Mini Portfolio
[Iman Maulana]

Intensive Data Science
by @myskill.id

Tabel Employees

Terdapat 500 baris didalam tabel employees, tabel ini merupakan informasi data karyawan yang bekerja di perusahaan XYZ

	employee_id [PK] integer	store_city_id integer	first_name character varying (255)	last_name character varying (255)	email character varying (255)	department character varying (255)
128	128	10	Dahlia	Hu	h_dahlia9265@icloud.ca	Data Analyst
129	129	8	Xaviera	Nell	xnell7971@hotmail.ca	Tech Support
130	130	5	Fulton	Roth	roth_fulton@hotmail.c...	Advertising
131	131	4	Dennis	Laith	l-dennis6517@google....	Accounting
132	132	3	Macy	Elton	m_elton@icloud.net	Advertising
133	133	2	Mikayla	Zachary	m.zachary@yahoo.com	Software Engineer
134	134	3	Malachi	India	malachi_india@icloud...	Tech Support
135	135	5	Idona	Channing	i-channing@hotmail.org	Tech Support
136	136	7	Signe	Jamalia	sjamalia6343@aol.net	Data Scientist
137	137	9	Ria	Knox	knox_ria7809@outlook...	Human Resources
138	138	7	Linda	Rashad	linda.rashad1384@pro...	Payroll
139	139	2	Leslie	Raymond	l.raymond@google.edu	Advertising
140	140	8	Beau	Lyle	lylebeau@protonmail.c...	Tech Support
141	141	9	Jelani	Frances	jfrances5278@aol.couk	Media Relations
142	142	3	Walker	Brennan	b-walker@yahoo.couk	Accounting
143	143	2	Basia	Carly	carly.basia4859@outlo...	Research and Develop...

Total rows: 500 of 500   Query complete 00:00:00.507   Rows selected: 500

Tabel Sales

Didalam tabel sales terdapat 1000 row yang merupakan data penjualan perusahaan selama 3 tahun terakhir

	user_id [PK] integer	product_name character varying (255)	quantity integer	purchase_date date	store_city_id integer	price_per_kg integer
1	1	Mangga	13	2021-07-21	10	10000
2	2	Jeruk	17	2022-01-22	4	9000
3	3	Jeruk	18	2022-04-29	4	9000
4	4	Anggur	3	2022-03-30	9	13000
5	5	Pisang	13	2022-04-07	3	8000
6	6	Melon	11	2021-02-04	4	11000
7	7	Apel	6	2021-11-08	5	15000
8	8	Apel	6	2020-09-30	5	15000
9	9	Semangka	18	2021-10-23	4	12000
10	10	Nanas	5	2020-07-22	8	11000
11	11	Markisa	15	2021-03-31	3	11000
12	12	Pepaya	19	2021-06-07	5	8000
13	13	Nanas	7	2022-04-14	7	11000
14	14	Pepaya	2	2021-07-07	9	8000
15	15	Semangka	12	2021-08-14	8	12000
16	16	Pepaya	13	2021-12-07	3	8000
17	17	Apel	19	2021-01-14	2	15000

Total rows: 1000 of 1000   Query complete 00:00:00.223   Rows selected: 1000

Tabel Region

Didalam tabel region hanya ada
10 row yang merupakan nformasi
mengenai nama kota / cabang dari
perusahaan

	store_city_id [PK] integer	region character varying (255)
1	1	Sumatera
2	2	Yogyakarta
3	3	Jawa Timur
4	4	Sulawesi
5	5	Bali
6	6	Jawa Barat
7	7	Kalimantan
8	8	Jawa Tengah
9	9	Bandung
10	10	Jakarta

What I do

1) Tampilkan record product buah yang hanya terjual di bulan 1-10 Januari 2021

SELECT
   DISTINCT(product_name) AS produk_name,
   purchase_date
FROM
   sales
WHERE
   purchase_date BETWEEN '2021-01-01' AND '2021-01-10'
ORDER BY purchase_date

produk_name character varying (255) 🔒	purchase_date 🔒 date
Semangka	2021-01-01
Anggur	2021-01-03
Mangga	2021-01-03
Jeruk	2021-01-03
Mangga	2021-01-04
Semangka	2021-01-05
Markisa	2021-01-05
Salak	2021-01-06
Pisang	2021-01-06
Kelengkeng	2021-01-07
Salak	2021-01-08

2) Tampilkan record penjualan product Mangga serta Apel di store city 9

SELECT
    *
FROM
    sales
WHERE
    product_name IN ('Mangga', 'Apel')
AND
    store_city_id = 9
ORDER BY 2

user_id [PK] integer	product_name character varying (255)	quantity integer	purchase_date date	store_city_id integer	price_per_kg integer
573	Apel	15	2022-03-07	9	15000
650	Apel	11	2022-05-18	9	15000
388	Apel	9	2022-05-18	9	15000
224	Apel	18	2022-02-06	9	15000
467	Apel	4	2020-09-04	9	15000
725	Apel	13	2020-08-19	9	15000
729	Apel	17	2021-07-14	9	15000
839	Apel	7	2021-01-29	9	15000
480	Apel	20	2021-02-11	9	15000
534	Apel	17	2022-01-17	9	15000
905	Mangga	11	2020-12-15	9	10000
213	Mangga	2	2020-05-26	9	10000
235	Mangga	7	2021-01-03	9	10000
382	Mangga	10	2022-02-07	9	10000
430	Mangga	6	2021-01-25	9	10000
674	Mangga	5	2021-06-08	9	10000
692	Mangga	9	2021-09-07	9	10000

rows: 19 of 19   Query complete 00:00:00.498

3) Di tanggal berapa jumlah penjualan buah mangga paling sedikit ?

purchase_date date	quantity integer
2021-07-24	1
2021-11-04	1
2022-03-12	2
2020-10-06	2
2021-05-11	2
2021-01-11	2
2021-12-10	2
2020-08-16	2
2020-07-04	2
2021-12-29	2
2020-05-26	2
2021-08-23	3
2022-04-26	3
2021-11-25	3
2020-07-20	3
2020-06-26	4
2021-12-02	4

Penjualan buah mangga paling sedikit terjadi pada tanggal 24 Juli 2021 sebanyak 1 buah dan pada tanggal 04 November 2021 sebanyak 1 buah

SELECT
    purchase_date, quantity
FROM
    sales
WHERE
    product_name = 'Mangga'
ORDER BY
    quantity

4) Tampilkan record seluruh gaji karyawan yang nama depannya mengandung huruf 'Ba'

SELECT
   first_name,
   salary_2020,
   salary_2021,
   salary_2022
FROM employees
WHERE first_name LIKE '%Ba%'

first_name character varying (255) 🔒	salary_2020 integer 🔒	salary_2021 integer 🔒	salary_2022 integer 🔒
Barry	1019	7672	2138
Basia	7024	5610	3588
Baxter	3292	9713	1420
Baker	4460	1920	5395

5) Tampilkan record rata-rata gaji karyawan per tahun, bulatkan 2 angka dibelakang koma

```
SELECT
  ROUND(AVG(salary_2020), 2) avg_2020,
  ROUND(AVG(salary_2021), 2) avg_2021,
  ROUND(AVG(salary_2022), 2) avg_2022
FROM employees
```

avg_2020 numeric	avg_2021 numeric	avg_2022 numeric
5678.51	6605.71	7334.72

Tahun 2020 rata-rata gaji karyawan adalah 5678.51 dollar
Tahun 2021 rata-rata gaji karyawan adalah 6605.71 dollar
Tahun 2022 rata-rata gaji karyawan adalah 7334.72 dollar

6) Tampilkan record nama-nama karyawan yang bertempat di store Yogyakarta dan Jawa Barat

```
SELECT
    CONCAT(t1.first_name,' ',t1.last_name) AS
nama_karyawan,
    t2.region
FROM
    employees t1
JOIN
    region t2
ON t1.store_city_id = t2.store_city_id
WHERE
    region IN ('Yogyakarta','Jawa Barat')
ORDER BY 2
```

nama_karyawan text	region character varying (255)
Channing Robert	Jawa Barat
Noah Lionel	Jawa Barat
Jorden Cailin	Jawa Barat
Victoria Jameson	Jawa Barat
Justina Wing	Jawa Barat
Adena Ira	Jawa Barat
Walter Ivan	Jawa Barat
Benedict Natha…	Jawa Barat
Dieter Brendan	Jawa Barat
Richard Olga	Jawa Barat
Jermaine Paloma	Jawa Barat
Ifeoma Nita	Jawa Barat
Nola Barrett	Jawa Barat
Ali Erasmus	Jawa Barat
Holmes Megan	Jawa Barat

Total rows: 108 of 108

7) Tampilkan record total quantity buah Mangga dan Apel selama 3 pekan setelah Hari Raya Idul Fitri 2022!

```
SELECT
    product_name,
    SUM(quantity) AS total_quantity
FROM
    sales
WHERE
    (product_name IN ('Mangga', 'Apel'))
AND
    purchase_date BETWEEN '2022-05-02' AND '2022-05-
23'
GROUP BY 1
```

Hari Raya Idul Fitri 2022 terjadi pada tanggal 02 Mei 2022

product_name character varying (255)	total_quantity bigint
Apel	20
Mangga	28

8) Tampilkan record seluruh karyawan yang bekerja di daerah Bali dan Yogyakarta, dengan metode Subquery

```
SELECT
    *
FROM
    employees
WHERE
    store_city_id IN (
        SELECT
            store_city_id
        FROM region
        WHERE region IN ('Bali','Yogyakarta'))
ORDER BY 2
```

employee_id [PK] integer	store_city_id integer	first_name character varying (255)	last_name character varying (255)	email character varying (255)	department character varying (255)	hire_date date
370	2	Quin	Mark	m_quin@google.edu	Payroll	2018-04-03
378	2	Walker	MacKenzie	m_walker7730@proton...	Legal Department	2019-08-15
380	2	Malte	Tanisha	tanisha.malte@icloud...	Sales and Marketing	2019-07-03
219	2	Sylvia	Victoria	victoria_sylvia@proton...	Legal Department	2018-06-20
388	2	Jakeem	Logan	j.logan9396@protonm...	Public Relations	2018-08-05
389	2	Merrill	Kennan	kennan_merrill@hotma...	Public Relations	2018-10-06
400	2	Dexter	Julian	jdexter6531@outlook.n...	Customer Relations	2018-02-25
409	2	Regina	Maryam	r.maryam@yahoo.edu	Legal Department	2019-12-29
229	2	Akeem	Raymond	r.akeem@protonmail.org	Customer Service	2018-04-06
133	2	Mikayla	Zachary	m.zachary@yahoo.com	Software Engineer	2018-09-09
423	2	Noelle	Lilah	n_lilah8870@google.org	Public Relations	2020-01-16
5	2	Tanek	Ocean	tanek-ocean5079@yah...	Customer Service	2018-10-19
427	2	Caldwell	Kasimir	kasimir-caldwell8917@...	Payroll	2018-12-08
241	2	Dalton	Michelle	daltonmichelle@proton...	Data Analyst	2018-04-16
139	2	Leslie	Raymond	l.raymond@google.edu	Advertising	2019-11-12
143	2	Basia	Carly	carly.basia4859@outlo...	Research and Develop...	2018-10-28

Total rows: 116 of 116

9) Tampilkan record jumlah karyawan berdasarkan kategori gaji nya di store 9 ditahun 2020. Kategori tersebut adalah LOWER, MIDDLE, dan HIGH. Untuk kategori LOWER di range : < 4000 ; MIDDLE : >= 4000 - 7000 ; HIGHER : > 7000

jumlah_karyawan 🔒 bigint	kategori 🔒 text
15	HIGHER
19	LOWER
20	MIDDLE

```
with cte as (
SELECT
    employee_id,
    CASE
        WHEN salary_2020 < 4000 THEN 'LOWER'
        WHEN salary_2020 BETWEEN 4000 AND 7000
THEN 'MIDDLE'
        ELSE 'HIGHER'
    END AS kategori
FROM employees
WHERE store_city_id = 9
GROUP BY employee_id
ORDER BY kategori)
SELECT
    COUNT(kategori) AS jumlah_karyawan,
    kategori
FROM cte
GROUP BY kategori
```

10) Dari data penjualan mobil yang telah dibuat di pertemuan 1, gantilah nama mobil Avanza menjadi Inova, sedangkan Pajero menjadi Tesla

```
UPDATE penjualan
SET product_name =
    CASE
        WHEN id_produk = 1 THEN 'Inova'
        WHEN id_produk = 3 THEN 'Tesla'
    END
WHERE id_produk IN (1,3)
```

id_produk [PK] integer	product_name character varying (255)	harga integer
1	Inova	10000
3	Tesla	30000

11) Berapa rata-rata total pendapatan di store Sumatera dan Kalimantan

```
WITH avg_pendapatan AS(
SELECT
    SUM(t1.quantity*t1.price_per_kg) AS
total_pendapatan,
    t1.product_name,
    t2.region
FROM
    sales t1 JOIN region t2 ON t1.store_city_id =
t2.store_city_id
WHERE region IN ('Sumatera', 'Kalimantan') GROUP
BY product_name, region)

SELECT
    ROUND(AVG(total_pendapatan), 2) AS
avg_total_pendapatan,
    region
FROM avg_pendapatan
GROUP BY region
```

avg_total_pendapatan numeric	region character varying (255)
1023800.00	Kalimantan
648285.71	Sumatera

Di store Kalimantan, rata-rata total pendapatannya adalah 1023800.00 dollar

Di store Sumatera, rata-rata total pendaptannya adalah 648285.71 dollar

12) Total pendapatan di store Sulawesi dan Yogyakarta pada tahun 2021

```
WITH avg_pendapatan AS(
SELECT
   SUM(t1.quantity*t1.price_per_kg) AS
total_pendapatan,
   t1.product_name,
   t2.region
FROM
   sales t1 JOIN region t2 ON t1.store_city_id =
t2.store_city_id
WHERE
   region IN ('Sulawesi', 'Yogyakarta')
AND
   t1.purchase_date BETWEEN '2021-01-01' AND
'2021-12-31'
GROUP BY product_name, region)
```

```
SELECT
   ROUND(AVG(total_pendapatan), 2) AS
avg_total_pendapatan,
   region
FROM avg_pendapatan
GROUP BY region
```

avg_total_pendapatan numeric	region character varying (255)
432785.71	Sulawesi
477666.67	Yogyakarta

13) Tampilkan record total pendapatan dari hasil penjualan buah di luar pulau jawa dan jawa, kategorikan daerah berdasarkan pulaunya

```
WITH cte AS(
    SELECT
        (t1.quantity*t1.price_per_kg) AS total_pendapatan,
        t2.region,
        CASE
            WHEN t2.region IN ('Sumatera', 'Sulawesi',
'Kalimantan','Bali') THEN 'Luar Pulau Jawa'
            ELSE 'Pulau Jawa'
        END AS kategori
    FROM sales t1 JOIN region t2 ON t1.store_city_id =
t2.store_city_id)
SELECT SUM(total_pendapatan), kategori FROM cte
GROUP BY kategori
```

sum bigint	kategori text
53774000	Luar Pulau Jawa
75647000	Pulau Jawa

Follow me!

Instagram : im__l

LinkedIn : linkedin.com/in/imanmaulana1

Intensive Bootcamp Data Science
by @myskill.id