

Tugas MBD 4

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No 1.

```
-- Select the sid and name of sailor that has a rating greater than the rating average
```

```
SELECT sid,sname  
FROM Sailors  
WHERE rating > (  
    SELECT AVG(rating)  
    FROM Sailors  
);
```

	sid [PK] integer	sname character varying (10)
1	22	Dustin
2	31	Lubber
3	32	Andy
4	58	Rusty
5	64	Horatio
6	71	Zorba
7	74	Horatio

No 2.

```
-- Select the sid and name of sailor that has the most number of reservations  
SELECT s.sid , s.sname  
FROM Sailors s  
INNER JOIN Reserves r ON s.sid = r.sid  
GROUP BY s.sid  
ORDER BY COUNT(s.sid) DESC  
LIMIT 1
```

	sid [PK] integer	sname character varying (10)
1	22	Dustin

No 3

```
-- Select the average age of sailors reserving 'Interlake' or 'Marine' boats

SELECT ROUND(AVG(s.age),2) as Rata_Rata_Umur
FROM Sailors s
INNER JOIN Reserves r ON s.sid = r.sid
INNER JOIN Boats b ON r.bid = b.bid
WHERE b.bname IN ('Interlake', 'Marine')
```

	rata_rata_umur numeric
1	45.14

No 4.

```
-- Select the month and the number of reservations for each month
SELECT EXTRACT(MONTH FROM r.day) AS Month, COUNT(*) AS Number_Reservation
FROM Reserves r
GROUP BY EXTRACT(MONTH FROM r.day)
ORDER BY EXTRACT(MONTH FROM r.day);
```

	month numeric	number_reservation bigint
1	9	3
2	10	4
3	11	3

No 5.

```
-- Select the percentage of red boat reservations of all reservations
SELECT (COUNT(b.color)* 100 / (SELECT COUNT(*) FROM RESERVES)) AS
Presentase_Kapal_Merah
FROM reserves r
INNER JOIN boats b ON r.bid = b.bid
WHERE b.color IN (
    SELECT b.color
    FROM Boats b)
```

```
WHERE b.color = 'red'  
)
```

	presentase_kapal_merah bigint 
1	50

EXERCISE 2

DDL

```
CREATE DATABASE exercise_provkot  
CREATE TABLE Provinsi(  
    id_provinsi INTEGER NOT NULL,  
    nama_provinsi VARCHAR(50) NOT NULL  
);  
CREATE TABLE Kota(  
    id_kota INTEGER NOT NULL,  
    nama_kota VARCHAR(50) NOT NULL,  
    id_provinsi INTEGER NOT NULL  
);
```

DML

```
INSERT INTO Provinsi VALUES  
(1,'DKI Jakarta'),  
(2,'Jawa Tengah'),  
(3,'Papua Barat'),  
(4,'Jawa Timur'),  
(5,'Jawa Barat');  
  
INSERT INTO Kota VALUES  
(1,'Jakarta',1),  
(2,'Semarang',2),  
(3,'Surabaya',4),  
(4,'Malang',4),  
(5,'Bandung',5),  
(6,'Denpasar',6),  
(7,'Makasar',7);
```

	id_provinsi integer	nama_provinsi character varying (50)
1	1	DKI Jakarta
2	2	Jawa Tengah
3	3	Papua Barat
4	4	Jawa Timur
5	5	Jawa Barat

	id_kota integer	nama_kota character varying (50)	id_provinsi integer
1	1	Jakarta	1
2	2	Semarang	2
3	3	Surabaya	4
4	4	Malang	4
5	5	Bandung	5
6	6	Denpasar	6
7	7	Makasar	7

No. 1

```
-- Select a number of city of "Jawa Timur"
SELECT k.id_kota
FROM Kota k
JOIN Provinsi p ON k.id_provinsi = p.id_provinsi
WHERE p.nama_provinsi = 'Jawa Timur'
```

	id_kota integer
1	3
2	4

No. 2

```
-- Select the name of province that has maximum number of city
SELECT p.nama_provinsi
FROM Provinsi p
JOIN Kota k ON p.id_provinsi = k.id_provinsi
WHERE k.id_kota = (
    SELECT MAX(k.id_kota)
    FROM Kota k
)
```

	nama_provinsi character varying (50) 🔒
--	---

(NULL)

No. 3

```
-- Select all province's name and the number of their cities
SELECT Prov.nama_provinsi, COUNT(Kot.nama_kota)
FROM Provinsi Prov
NATURAL LEFT JOIN Kota Kot
GROUP BY Prov.nama_provinsi
ORDER BY Prov.nama_provinsi;
```

	nama_provinsi character varying (50) 🔒	count bigint 🔒
1	DKI Jakarta	1
2	Jawa Barat	1
3	Jawa Tengah	1
4	Jawa Timur	2
5	Papua Barat	0


No. 4

```
-- Select name of provinces and name of cities of those provinces (if the
province didn't have city, the column 'nama_kota' will be null)
SELECT p.nama_provinsi, k.nama_kota
FROM Provinsi p
LEFT JOIN Kota k ON p.id_provinsi = k.id_provinsi
```

	nama_provinsi character varying (50) 🔒	nama_kota character varying (50) 🔒
1	DKI Jakarta	Jakarta
2	Jawa Tengah	Semarang
3	Papua Barat	[null]
4	Jawa Timur	Malang
5	Jawa Timur	Surabaya

No. 5

```
-- Select name of provinces that don't have a city
SELECT DISTINCT p.nama_provinsi
FROM Provinsi p
LEFT JOIN Kota k ON p.id_provinsi = k.id_provinsi
WHERE k.id_kota IS NULL
```

	nama_provinsi character varying (50) 
1	Papua Barat