69,079,650	331,714,560
6	Jakarta Pusat	2,008	6	125,181	764,552	67,931,860	399,646,420
7	Jakarta Pusat	2,008	7	130,493	895,045	70,173,270	469,819,690
8	Jakarta Pusat	2,008	8	130,145	1,025,190	70,385,270	540,204,960
9	Jakarta Pusat	2,008	9	125,081	1,150,271	66,459,850	606,664,810
10	Jakarta Pusat	2,008	10	130,263	1,280,534	70,318,830	676,983,640
11	Jakarta Pusat	2,008	11	125,124	1,405,658	69,798,540	746,782,180
12	Jakarta Pusat	2,008	12	125,696	1,531,354	69,506,460	816,288,640
13	Makassar	2,008	1	129,868	129,868	67,019,150	67,019,150
14	Makassar	2,008	2	122,627	252,495	65,483,000	132,502,150
15	Makassar	2,008	3	129,667	382,162	68,632,790	201,134,940
16	Makassar	2,008	4	125,396	507,558	64,787,910	265,922,850
17	Makassar	2,008	5	130,634	638,192	69,113,650	335,036,500
18	Makassar	2,008	6	124,493	762,685	64,895,950	399,932,450
19	Makassar	2,008	7	130,732	893,417	68,361,300	468,293,750
20	Makassar	2,008	8	130,507	1,023,924	72,331,260	540,625,010
21	Makassar	2,008	9	127,425	1,151,349	70,605,390	611,230,400
22	Makassar	2,008	10	129,066	1,280,415	72,505,710	683,736,110
23	Makassar	2,008	11	125,653	1,406,068	66,971,960	750,708,070
24	Makassar	2,008	12	125,548	1,531,616	69,237,320	819,945,390
25	Surabaya	2,008	1	129,197	129,197	68,263,860	68,263,860

Screenshot Validasi/Pembanding

nama_kota	tahun	bulan	jumlah_pembelian	jumlah_pembelian_ytd	total_profit	total_profit_ytd
Jakarta Pusat	2,008	1	130,921	130,921	65,836,750	65,836,750
Jakarta Pusat	2,008	2	121,111	252,032	64,577,880	130,414,630
Jakarta Pusat	2,008	3	129,191	381,223	67,432,280	197,846,910
Jakarta Pusat	2,008	4	128,346	509,569	64,788,000	262,634,910
Jakarta Pusat	2,008	5	129,802	639,371	69,079,650	331,714,560
Jakarta Pusat	2,008	6	125,181	764,552	67,931,860	399,646,420
Jakarta Pusat	2,008	7	130,493	895,045	70,173,270	469,819,690
Jakarta Pusat	2,008	8	130,145	1,025,190	70,385,270	540,204,960
Jakarta Pusat	2,008	9	125,081	1,150,271	66,459,850	606,664,810
Jakarta Pusat	2,008	10	130,263	1,280,534	70,318,830	676,983,640
Jakarta Pusat	2,008	11	125,124	1,405,658	69,798,540	746,782,180
Jakarta Pusat	2,008	12	125,696	1,531,354	69,506,460	816,288,640
Makassar	2,008	1	129,868	129,868	67,019,150	67,019,150
Makassar	2,008	2	122,627	252,495	65,483,000	132,502,150
Makassar	2,008	3	129,667	382,162	68,632,790	201,134,940
Makassar	2,008	4	125,396	507,558	64,787,910	265,922,850
Makassar	2,008	5	130,634	638,192	69,113,650	335,036,500
Makassar	2,008	6	124,493	762,685	64,895,950	399,932,450
Makassar	2,008	7	130,732	893,417	68,361,300	468,293,750
Makassar	2,008	8	130,507	1,023,924	72,331,260	540,625,010
Makassar	2,008	9	127,425	1,151,349	70,605,390	611,230,400
Makassar	2,008	10	129,066	1,280,415	72,505,710	683,736,110
Makassar	2,008	11	125,653	1,406,068	66,971,960	750,708,070
Makassar	2,008	12	125,548	1,531,616	69,237,320	819,945,390
Surabaya	2,008	1	129,197	129,197	68,263,860	68,263,860

iii. Propinsi

Jawaban :

SQL Query

```sql
SELECT
  mpv.nama_propinsi,
  date_part('year', date(mhh.tgl_berlaku)) AS tahun,
  date_part('month', date(mhh.tgl_berlaku)) AS bulan,
  SUM(tp.jumlah_pembelian) AS jumlah_pembelian,
  SUM(SUM(tp.jumlah_pembelian)) OVER(PARTITION BY mpv.nama_propinsi ORDER BY
mpv.nama_propinsi, date_part('year', date(mhh.tgl_berlaku)),
          date_part('month', date(mhh.tgl_berlaku))) AS jumlah_pembelian_ytd,
  SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang - mhh.modal_cabang -
mhh.biaya_cabang)) AS total_profit,
  SUM(SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang - mhh.modal_cabang -
mhh.biaya_cabang))) OVER(PARTITION BY mpv.nama_propinsi ORDER BY
mpv.nama_propinsi, date_part('year', date(mhh.tgl_berlaku)),
          date_part('month', date(mhh.tgl_berlaku))) AS total_profit_ytd
FROM public.tr_penjualan tp
JOIN public.ms_produk mp ON tp.kode_produk = mp.kode_produk
JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang = mhh.kode_cabang
JOIN ms_kota mk ON mk.kode_kota = mc.kode_kota
JOIN ms_propinsi mpv ON mpv.kode_propinsi = mk.kode_propinsi
GROUP BY 1,2,3;
```

2d.iii.
Jumlah_pembelian_`

Screenshot hasil Query

	nama_propinsi	tahun	bulan	jumlah_pembelian	jumlah_pembelian_ytd	total_profit	total_profit_ytd
1	DKI Jakarta	2,008	1	130,921	130,921	65,836,750	65,836,750
2	DKI Jakarta	2,008	2	121,111	252,032	64,577,880	130,414,630
3	DKI Jakarta	2,008	3	129,191	381,223	67,432,280	197,846,910
4	DKI Jakarta	2,008	4	128,346	509,569	64,788,000	262,634,910
5	DKI Jakarta	2,008	5	129,802	639,371	69,079,650	331,714,560
6	DKI Jakarta	2,008	6	125,181	764,552	67,931,860	399,646,420
7	DKI Jakarta	2,008	7	130,493	895,045	70,173,270	469,819,690
8	DKI Jakarta	2,008	8	130,145	1,025,190	70,385,270	540,204,960
9	DKI Jakarta	2,008	9	125,081	1,150,271	66,459,850	606,664,810
10	DKI Jakarta	2,008	10	130,263	1,280,534	70,318,830	676,983,640
11	DKI Jakarta	2,008	11	125,124	1,405,658	69,798,540	746,782,180
12	DKI Jakarta	2,008	12	125,696	1,531,354	69,506,460	816,288,640
13	Jawa Timur	2,008	1	129,197	129,197	68,263,860	68,263,860
14	Jawa Timur	2,008	2	123,023	252,220	64,071,910	132,335,770
15	Jawa Timur	2,008	3	130,956	383,176	68,739,250	201,075,020
16	Jawa Timur	2,008	4	126,461	509,637	66,827,250	267,902,270
17	Jawa Timur	2,008	5	130,585	640,222	68,987,280	336,889,550
18	Jawa Timur	2,008	6	126,265	766,487	66,595,730	403,485,280
19	Jawa Timur	2,008	7	130,792	897,279	68,976,570	472,461,850
20	Jawa Timur	2,008	8	131,749	1,029,028	71,918,600	544,380,450
21	Jawa Timur	2,008	9	127,097	1,156,125	71,807,220	616,187,670
22	Jawa Timur	2,008	10	130,117	1,286,242	70,522,910	686,710,580
23	Jawa Timur	2,008	11	125,511	1,411,753	68,062,680	754,773,260
24	Jawa Timur	2,008	12	127,054	1,538,807	68,934,840	823,708,100
25	Sulawesi Selatan	2,008	1	129,868	129,868	67,019,150	67,019,150
26	Sulawesi Selatan	2,008	2	122,627	252,495	65,483,000	132,502,150
27	Sulawesi Selatan	2,008	3	129,667	382,162	68,632,790	201,134,940
28	Sulawesi Selatan	2,008	4	125,396	507,558	64,787,910	265,922,850
29	Sulawesi Selatan	2,008	5	130,634	638,192	69,113,650	335,036,500

Screenshot Validasi/Pembanding

nama_propinsi	tahun	bulan	jumlah_pembelian	jumlah_pembelian_ytd	total_profit	total_profit_ytd
DKI Jakarta	2,008	1	130,921	130,921	65,836,750	65,836,750
DKI Jakarta	2,008	2	121,111	252,032	64,577,880	130,414,630
DKI Jakarta	2,008	3	129,191	381,223	67,432,280	197,846,910
DKI Jakarta	2,008	4	128,346	509,569	64,788,000	262,634,910
DKI Jakarta	2,008	5	129,802	639,371	69,079,650	331,714,560
DKI Jakarta	2,008	6	125,181	764,552	67,931,860	399,646,420
DKI Jakarta	2,008	7	130,493	895,045	70,173,270	469,819,690
DKI Jakarta	2,008	8	130,145	1,025,190	70,385,270	540,204,960
DKI Jakarta	2,008	9	125,081	1,150,271	66,459,850	606,664,810
DKI Jakarta	2,008	10	130,263	1,280,534	70,318,830	676,983,640
DKI Jakarta	2,008	11	125,124	1,405,658	69,798,540	746,782,180
DKI Jakarta	2,008	12	125,696	1,531,354	69,506,460	816,288,640
Jawa Timur	2,008	1	129,197	129,197	68,263,860	68,263,860
Jawa Timur	2,008	2	123,023	252,220	64,071,910	132,335,770
Jawa Timur	2,008	3	130,956	383,176	68,739,250	201,075,020
Jawa Timur	2,008	4	126,461	509,637	66,827,250	267,902,270
Jawa Timur	2,008	5	130,585	640,222	68,987,280	336,889,550
Jawa Timur	2,008	6	126,265	766,487	66,595,730	403,485,280
Jawa Timur	2,008	7	130,792	897,279	68,976,570	472,461,850
Jawa Timur	2,008	8	131,749	1,029,028	71,918,600	544,380,450
Jawa Timur	2,008	9	127,097	1,156,125	71,807,220	616,187,670
Jawa Timur	2,008	10	130,117	1,286,242	70,522,910	686,710,580
Jawa Timur	2,008	11	125,511	1,411,753	68,062,680	754,773,260
Jawa Timur	2,008	12	127,054	1,538,807	68,934,840	823,708,100
Sulawesi Selatan	2,008	1	129,868	129,868	67,019,150	67,019,150
Sulawesi Selatan	2,008	2	122,627	252,495	65,483,000	132,502,150
Sulawesi Selatan	2,008	3	129,667	382,162	68,632,790	201,134,940
Sulawesi Selatan	2,008	4	125,396	507,558	64,787,910	265,922,850

iv. Produk

Jawaban :

SQL Query

```sql
SELECT
    mp.nama_produk,
    date_part('year', date(mhh.tgl_berlaku)) AS tahun,
    date_part('month', date(mhh.tgl_berlaku)) AS bulan,
    SUM(tp.jumlah_pembelian) AS jumlah_pembelian,
    SUM(SUM(tp.jumlah_pembelian)) OVER(PARTITION BY mp.nama_produk ORDER BY
mp.nama_produk, date_part('year', date(mhh.tgl_berlaku)),
            date_part('month', date(mhh.tgl_berlaku))) AS
jumlah_pembelian_ytd,
    SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang - mhh.modal_cabang -
mhh.biaya_cabang)) AS total_profit,
    SUM(SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang))) OVER(PARTITION BY mp.nama_produk
ORDER BY mp.nama_produk, date_part('year', date(mhh.tgl_berlaku)),
            date_part('month', date(mhh.tgl_berlaku))) AS total_profit_ytd
FROM public.tr_penjualan tp
JOIN public.ms_produk mp ON tp.kode_produk = mp.kode_produk
JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang = mhh.kode_cabang
JOIN ms_kota mk ON mk.kode_kota = mc.kode_kota
JOIN ms_propinsi mpv ON mpv.kode_propinsi = mk.kode_propinsi
GROUP BY 1,2,3;
```

2d.iv.
Jumlah_pembelian_`

Screenshot hasil Query

	nama_produk	tahun	bulan	jumlah_pembelian	jumlah_pembelian_ytd	total_profit	total_profit_ytd
1	air mineral 600 ml	2,008	1	9,730	9,730	442,950	442,950
2	air mineral 600 ml	2,008	2	9,498	19,228	431,070	874,020
3	air mineral 600 ml	2,008	3	9,561	28,789	429,900	1,303,920
4	air mineral 600 ml	2,008	4	9,125	37,914	404,940	1,708,860
5	air mineral 600 ml	2,008	5	9,054	46,968	421,440	2,130,300
6	air mineral 600 ml	2,008	6	8,872	55,840	420,420	2,550,720
7	air mineral 600 ml	2,008	7	9,536	65,376	439,730	2,990,450
8	air mineral 600 ml	2,008	8	9,688	75,064	460,720	3,451,170
9	air mineral 600 ml	2,008	9	9,262	84,326	457,010	3,908,180
10	air mineral 600 ml	2,008	10	9,005	93,331	442,730	4,350,910
11	air mineral 600 ml	2,008	11	9,047	102,378	438,110	4,789,020
12	air mineral 600 ml	2,008	12	9,729	112,107	497,880	5,286,900
13	alpukat 1 kg	2,008	1	9,314	9,314	2,096,460	2,096,460
14	alpukat 1 kg	2,008	2	8,037	17,351	1,844,510	3,940,970
15	alpukat 1 kg	2,008	3	9,584	26,935	2,260,530	6,201,500
16	alpukat 1 kg	2,008	4	10,293	37,228	2,400,200	8,601,700
17	alpukat 1 kg	2,008	5	10,201	47,429	2,548,520	11,150,220

Screenshot Validasi/Pembanding

nama_produk	tahun	bulan	jumlah_pembelian	jumlah_pembelian_ytd	total_profit	total_profit_ytd
air mineral 600 ml	2,008	1	9,730	9,730	442,950	442,950
air mineral 600 ml	2,008	2	9,498	19,228	431,070	874,020
air mineral 600 ml	2,008	3	9,561	28,789	429,900	1,303,920
air mineral 600 ml	2,008	4	9,125	37,914	404,940	1,708,860
air mineral 600 ml	2,008	5	9,054	46,968	421,440	2,130,300
air mineral 600 ml	2,008	6	8,872	55,840	420,420	2,550,720
air mineral 600 ml	2,008	7	9,536	65,376	439,730	2,990,450
air mineral 600 ml	2,008	8	9,688	75,064	460,720	3,451,170
air mineral 600 ml	2,008	9	9,262	84,326	457,010	3,908,180
air mineral 600 ml	2,008	10	9,005	93,331	442,730	4,350,910
air mineral 600 ml	2,008	11	9,047	102,378	438,110	4,789,020
air mineral 600 ml	2,008	12	9,729	112,107	497,880	5,286,900
alpukat 1 kg	2,008	1	9,314	9,314	2,096,460	2,096,460
alpukat 1 kg	2,008	2	8,037	17,351	1,844,510	3,940,970
alpukat 1 kg	2,008	3	9,584	26,935	2,260,530	6,201,500
alpukat 1 kg	2,008	4	10,293	37,228	2,400,200	8,601,700
alpukat 1 kg	2,008	5	10,201	47,429	2,548,520	11,150,220

2e. Top3 (3 Terbaik)

    i.   Nama Cabang per setiap Kota dengan Total Profit terbaik setiap bulannya

Jawaban :

SQL Query

```sql
SELECT t1.top3, t1.nama_cabang, t1.nama_kota, t2.tahun, t2.bulan,
t2.total_profit
FROM (
    SELECT
        ROW_NUMBER() OVER (PARTITION BY mc.nama_cabang, date_part('month',
date(mhh.tgl_berlaku)) ORDER BY SUM(tp.jumlah_pembelian *
(mhh.harga_berlaku_cabang - mhh.modal_cabang - mhh.biaya_cabang)) DESC) AS
top3,
        mc.nama_cabang,
    mk.nama_kota,
    date_part('year', date(mhh.tgl_berlaku)) AS tahun,
    date_part('month', date(mhh.tgl_berlaku)) AS bulan,
    SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang)) AS total_profit
    FROM public.tr_penjualan tp
    JOIN public.ms_cabang mc ON mc.kode_cabang = tp.kode_cabang
    JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk
AND mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang =
mhh.kode_cabang
        JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
    GROUP BY  mc.nama_cabang,
        mk.nama_kota,
        date_part('year', date(mhh.tgl_berlaku)),
        date_part('month', date(mhh.tgl_berlaku))
) AS t2
JOIN (
    SELECT
        ROW_NUMBER() OVER (PARTITION BY mc.nama_cabang, date_part('month',
date(mhh.tgl_berlaku)) ORDER BY SUM(tp.jumlah_pembelian *
(mhh.harga_berlaku_cabang - mhh.modal_cabang - mhh.biaya_cabang)) DESC) AS
top3,
        mc.nama_cabang,
```
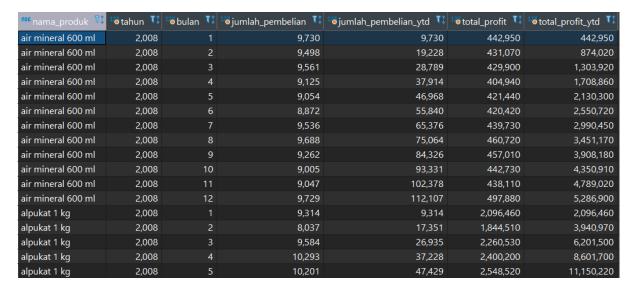
```sql
        mk.nama_kota,
        date_part('year', date(mhh.tgl_berlaku)) AS tahun,
        date_part('month', date(mhh.tgl_berlaku)) AS bulan,
        SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang)) AS total_profit
    FROM public.tr_penjualan tp
    JOIN public.ms_cabang mc ON mc.kode_cabang = tp.kode_cabang
    JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk
AND mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang =
mhh.kode_cabang
    JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
    GROUP BY  mc.nama_cabang,
        mk.nama_kota,
        date_part('year', date(mhh.tgl_berlaku)),
        date_part('month', date(mhh.tgl_berlaku))
) AS t1 ON t1.nama_kota = t2.nama_kota AND t1.tahun = t2.tahun AND
t1.bulan = t2.bulan AND t1.top3 = t2.top3
WHERE t2.top3 <= 3
ORDER BY t2.nama_cabang, t2.nama_kota, t2.bulan, t2.total_profit;
```

2e.i. Top3_Cabang
   per Kota.sql

Screenshot hasil Query

	top3	nama_cabang	nama_kota	tahun	bulan	total_profit
1	1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	1	65,836,750
2	1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	2	64,577,880
3	1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	3	67,432,280
4	1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	4	64,788,000
5	1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	5	69,079,650
6	1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	6	67,931,860
7	1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	7	70,173,270
8	1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	8	70,385,270
9	1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	9	66,459,850
10	1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	10	70,318,830
11	1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	11	69,798,540
12	1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	12	69,506,460
13	1	PHI Mini Market - Makassar 01	Makassar	2,008	1	67,019,150
14	1	PHI Mini Market - Makassar 01	Makassar	2,008	2	65,483,000
15	1	PHI Mini Market - Makassar 01	Makassar	2,008	3	68,632,790
16	1	PHI Mini Market - Makassar 01	Makassar	2,008	4	64,787,910
17	1	PHI Mini Market - Makassar 01	Makassar	2,008	5	69,113,650
18	1	PHI Mini Market - Makassar 01	Makassar	2,008	6	64,895,950
19	1	PHI Mini Market - Makassar 01	Makassar	2,008	7	68,361,300
20	1	PHI Mini Market - Makassar 01	Makassar	2,008	8	72,331,260
21	1	PHI Mini Market - Makassar 01	Makassar	2,008	9	70,605,390
22	1	PHI Mini Market - Makassar 01	Makassar	2,008	10	72,505,710
23	1	PHI Mini Market - Makassar 01	Makassar	2,008	11	66,971,960
24	1	PHI Mini Market - Makassar 01	Makassar	2,008	12	69,237,320

Screenshot Validasi/Pembanding

top3	nama_cabang	nama_kota	tahun	bulan	total_profit
1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	1	65,836,750
1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	2	64,577,880
1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	3	67,432,280
1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	4	64,788,000
1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	5	69,079,650
1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	6	67,931,860
1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	7	70,173,270
1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	8	70,385,270
1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	9	66,459,850
1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	10	70,318,830
1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	11	69,798,540
1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	12	69,506,460
1	PHI Mini Market - Makassar 01	Makassar	2,008	1	67,019,150
1	PHI Mini Market - Makassar 01	Makassar	2,008	2	65,483,000
1	PHI Mini Market - Makassar 01	Makassar	2,008	3	68,632,790
1	PHI Mini Market - Makassar 01	Makassar	2,008	4	64,787,910
1	PHI Mini Market - Makassar 01	Makassar	2,008	5	69,113,650
1	PHI Mini Market - Makassar 01	Makassar	2,008	6	64,895,950
1	PHI Mini Market - Makassar 01	Makassar	2,008	7	68,361,300
1	PHI Mini Market - Makassar 01	Makassar	2,008	8	72,331,260
1	PHI Mini Market - Makassar 01	Makassar	2,008	9	70,605,390
1	PHI Mini Market - Makassar 01	Makassar	2,008	10	72,505,710
1	PHI Mini Market - Makassar 01	Makassar	2,008	11	66,971,960
1	PHI Mini Market - Makassar 01	Makassar	2,008	12	69,237,320

ii.   **Nama Cabang per setiap Propinsidengan Total Profit terbaik setiap bulannya**

Jawaban :

SQL Query :

```sql
SELECT t1.top3, t1.nama_cabang, t1.nama_propinsi, t2.tahun, t2.bulan,
t2.total_profit
FROM (
    SELECT
        ROW_NUMBER() OVER (PARTITION BY mc.nama_cabang, date_part('month',
date(mhh.tgl_berlaku)) ORDER BY SUM(tp.jumlah_pembelian *
(mhh.harga_berlaku_cabang - mhh.modal_cabang - mhh.biaya_cabang)) DESC) AS
top3,
        mc.nama_cabang,
    mpv.nama_propinsi,
    date_part('year', date(mhh.tgl_berlaku)) AS tahun,
    date_part('month', date(mhh.tgl_berlaku)) AS bulan,
    SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang)) AS total_profit
    FROM public.tr_penjualan tp
    JOIN public.ms_cabang mc ON mc.kode_cabang = tp.kode_cabang
    JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk
AND mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang =
mhh.kode_cabang
    JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
    JOIN public.ms_propinsi mpv ON mk.kode_propinsi = mpv.kode_propinsi
    GROUP BY  mc.nama_cabang,
    mpv.nama_propinsi,
```

```sql
        date_part('year', date(mhh.tgl_berlaku)),
        date_part('month', date(mhh.tgl_berlaku))
) AS t2
JOIN (
    SELECT
        ROW_NUMBER() OVER (PARTITION BY mc.nama_cabang, date_part('month',
date(mhh.tgl_berlaku)) ORDER BY SUM(tp.jumlah_pembelian *
(mhh.harga_berlaku_cabang - mhh.modal_cabang - mhh.biaya_cabang)) DESC) AS
top3,
        mc.nama_cabang,
     mpv.nama_propinsi,
        date_part('year', date(mhh.tgl_berlaku)) AS tahun,
        date_part('month', date(mhh.tgl_berlaku)) AS bulan,
        SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang)) AS total_profit
    FROM public.tr_penjualan tp
    JOIN public.ms_cabang mc ON mc.kode_cabang = tp.kode_cabang
    JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk
AND mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang =
mhh.kode_cabang
    JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
    JOIN public.ms_propinsi mpv ON mk.kode_propinsi = mpv.kode_propinsi
    GROUP BY  mc.nama_cabang,
        mpv.nama_propinsi,
        date_part('year', date(mhh.tgl_berlaku)),
        date_part('month', date(mhh.tgl_berlaku))
) AS t1 ON t1.nama_propinsi = t2.nama_propinsi AND t1.tahun = t2.tahun AND
t1.bulan = t2.bulan AND t1.top3 = t2.top3
WHERE t2.top3 <= 3
ORDER BY t2.nama_propinsi, t2.nama_cabang, t2.bulan, t2.total_profit;
```

2e.ii. Top3_Cabang
   per Propinsi.sql

Screenshot hasil Query

	top3	nama_cabang	nama_propinsi	tahun	bulan	total_profit
1	1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	1	65,836,750
2	1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	2	64,577,880
3	1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	3	67,432,280
4	1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	4	64,788,000
5	1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	5	69,079,650
6	1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	6	67,931,860
7	1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	7	70,173,270
8	1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	8	70,385,270
9	1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	9	66,459,850
10	1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	10	70,318,830
11	1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	11	69,798,540
12	1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	12	69,506,460
13	1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	1	68,263,860
14	1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	2	64,071,910
15	1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	3	68,739,250
16	1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	4	66,827,250
17	1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	5	68,987,280
18	1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	6	66,595,730
19	1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	7	68,976,570
20	1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	8	71,918,600
21	1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	9	71,807,220
22	1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	10	70,522,910
23	1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	11	68,062,680
24	1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	12	68,934,840

Screenshot Validasi/Pembanding

top3	nama_cabang	nama_propinsi	tahun	bulan	total_profit
1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	1	65,836,750
1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	2	64,577,880
1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	3	67,432,280
1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	4	64,788,000
1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	5	69,079,650
1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	6	67,931,860
1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	7	70,173,270
1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	8	70,385,270
1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	9	66,459,850
1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	10	70,318,830
1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	11	69,798,540
1	PHI Mini Market - Jakarta Pusat 01	DKI Jakarta	2,008	12	69,506,460
1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	1	68,263,860
1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	2	64,071,910
1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	3	68,739,250
1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	4	66,827,250
1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	5	68,987,280
1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	6	66,595,730
1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	7	68,976,570
1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	8	71,918,600
1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	9	71,807,220
1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	10	70,522,910
1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	11	68,062,680
1	PHI Mini Market - Surabaya 01	Jawa Timur	2,008	12	68,934,840

iii. Nama Produk per setiap Kota dengan Total Profit terbaik setiap bulannya

Jawaban :

SQL Query :

```sql
SELECT t1.top3, t1.nama_produk, t1.nama_kota, t2.tahun, t2.bulan,
t2.total_profit
FROM (
    SELECT
        ROW_NUMBER() OVER (PARTITION BY mk.nama_kota, COUNT(DISTINCT
mp.nama_produk), date_part('month', date(mhh.tgl_berlaku))
            ORDER BY SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang)) DESC) AS top3,
        mp.nama_produk,
        mk.nama_kota,
        date_part('year', date(mhh.tgl_berlaku)) AS tahun,
        date_part('month', date(mhh.tgl_berlaku)) AS bulan,
        SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang)) AS total_profit
    FROM public.tr_penjualan tp
    JOIN public.ms_cabang mc ON mc.kode_cabang = tp.kode_cabang
    JOIN public.ms_produk mp ON mp.kode_produk = tp.kode_produk
    JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk
AND mhh.tgl_berlaku = tp.tgl_transaksi
    AND tp.kode_cabang = mhh.kode_cabang
    JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
    GROUP BY
        mp.nama_produk,
        mk.nama_kota,
        date_part('year', date(mhh.tgl_berlaku)),
        date_part('month', date(mhh.tgl_berlaku))
) AS t2
JOIN (
```

```sql
    SELECT
        ROW_NUMBER() OVER (PARTITION BY mk.nama_kota, COUNT(DISTINCT
mp.nama_produk), date_part('month', date(mhh.tgl_berlaku))
            ORDER BY SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang)) DESC) AS top3,
        mp.nama_produk,
        mk.nama_kota,
        date_part('year', date(mhh.tgl_berlaku)) AS tahun,
        date_part('month', date(mhh.tgl_berlaku)) AS bulan,
        SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang)) AS total_profit
    FROM public.tr_penjualan tp
    JOIN public.ms_cabang mc ON mc.kode_cabang = tp.kode_cabang
    JOIN public.ms_produk mp ON mp.kode_produk = tp.kode_produk
    JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk
AND mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang =
mhh.kode_cabang
        JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
    GROUP BY
        mp.nama_produk,
        mk.nama_kota,
        date_part('year', date(mhh.tgl_berlaku)),
        date_part('month', date(mhh.tgl_berlaku))
) AS t1 ON t1.nama_kota = t2.nama_kota AND t1.tahun = t2.tahun AND
t1.bulan = t2.bulan AND t1.top3 = t2.top3
WHERE t2.top3 <= 3
ORDER BY t2.nama_kota, t2.bulan, t2.top3, t2.nama_produk, t2.total_profit;
```

2e.iii. Top3_Produk
   per Kota.sql

Screenshot hasil Query

	top3	nama_produk	nama_kota	tahun	bulan	total_profit
1	1	mie instant 1 kotak (40 bungkus)	Jakarta Pusat	2,008	1	11,475,380
2	2	kacang mete 1 kg	Jakarta Pusat	2,008	1	7,084,650
3	3	apel 1 kg	Jakarta Pusat	2,008	1	6,784,170
4	1	mie instant 1 kotak (40 bungkus)	Jakarta Pusat	2,008	2	11,839,460
5	2	kacang mete 1 kg	Jakarta Pusat	2,008	2	7,775,740
6	3	apel 1 kg	Jakarta Pusat	2,008	2	6,611,540
7	1	mie instant 1 kotak (40 bungkus)	Jakarta Pusat	2,008	3	11,949,940
8	2	kacang mete 1 kg	Jakarta Pusat	2,008	3	7,593,670
9	3	apel 1 kg	Jakarta Pusat	2,008	3	7,245,500
10	1	mie instant 1 kotak (40 bungkus)	Jakarta Pusat	2,008	4	9,780,030
11	2	kacang mete 1 kg	Jakarta Pusat	2,008	4	8,759,460
12	3	apel 1 kg	Jakarta Pusat	2,008	4	5,768,220

Screenshot Validasi/Pembanding

top3	nama_produk	nama_kota	tahun	bulan	total_profit
1	mie instant 1 kotak (40 bungkus)	Jakarta Pusat	2,008	1	11,475,380
2	kacang mete 1 kg	Jakarta Pusat	2,008	1	7,084,650
3	apel 1 kg	Jakarta Pusat	2,008	1	6,784,170
1	mie instant 1 kotak (40 bungkus)	Jakarta Pusat	2,008	2	11,839,460
2	kacang mete 1 kg	Jakarta Pusat	2,008	2	7,775,740
3	apel 1 kg	Jakarta Pusat	2,008	2	6,611,540
1	mie instant 1 kotak (40 bungkus)	Jakarta Pusat	2,008	3	11,949,940
2	kacang mete 1 kg	Jakarta Pusat	2,008	3	7,593,670
3	apel 1 kg	Jakarta Pusat	2,008	3	7,245,500
1	mie instant 1 kotak (40 bungkus)	Jakarta Pusat	2,008	4	9,780,030
2	kacang mete 1 kg	Jakarta Pusat	2,008	4	8,759,460
3	apel 1 kg	Jakarta Pusat	2,008	4	5,768,220

iv.   Nama Produk per setiap Propinsidengan Total Profit terbaik setiap bulannya

Jawaban :

SQL Query :

```
SELECT t1.top3, t1.nama_produk, t1.nama_propinsi, t2.tahun, t2.bulan,
t2.total_profit
FROM (
    SELECT
        ROW_NUMBER() OVER (PARTITION BY mpv.nama_propinsi, COUNT(DISTINCT
mp.nama_produk), date_part('month', date(mhh.tgl_berlaku))
            ORDER BY SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang)) DESC) AS top3,
        mp.nama_produk,
      mpv.nama_propinsi,
      date_part('year', date(mhh.tgl_berlaku)) AS tahun,
      date_part('month', date(mhh.tgl_berlaku)) AS bulan,
      SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang)) AS total_profit
    FROM public.tr_penjualan tp
    JOIN public.ms_cabang mc ON mc.kode_cabang = tp.kode_cabang
    JOIN public.ms_produk mp ON mp.kode_produk = tp.kode_produk
    JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk
AND mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang =
mhh.kode_cabang
    JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
    JOIN public.ms_propinsi mpv ON mk.kode_propinsi = mpv.kode_propinsi
    GROUP BY  mp.nama_produk,
      mpv.nama_propinsi,
      date_part('year', date(mhh.tgl_berlaku)),
      date_part('month', date(mhh.tgl_berlaku))
) AS t2
JOIN (
    SELECT
        ROW_NUMBER() OVER (PARTITION BY mpv.nama_propinsi, COUNT(DISTINCT
mp.nama_produk), date_part('month', date(mhh.tgl_berlaku))
```

```
            ORDER BY SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang)) DESC) AS top3,
        mp.nama_produk,
    mpv.nama_propinsi,
    date_part('year', date(mhh.tgl_berlaku)) AS tahun,
    date_part('month', date(mhh.tgl_berlaku)) AS bulan,
    SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang)) AS total_profit
    FROM public.tr_penjualan tp
    JOIN public.ms_cabang mc ON mc.kode_cabang = tp.kode_cabang
    JOIN public.ms_produk mp ON mp.kode_produk = tp.kode_produk
    JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk
AND mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang =
mhh.kode_cabang
    JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
    JOIN public.ms_propinsi mpv ON mk.kode_propinsi = mpv.kode_propinsi
    GROUP BY  mp.nama_produk,
    mpv.nama_propinsi,
    date_part('year', date(mhh.tgl_berlaku)),
    date_part('month', date(mhh.tgl_berlaku))
) AS t1 ON t1.nama_propinsi = t2.nama_propinsi AND t1.tahun = t2.tahun AND
t1.bulan = t2.bulan AND t1.top3 = t2.top3
WHERE t2.top3 <= 3
ORDER BY t2.nama_propinsi, t2.bulan, t2.top3, t2.nama_produk,
t2.total_profit;
```

2e.iv. Top3_Produk
  per Propinsi.sql

Screenshot hasil Query

	top3	nama_produk	nama_propinsi	tahun	bulan	total_profit
1	1	mie instant 1 kotak (40 b	DKI Jakarta	2,008	1	11,475,380
2	2	kacang mete 1 kg	DKI Jakarta	2,008	1	7,084,650
3	3	apel 1 kg	DKI Jakarta	2,008	1	6,784,170
4	1	mie instant 1 kotak (40 b	DKI Jakarta	2,008	2	11,839,460
5	2	kacang mete 1 kg	DKI Jakarta	2,008	2	7,775,740
6	3	apel 1 kg	DKI Jakarta	2,008	2	6,611,540
7	1	mie instant 1 kotak (40 b	DKI Jakarta	2,008	3	11,949,940
8	2	kacang mete 1 kg	DKI Jakarta	2,008	3	7,593,670
9	3	apel 1 kg	DKI Jakarta	2,008	3	7,245,500
10	1	mie instant 1 kotak (40 b	DKI Jakarta	2,008	4	9,780,030
11	2	kacang mete 1 kg	DKI Jakarta	2,008	4	8,759,460
12	3	apel 1 kg	DKI Jakarta	2,008	4	5,768,220
13	1	mie instant 1 kotak (40 b	DKI Jakarta	2,008	5	12,620,210
14	2	kacang mete 1 kg	DKI Jakarta	2,008	5	9,224,150

Screenshot Validasi/Pembanding

top3	nama_produk	nama_propinsi	tahun	bulan	total_profit
1	mie instant 1 kotak (40 bungkus)	DKI Jakarta	2,008	1	11,475,380
2	kacang mete 1 kg	DKI Jakarta	2,008	1	7,084,650
3	apel 1 kg	DKI Jakarta	2,008	1	6,784,170
1	mie instant 1 kotak (40 bungkus)	DKI Jakarta	2,008	2	11,839,460
2	kacang mete 1 kg	DKI Jakarta	2,008	2	7,775,740
3	apel 1 kg	DKI Jakarta	2,008	2	6,611,540
1	mie instant 1 kotak (40 bungkus)	DKI Jakarta	2,008	3	11,949,940
2	kacang mete 1 kg	DKI Jakarta	2,008	3	7,593,670
3	apel 1 kg	DKI Jakarta	2,008	3	7,245,500
1	mie instant 1 kotak (40 bungkus)	DKI Jakarta	2,008	4	9,780,030
2	kacang mete 1 kg	DKI Jakarta	2,008	4	8,759,460
3	apel 1 kg	DKI Jakarta	2,008	4	5,768,220
1	mie instant 1 kotak (40 bungkus)	DKI Jakarta	2,008	5	12,620,210
2	kacang mete 1 kg	DKI Jakarta	2,008	5	9,224,150

2f . Perbandingan dengan bulan sebelumnya

   i. **Nama Cabang** per setiap **Kota** dengan **total profit dan growth (pertumbuhan) total profit** dalam persentase dibandingkan bulan sebelumnya

Jawaban :

SQL Query :

```sql
WITH cte AS (
    SELECT
        mc.nama_cabang,
        mk.nama_kota,
        date_part('year', date(mhh.tgl_berlaku)) AS tahun,
        date_part('month', date(mhh.tgl_berlaku)) AS bulan,
        SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang))::numeric AS total_profit,
        LAG(SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang)))
            OVER (PARTITION BY mc.nama_cabang, mk.nama_kota ORDER BY
date_part('month', date(mhh.tgl_berlaku)))
            AS prev_month
    FROM public.tr_penjualan tp
    JOIN public.ms_cabang mc ON mc.kode_cabang = tp.kode_cabang
    JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk
AND mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang =
mhh.kode_cabang
    JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
    GROUP BY  mc.nama_cabang,
        mk.nama_kota,
        date_part('year', date(mhh.tgl_berlaku)),
        date_part('month', date(mhh.tgl_berlaku))
)
SELECT
        *, (cte.total_profit - cte.prev_month) as selisih,
        CAST(
            CASE
```

```sql
                WHEN cte.prev_month = 0 THEN 0
                  ELSE ((cte.total_profit - cte.prev_month) /
cte.prev_month)
            END AS numeric(15, 10)
        ) AS persentase,
        CASE
            WHEN cte.prev_month is NULL THEN NULL
            ELSE concat(round((((cte.total_profit - cte.prev_month) /
cte.prev_month)*100),2), ' %')
        END AS persentase_text
FROM cte
ORDER BY  cte.nama_cabang, cte.nama_kota, cte.bulan;
```

2f.i. Persentase
Pertumbuhan Cabar

Screenshot hasil Query

nama_cabang	nama_kota	tahun	bulan	total_profit	prev_month	selisih	persentase	persentase_text
1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	1	65,836,750	[NULL]	[NULL]	[NULL]	[NULL]
2	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	2	64,577,880	65,836,750	-1,258,870	-0.0191210836	-1.91 %
3	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	3	67,432,280	64,577,880	2,854,400	0.0442008936	4.42 %
4	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	4	64,788,000	67,432,280	-2,644,280	-0.0392138602	-3.92 %
5	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	5	69,079,650	64,788,000	4,291,650	0.0662414336	6.62 %
6	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	6	67,931,860	69,079,650	-1,147,790	-0.0166154577	-1.66 %
7	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	7	70,173,270	67,931,860	2,241,410	0.0329949747	3.30 %
8	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	8	70,385,270	70,173,270	212,000	0.0030210934	0.30 %
9	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	9	66,459,850	70,385,270	-3,925,420	-0.0557704758	-5.58 %
10	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	10	70,318,830	66,459,850	3,858,980	0.0580648316	5.81 %
11	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	11	69,798,540	70,318,830	-520,290	-0.0073990139	-0.74 %
12	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	12	69,506,460	69,798,540	-292,080	-0.0041846147	-0.42 %
13	PHI Mini Market - Makassar 01	Makassar	2,008	1	67,019,150	[NULL]	[NULL]	[NULL]	[NULL]
14	PHI Mini Market - Makassar 01	Makassar	2,008	2	65,483,000	67,019,150	-1,536,150	-0.0229210606	-2.29 %
15	PHI Mini Market - Makassar 01	Makassar	2,008	3	68,632,790	65,483,000	3,149,790	0.0481008811	4.81 %
16	PHI Mini Market - Makassar 01	Makassar	2,008	4	64,787,910	68,632,790	-3,844,880	-0.056021036	-5.60 %
17	PHI Mini Market - Makassar 01	Makassar	2,008	5	69,113,650	64,787,910	4,325,740	0.066767704	6.68 %
18	PHI Mini Market - Makassar 01	Makassar	2,008	6	64,895,950	69,113,650	-4,217,700	-0.0610255716	-6.10 %
19	PHI Mini Market - Makassar 01	Makassar	2,008	7	68,361,300	64,895,950	3,465,350	0.0533985557	5.34 %
20	PHI Mini Market - Makassar 01	Makassar	2,008	8	72,331,260	68,361,300	3,969,960	0.0580732081	5.81 %
21	PHI Mini Market - Makassar 01	Makassar	2,008	9	70,605,390	72,331,260	-1,725,870	-0.0238606378	-2.39 %
22	PHI Mini Market - Makassar 01	Makassar	2,008	10	72,505,710	70,605,390	1,900,320	0.0269146591	2.69 %
23	PHI Mini Market - Makassar 01	Makassar	2,008	11	66,971,960	72,505,710	-5,533,750	-0.0763215752	-7.63 %
24	PHI Mini Market - Makassar 01	Makassar	2,008	12	69,237,320	66,971,960	2,265,360	0.0338254995	3.38 %
25	PHI Mini Market - Surabaya 01	Surabaya	2,008	1	68,263,860	[NULL]	[NULL]	[NULL]	[NULL]
26	PHI Mini Market - Surabaya 01	Surabaya	2,008	2	64,071,910	68,263,860	-4,191,950	-0.0614080423	-6.14 %
27	PHI Mini Market - Surabaya 01	Surabaya	2,008	3	68,739,250	64,071,910	4,667,340	0.0728453389	7.28 %
28	PHI Mini Market - Surabaya 01	Surabaya	2,008	4	66,827,250	68,739,250	-1,912,000	-0.0278152584	-2.78 %
29	PHI Mini Market - Surabaya 01	Surabaya	2,008	5	68,987,280	66,827,250	2,160,030	0.032322593	3.23 %
30	PHI Mini Market - Surabaya 01	Surabaya	2,008	6	66,595,730	68,987,280	-2,391,550	-0.0346665356	-3.47 %
31	PHI Mini Market - Surabaya 01	Surabaya	2,008	7	68,976,570	66,595,730	2,380,840	0.0357506405	3.58 %

Screenshot Validasi/Pembanding

nama_cabang	nama_kota	tahun	bulan	total_profit	prev_month	selisih	persentase	persetase_text
1	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	1	65,836,750	[NULL]	[NULL]	[NULL]	[NULL]
2	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	2	64,577,880	65,836,750	-1,258,870	-0.0191210836	-1.91%
3	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	3	67,432,280	64,577,880	2,854,400	0.0442008936	4.42%
4	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	4	64,788,000	67,432,280	-2,644,280	-0.0392138602	-3.92%
5	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	5	69,079,650	64,788,000	4,291,650	0.0662414336	6.62%
6	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	6	67,931,860	69,079,650	-1,147,790	-0.0166154577	-1.66%
7	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	7	70,173,270	67,931,860	2,241,410	0.0329949747	3.30%
8	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	8	70,385,270	70,173,270	212,000	0.0030210934	.30%
9	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	9	66,459,850	70,385,270	-3,925,420	-0.0557704758	-5.58%
10	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	10	70,318,830	66,459,850	3,858,980	0.0580648316	5.81%
11	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	11	69,798,540	70,318,830	-520,290	-0.0073990139	-.74%
12	PHI Mini Market - Jakarta Pusat 01	Jakarta Pusat	2,008	12	69,506,460	69,798,540	-292,080	-0.0041846147	-.42%
13	PHI Mini Market - Makassar 01	Makassar	2,008	1	67,019,150	[NULL]	[NULL]	[NULL]	[NULL]
14	PHI Mini Market - Makassar 01	Makassar	2,008	2	65,483,000	67,019,150	-1,536,150	-0.0229210606	-2.29%
15	PHI Mini Market - Makassar 01	Makassar	2,008	3	68,632,790	65,483,000	3,149,790	0.0481008811	4.81%
16	PHI Mini Market - Makassar 01	Makassar	2,008	4	64,787,910	68,632,790	-3,844,880	-0.056021036	-5.60%
17	PHI Mini Market - Makassar 01	Makassar	2,008	5	69,113,650	64,787,910	4,325,740	0.066767704	6.68%
18	PHI Mini Market - Makassar 01	Makassar	2,008	6	64,895,950	69,113,650	-4,217,700	-0.0610255716	-6.10%
19	PHI Mini Market - Makassar 01	Makassar	2,008	7	68,361,300	64,895,950	3,465,350	0.0533985557	5.34%
20	PHI Mini Market - Makassar 01	Makassar	2,008	8	72,331,260	68,361,300	3,969,960	0.0580732081	5.81%
21	PHI Mini Market - Makassar 01	Makassar	2,008	9	70,605,390	72,331,260	-1,725,870	-0.0238606378	-2.39%
22	PHI Mini Market - Makassar 01	Makassar	2,008	10	72,505,710	70,605,390	1,900,320	0.0269146591	2.69%
23	PHI Mini Market - Makassar 01	Makassar	2,008	11	66,971,960	72,505,710	-5,533,750	-0.0763215752	-7.63%
24	PHI Mini Market - Makassar 01	Makassar	2,008	12	69,237,320	66,971,960	2,265,360	0.0338254995	3.38%
25	PHI Mini Market - Surabaya 01	Surabaya	2,008	1	68,263,860	[NULL]	[NULL]	[NULL]	[NULL]
26	PHI Mini Market - Surabaya 01	Surabaya	2,008	2	64,071,910	68,263,860	-4,191,950	-0.0614080423	-6.14%
27	PHI Mini Market - Surabaya 01	Surabaya	2,008	3	68,739,250	64,071,910	4,667,340	0.0728453389	7.28%
28	PHI Mini Market - Surabaya 01	Surabaya	2,008	4	66,827,250	68,739,250	-1,912,000	-0.0278152584	-2.78%
29	PHI Mini Market - Surabaya 01	Surabaya	2,008	5	68,987,280	66,827,250	2,160,030	0.032322593	3.23%
30	PHI Mini Market - Surabaya 01	Surabaya	2,008	6	66,595,730	68,987,280	-2,391,550	-0.0346665356	-3.47%
31	PHI Mini Market - Surabaya 01	Surabaya	2,008	7	68,976,570	66,595,730	2,380,840	0.0357506405	3.58%

ii. **Nama Produk** per setiap **Kota** dengan **total profit dan growth (pertumbuhan) total profit** dalam persentase dibandingkan bulan sebelumnya
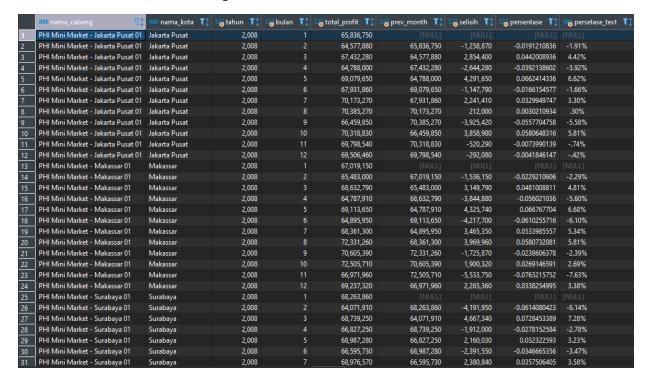
Jawaban :

SQL Query :

```
WITH cte AS (
    SELECT
        mp.nama_produk,
        mk.nama_kota,
        date_part('year', date(mhh.tgl_berlaku)) AS tahun,
        date_part('month', date(mhh.tgl_berlaku)) AS bulan,
        SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang))::numeric AS total_profit,
        LAG(SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang -
mhh.modal_cabang - mhh.biaya_cabang)))
            OVER (PARTITION BY mp.nama_produk, mk.nama_kota ORDER BY
date_part('month', date(mhh.tgl_berlaku)))
            AS prev_month
    FROM public.tr_penjualan tp
    JOIN public.ms_cabang mc ON mc.kode_cabang = tp.kode_cabang
    JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk
AND mhh.tgl_berlaku = tp.tgl_transaksi AND tp.kode_cabang =
mhh.kode_cabang
    JOIN public.ms_kota mk ON mk.kode_kota = mc.kode_kota
    JOIN public.ms_produk mp ON mp.kode_produk = mhh.kode_produk
    GROUP BY  mp.nama_produk,
        mk.nama_kota,
        date_part('year', date(mhh.tgl_berlaku)),
        date_part('month', date(mhh.tgl_berlaku))
)
SELECT
```

```sql
        *, (cte.total_profit - cte.prev_month) as selisih,
      CAST(
        CASE
            WHEN cte.prev_month = 0 THEN 0
             ELSE ((cte.total_profit - cte.prev_month) /
cte.prev_month)
          END AS numeric(15, 10)
      ) AS persentase,
      CASE
          WHEN cte.prev_month is NULL THEN NULL
          ELSE concat(round(((((cte.total_profit - cte.prev_month) /
cte.prev_month)*100),2), ' %')
      END AS persentase_text
FROM cte
ORDER BY  cte.nama_produk, cte.nama_kota, cte.bulan;
```

2f.ii. Persentase
Pertumbuhan Produ

Screenshot hasil Query

	nama_produk	nama_kota	tahun	bulan	total_profit	prev_month	selisih	persentase	persentase_text
1	air mineral 600 ml	Jakarta Pusat	2,008	1	169,620	[NULL]	[NULL]	[NULL]	[NULL]
2	air mineral 600 ml	Jakarta Pusat	2,008	2	139,770	169,620	-29,850	-0.1759816059	-17.60 %
3	air mineral 600 ml	Jakarta Pusat	2,008	3	141,820	139,770	2,050	0.0146669529	1.47 %
4	air mineral 600 ml	Jakarta Pusat	2,008	4	140,710	141,820	-1,110	-0.0078268227	-0.78 %
5	air mineral 600 ml	Jakarta Pusat	2,008	5	133,000	140,710	-7,710	-0.054793547	-5.48 %
6	air mineral 600 ml	Jakarta Pusat	2,008	6	129,000	133,000	-4,000	-0.030075188	-3.01 %
7	air mineral 600 ml	Jakarta Pusat	2,008	7	146,960	129,000	17,960	0.1392248062	13.92 %
8	air mineral 600 ml	Jakarta Pusat	2,008	8	169,340	146,960	22,380	0.1522863364	15.23 %
9	air mineral 600 ml	Jakarta Pusat	2,008	9	147,100	169,340	-22,240	-0.1313334121	-13.13 %
10	air mineral 600 ml	Jakarta Pusat	2,008	10	148,330	147,100	1,230	0.0083616587	0.84 %
11	air mineral 600 ml	Jakarta Pusat	2,008	11	135,200	148,330	-13,130	-0.0885188431	-8.85 %
12	air mineral 600 ml	Jakarta Pusat	2,008	12	151,120	135,200	15,920	0.1177514793	11.78 %
13	air mineral 600 ml	Makassar	2,008	1	137,610	[NULL]	[NULL]	[NULL]	[NULL]
14	air mineral 600 ml	Makassar	2,008	2	145,870	137,610	8,260	0.0600247075	6.00 %
15	air mineral 600 ml	Makassar	2,008	3	147,650	145,870	1,780	0.0122026462	1.22 %
16	air mineral 600 ml	Makassar	2,008	4	127,530	147,650	-20,120	-0.1362682018	-13.63 %
17	air mineral 600 ml	Makassar	2,008	5	129,530	127,530	2,000	0.0156825845	1.57 %
18	air mineral 600 ml	Makassar	2,008	6	146,620	129,530	17,090	0.1319385471	13.19 %
19	air mineral 600 ml	Makassar	2,008	7	159,610	146,620	12,990	0.0885963716	8.86 %
20	air mineral 600 ml	Makassar	2,008	8	139,010	159,610	-20,600	-0.129064595	-12.91 %
21	air mineral 600 ml	Makassar	2,008	9	146,740	139,010	7,730	0.0556075103	5.56 %
22	air mineral 600 ml	Makassar	2,008	10	137,100	146,740	-9,640	-0.0656944255	-6.57 %
23	air mineral 600 ml	Makassar	2,008	11	143,100	137,100	6,000	0.0437636761	4.38 %
24	air mineral 600 ml	Makassar	2,008	12	173,250	143,100	30,150	0.2106918239	21.07 %
25	air mineral 600 ml	Surabaya	2,008	1	135,720	[NULL]	[NULL]	[NULL]	[NULL]
26	air mineral 600 ml	Surabaya	2,008	2	145,430	135,720	9,710	0.071544356	7.15 %
27	air mineral 600 ml	Surabaya	2,008	3	140,430	145,430	-5,000	-0.0343808018	-3.44 %
28	air mineral 600 ml	Surabaya	2,008	4	136,700	140,430	-3,730	-0.0265612761	-2.66 %
29	air mineral 600 ml	Surabaya	2,008	5	158,910	136,700	22,210	0.1624725677	16.25 %
30	air mineral 600 ml	Surabaya	2,008	6	144,800	158,910	-14,110	-0.0887923982	-8.88 %
31	air mineral 600 ml	Surabaya	2,008	7	133,160	144,800	-11,640	-0.0803867403	-8.04 %

Screenshot Validasi/Pembanding

Tidak ada validasi

2g. Keterangan naik dan turun profit per setiap cabang dibandingkan dengan bulan sebelumnya berikut YTD (kumulatif) total penjualan nya. Hasil seperti gambar dibawah ini:

Jawaban :
SQL Query :

```sql
WITH monthly_sales AS (
```

```sql
    SELECT
        mc.nama_cabang,
        date_part('year', date(tp.tgl_transaksi)) AS tahun,
        date_part('month', date(tp.tgl_transaksi)) AS bulan,
        SUM(tp.jumlah_pembelian * mhh.harga_berlaku_cabang) AS total_penjualan,
        LAG(SUM(tp.jumlah_pembelian * mhh.harga_berlaku_cabang)) OVER (PARTITION
BY mc.nama_cabang ORDER BY date_part('month', date(tp.tgl_transaksi))) AS
penjualan_sebelumnya
    FROM public.tr_penjualan tp
    JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
    JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi
        AND tp.kode_cabang = mhh.kode_cabang
    GROUP BY 1,2,3
),
monthly_profit AS (
    SELECT
        mc.nama_cabang,
        date_part('year', date(tp.tgl_transaksi)) AS tahun,
        date_part('month', date(tp.tgl_transaksi)) AS bulan,
        SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang - mhh.modal_cabang -
mhh.biaya_cabang)) AS total_profit,
        LAG(SUM(tp.jumlah_pembelian * (mhh.harga_berlaku_cabang - mhh.modal_cabang
- mhh.biaya_cabang)))
            OVER (PARTITION BY mc.nama_cabang ORDER BY date_part('month',
date(tp.tgl_transaksi))) AS profit_sebelumnya
    FROM public.tr_penjualan tp
    JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
    JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi
        AND tp.kode_cabang = mhh.kode_cabang
    GROUP BY 1,2,3
),
ytd_total_sales AS (
    SELECT
        mc.nama_cabang,
        date_part('year', date(tp.tgl_transaksi)) AS tahun,
        date_part('month', date(tp.tgl_transaksi)) AS bulan,
/*      SUM(tp.jumlah_pembelian * mhh.harga_berlaku_cabang) AS ytd_penjualan*/
        SUM(SUM(tp.jumlah_pembelian * mhh.harga_berlaku_cabang)) OVER(PARTITION BY
mc.nama_cabang ORDER BY mc.nama_cabang,
            date_part('month', date(tp.tgl_transaksi))) AS ytd_penjualan
    FROM public.tr_penjualan tp
    JOIN public.ms_cabang mc ON tp.kode_cabang = mc.kode_cabang
    JOIN public.ms_harga_harian mhh ON mhh.kode_produk = tp.kode_produk AND
mhh.tgl_berlaku = tp.tgl_transaksi
        AND tp.kode_cabang = mhh.kode_cabang
    WHERE date_part('year', date(tp.tgl_transaksi)) = date_part('year',
date(mhh.tgl_berlaku))
    GROUP BY 1,2,3
)
SELECT
        ms.tahun,
    ms.bulan,
    ms.nama_cabang,
    ms.total_penjualan,
    (ms.total_penjualan - COALESCE(ms.penjualan_sebelumnya, 0)) AS
selisih_penjualan,
    CASE
```

```sql
        WHEN (ms.total_penjualan - COALESCE(ms.penjualan_sebelumnya, 0)) = 0 THEN
'Tidak ada penjualan'
        WHEN (ms.total_penjualan - COALESCE(ms.penjualan_sebelumnya, 0)) > 0 THEN
concat('Naik Sebesar Rp ',(ms.total_penjualan - COALESCE(ms.penjualan_sebelumnya,
0)))
        ELSE concat('Turun Sebesar Rp ',(ms.total_penjualan -
COALESCE(ms.penjualan_sebelumnya, 0)))
    END  AS status_penjualan,
    yts.ytd_penjualan
FROM monthly_sales ms
JOIN monthly_profit mp ON ms.nama_cabang = mp.nama_cabang AND ms.bulan = mp.bulan
JOIN ytd_total_sales yts ON ms.nama_cabang = yts.nama_cabang AND ms.bulan =
yts.bulan
ORDER BY ms.nama_cabang, ms.bulan;
```

2g.sql

Screenshot hasil Query

	tahun	bulan	nama_cabang	total_penjualan	selisih_penjualan	status_penjualan	ytd_penjualan
11	2,008	11	PHI Mini Market - Jakarta Pusat 01	1,846,566,350	-11,640,020	Turun Sebesar Rp -11640020	19,680,512,280
12	2,008	12	PHI Mini Market - Jakarta Pusat 01	1,830,547,670	-16,018,680	Turun Sebesar Rp -16018680	21,511,059,950
13	2,008	1	PHI Mini Market - Makassar 01	1,777,546,700	1,777,546,700	Naik Sebesar Rp 1777546700	1,777,546,700
14	2,008	2	PHI Mini Market - Makassar 01	1,690,605,220	-86,941,480	Turun Sebesar Rp -86941480	3,468,151,920
15	2,008	3	PHI Mini Market - Makassar 01	1,809,263,190	118,657,970	Naik Sebesar Rp 118657970	5,277,415,110
16	2,008	4	PHI Mini Market - Makassar 01	1,734,374,120	-74,889,070	Turun Sebesar Rp -74889070	7,011,789,230
17	2,008	5	PHI Mini Market - Makassar 01	1,797,580,080	63,205,960	Naik Sebesar Rp 63205960	8,809,369,310
18	2,008	6	PHI Mini Market - Makassar 01	1,784,245,770	-13,334,310	Turun Sebesar Rp -13334310	10,593,615,080
19	2,008	7	PHI Mini Market - Makassar 01	1,826,120,110	41,874,340	Naik Sebesar Rp 41874340	12,419,735,190
20	2,008	8	PHI Mini Market - Makassar 01	1,886,629,890	60,509,780	Naik Sebesar Rp 60509780	14,306,365,080
21	2,008	9	PHI Mini Market - Makassar 01	1,852,706,510	-33,923,380	Turun Sebesar Rp -33923380	16,159,071,590
22	2,008	10	PHI Mini Market - Makassar 01	1,895,156,400	42,449,890	Naik Sebesar Rp 42449890	18,054,227,990
23	2,008	11	PHI Mini Market - Makassar 01	1,859,560,220	-35,596,180	Turun Sebesar Rp -35596180	19,913,788,210
24	2,008	12	PHI Mini Market - Makassar 01	1,817,472,290	-42,087,930	Turun Sebesar Rp -42087930	21,731,260,500
25	2,008	1	PHI Mini Market - Surabaya 01	1,813,913,540	1,813,913,540	Naik Sebesar Rp 1813913540	1,813,913,540
26	2,008	2	PHI Mini Market - Surabaya 01	1,692,750,000	-121,163,540	Turun Sebesar Rp -121163540	3,506,663,540
27	2,008	3	PHI Mini Market - Surabaya 01	1,853,315,990	160,565,990	Naik Sebesar Rp 160565990	5,359,979,530
28	2,008	4	PHI Mini Market - Surabaya 01	1,783,108,440	-70,207,550	Turun Sebesar Rp -70207550	7,143,087,970
29	2,008	5	PHI Mini Market - Surabaya 01	1,834,763,160	51,654,720	Naik Sebesar Rp 51654720	8,977,851,130
30	2,008	6	PHI Mini Market - Surabaya 01	1,767,093,710	-67,669,450	Turun Sebesar Rp -67669450	10,744,944,840
31	2,008	7	PHI Mini Market - Surabaya 01	1,824,098,100	57,004,390	Naik Sebesar Rp 57004390	12,569,042,940
32	2,008	8	PHI Mini Market - Surabaya 01	1,893,709,220	69,611,120	Naik Sebesar Rp 69611120	14,462,752,160
33	2,008	9	PHI Mini Market - Surabaya 01	1,876,257,180	-17,452,040	Turun Sebesar Rp -17452040	16,339,009,340
34	2,008	10	PHI Mini Market - Surabaya 01	1,881,533,110	5,275,930	Naik Sebesar Rp 5275930	18,220,542,450
35	2,008	11	PHI Mini Market - Surabaya 01	1,819,534,380	-61,998,730	Turun Sebesar Rp -61998730	20,040,076,830
36	2,008	12	PHI Mini Market - Surabaya 01	1,826,783,840	7,249,460	Naik Sebesar Rp 7249460	21,866,860,670

Screenshot Validasi/Pembanding

	tahun	bulan	nama_cabang	total_penjualan_perbulan	selisih_dengan_bulan_lalu	status_penjualan	ytd_penjualan
11	2,008	11	PHI Mini Market - Jakarta Pusat 01	1,846,566,350	-11,640,020	Turun Sebesar Rp -11640020	19,680,512,280
12	2,008	12	PHI Mini Market - Jakarta Pusat 01	1,830,547,670	-16,018,680	Turun Sebesar Rp -16018680	21,511,059,950
13	2,008	1	PHI Mini Market - Makassar 01	1,777,546,700	[NULL]	Tidak ada penjualan	1,777,546,700
14	2,008	2	PHI Mini Market - Makassar 01	1,690,605,220	-86,941,480	Turun Sebesar Rp -86941480	3,468,151,920
15	2,008	3	PHI Mini Market - Makassar 01	1,809,263,190	118,657,970	Naik Sebesar Rp 118657970	5,277,415,110
16	2,008	4	PHI Mini Market - Makassar 01	1,734,374,120	-74,889,070	Turun Sebesar Rp -74889070	7,011,789,230
17	2,008	5	PHI Mini Market - Makassar 01	1,797,580,080	63,205,960	Naik Sebesar Rp 63205960	8,809,369,310
18	2,008	6	PHI Mini Market - Makassar 01	1,784,245,770	-13,334,310	Turun Sebesar Rp -13334310	10,593,615,080
19	2,008	7	PHI Mini Market - Makassar 01	1,826,120,110	41,874,340	Naik Sebesar Rp 41874340	12,419,735,190
20	2,008	8	PHI Mini Market - Makassar 01	1,886,629,890	60,509,780	Naik Sebesar Rp 60509780	14,306,365,080
21	2,008	9	PHI Mini Market - Makassar 01	1,852,706,510	-33,923,380	Turun Sebesar Rp -33923380	16,159,071,590
22	2,008	10	PHI Mini Market - Makassar 01	1,895,156,400	42,449,890	Naik Sebesar Rp 42449890	18,054,227,990
23	2,008	11	PHI Mini Market - Makassar 01	1,859,560,220	-35,596,180	Turun Sebesar Rp -35596180	19,913,788,210
24	2,008	12	PHI Mini Market - Makassar 01	1,817,472,290	-42,087,930	Turun Sebesar Rp -42087930	21,731,260,500
25	2,008	1	PHI Mini Market - Surabaya 01	1,813,913,540	[NULL]	Tidak ada penjualan	1,813,913,540
26	2,008	2	PHI Mini Market - Surabaya 01	1,692,750,000	-121,163,540	Turun Sebesar Rp -121163540	3,506,663,540
27	2,008	3	PHI Mini Market - Surabaya 01	1,853,315,990	160,565,990	Naik Sebesar Rp 160565990	5,359,979,530
28	2,008	4	PHI Mini Market - Surabaya 01	1,783,108,440	-70,207,550	Turun Sebesar Rp -70207550	7,143,087,970
29	2,008	5	PHI Mini Market - Surabaya 01	1,834,763,160	51,654,720	Naik Sebesar Rp 51654720	8,977,851,130
30	2,008	6	PHI Mini Market - Surabaya 01	1,767,093,710	-67,669,450	Turun Sebesar Rp -67669450	10,744,944,840
31	2,008	7	PHI Mini Market - Surabaya 01	1,824,098,100	57,004,390	Naik Sebesar Rp 57004390	12,569,042,940
32	2,008	8	PHI Mini Market - Surabaya 01	1,893,709,220	69,611,120	Naik Sebesar Rp 69611120	14,462,752,160
33	2,008	9	PHI Mini Market - Surabaya 01	1,876,257,180	-17,452,040	Turun Sebesar Rp -17452040	16,339,009,340
34	2,008	10	PHI Mini Market - Surabaya 01	1,881,533,110	5,275,930	Naik Sebesar Rp 5275930	18,220,542,450
35	2,008	11	PHI Mini Market - Surabaya 01	1,819,534,380	-61,998,730	Turun Sebesar Rp -61998730	20,040,076,830
36	2,008	12	PHI Mini Market - Surabaya 01	1,826,783,840	7,249,460	Naik Sebesar Rp 7249460	21,866,860,670