

TEKNOLOGI BASIS DATA

PRAKTIKUM TEKNOLOGI BASIS DATA

“Perintah Dasar MySQL dengan CMD”

Diajukan untuk memenuhi Nilai UTS mata kuliah Basis Data

Dosen Mata Kuliah :

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TUGAS PRAKTIKUM 3 Part1 (Pegawai)

1. Buat table pegawai dan isi datanya seperti berikut:

```
MariaDB [latihan3]> select * from pegawai;
```

idpegawai	namadepan	namabelakang	email	telepon	tglkontrak	idjob	gaji	tunjangan
E001	ferry	gustiawan	ferry@yahoo.com	07117059004	2005-09-01	L0001	2000000	500000
E002	aris	ganiardi	aris@yahoo.com	081312345678	2006-09-01	L0002	2000000	200000
E003	faiz	ahmad	faiz@gmail.com	081367384322	2006-10-01	L0003	1500000	NULL
E004	emma	bunton	emma@gmail.com	081363484342	2006-10-01	L0004	1500000	0
E005	mike	scof	mike@plasa.com	08163454555	2007-09-01	L0005	1250000	0
E006	lincoln	burrows	linc@yahoo.com	08527388432	2008-09-01	L0006	1750000	NULL

6 rows in set (0.00 sec)

Langkah – langkahnya adalah sebagai berikut:

- Buat database dengan nama latihan3

```
MariaDB [(none)]> create database latihan3;
Query OK, 1 row affected (0.03 sec)

MariaDB [(none)]> show databases;
+-----+
| Database |
+-----+
| belajar |
| information_schema |
| latihan1 |
| latihan2 |
| latihan3 |
| mysql |
| performance_schema |
| phpmyadmin |
| test |
+-----+
9 rows in set (0.00 sec)
```

- Buat table dengan nama pegawai

```
MariaDB [latihan3]> create table pegawai (
-> idpegawai varchar(5) primary key,
-> namadepan varchar(10),
-> namabelakang varchar(10),
-> email varchar(20),
-> telepon varchar(12),
-> tglkontrak date,
-> idjob varchar(6),
-> gaji int(10),
-> tunjangan varchar(10)
-> );
Query OK, 0 rows affected (0.27 sec)
```

- Isi table pegawai seperti diatas dengan perintah sebagai berikut:

```
MariaDB [latihan3]> insert into pegawai (idpegawai, namadepan, namabelakang, email, telepon, tglkontrak, idjob, gaji, tunjangan) values
-> ('E001', 'ferry', 'gustiawan', 'ferry@yahoo.com', '07117059004', '2005-09-01', 'L0001', '2000000', '500000'),
-> ('E002', 'aris', 'ganiardi', 'aris@yahoo.com', '081312345678', '2006-09-01', 'L0002', '2000000', '200000'),
-> ('E003', 'faiz', 'ahmad', 'faiz@gmail.com', '081367384322', '2006-10-01', 'L0003', '1500000', null),
-> ('E004', 'emma', 'bunton', 'emma@gmail.com', '081363484342', '2006-10-01', 'L0004', '1500000', '0'),
-> ('E005', 'mike', 'scof', 'mike@plasa.com', '08163454555', '2007-09-01', 'L0005', '1250000', '0'),
-> ('E006', 'lincoln', 'burrows', 'linc@yahoo.com', '08527388432', '2008-09-01', 'L0006', '1750000', null);
Query OK, 6 rows affected (0.12 sec)
Records: 6 Duplicates: 0 Warnings: 0
```

2. Tampilkan pegawai yang gajinya bukan 2.000.000 dan 1.250.000 !

```
MariaDB [latihan3]> select * from pegawai where gaji != 2000000 and gaji != 1250000;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| idpegawai | namadepan | namabelakang | email | telepon | tglkontrak | idjob | gaji | tunjangan |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| E003 | faiz | ahmad | faiz@gmail.com | 081367384322 | 2006-10-01 | L0003 | 1500000 | NULL |
| E004 | emma | bunton | emma@gmail.com | 081363484342 | 2006-10-01 | L0004 | 1500000 | 0 |
| E006 | lincoln | burrows | linc@yahoo.com | 08527388432 | 2008-09-01 | L0006 | 1750000 | NULL |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

3. Tampilkan pegawai yang tunjangannya NULL!

```
MariaDB [latihan3]> select * from pegawai where tunjangan is null;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| idpegawai | namadepan | namabelakang | email | telepon | tglkontrak | idjob | gaji | tunjangan |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| E003 | faiz | ahmad | faiz@gmail.com | 081367384322 | 2006-10-01 | L0003 | 1500000 | NULL |
| E006 | lincoln | burrows | linc@yahoo.com | 08527388432 | 2008-09-01 | L0006 | 1750000 | NULL |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

4. Tampilkan pegawai yang tunjangannya tidak NULL!

```
MariaDB [latihan3]> select * from pegawai where tunjangan is not null;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| idpegawai | namadepan | namabelakang | email | telepon | tglkontrak | idjob | gaji | tunjangan |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| E001 | ferry | gustiawan | ferry@yahoo.com | 07117059004 | 2005-09-01 | L0001 | 2000000 | 500000 |
| E002 | aris | ganiardi | aris@yahoo.com | 081312345678 | 2006-09-01 | L0002 | 2000000 | 200000 |
| E004 | emma | bunton | emma@gmail.com | 081363484342 | 2006-10-01 | L0004 | 1500000 | 0 |
| E005 | mike | scof | mike@plasa.com | 08163454555 | 2007-09-01 | L0005 | 1250000 | 0 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

5. Tampilkan/hitung jumlah baris/record tabel pegawai!

```
MariaDB [latihan3]> select count(idpegawai) from pegawai;
+-----+
| count(idpegawai) |
+-----+
| 6 |
+-----+
1 row in set (0.00 sec)
```

6. Tampilkan/hitung jumlah total gaji di tabel pegawai!

```
MariaDB [latihan3]> select sum(gaji) from pegawai;
+-----+
| sum(gaji) |
+-----+
| 10000000 |
+-----+
1 row in set (0.00 sec)
```

7. Tampilkan/hitung rata-rata gaji pegawai!

```
MariaDB [latihan3]> select avg(gaji) as rata2_gaji from pegawai;
+-----+
| rata2_gaji |
+-----+
| 1666666.6667 |
+-----+
1 row in set (0.00 sec)
```

8. Tampilkan gaji terkecil!

```
MariaDB [latihan3]> select min(gaji) as gaji_terkecil from pegawai;
+-----+
| gaji_terkecil |
+-----+
| 1250000 |
+-----+
1 row in set (0.07 sec)
```

9. Tampilkan gaji terbesar!

```
MariaDB [latihan3]> select max(gaji) as gaji_terbesar from pegawai;
+-----+
| gaji_terbesar |
+-----+
|          2000000 |
+-----+
1 row in set (0.00 sec)
```

TUGAS PRAKTIKUM 3 Part2 (Pet)

1. Buat table pet dan isi datanya seperti berikut:

```
MariaDB [latihan3]> select * from pet;
+-----+-----+-----+-----+-----+-----+
| name   | owner  | species | sex  | birth      | death      |
+-----+-----+-----+-----+-----+-----+
| Puffball | Diane  | Hamster | F    | 1999-03-03 | NULL       |
| Claws    | Gwen   | Cat     | M    | 1994-03-17 | NULL       |
| Fluffy   | Harrold | Cat     | F    | 1993-02-04 | NULL       |
| Buffy    | Harrold | Dog     | F    | 1989-05-13 | NULL       |
| Fang     | Benny  | Dog     | M    | 1990-08-27 | NULL       |
| Bowser   | Diane  | Dog     | M    | 1989-08-31 | 1995-07-29 |
| Chirpy   | Gwen   | Bird    | F    | 1998-09-11 | NULL       |
| Whistler  | Gwen   | Bird    | NULL | 1997-12-09 | NULL       |
| Slim    | Benny  | Snake   | M    | 1996-04-29 | NULL       |
+-----+-----+-----+-----+-----+-----+
9 rows in set (0.00 sec)
```

Langkah – langkahnya adalah sebagai berikut:

- Buat table dengan nama pet

```
MariaDB [latihan3]> create table pet (
-> name varchar(15),
-> owner varchar(15),
-> species varchar(15),
-> sex varchar(3),
-> birth date,
-> death date
-> );
Query OK, 0 rows affected (0.28 sec)
```

- Isi table pet seperti diatas dengan perintah sebagai berikut:

```
MariaDB [latihan3]> insert into pet (name, owner, species, sex, birth, death) values
-> ('Puffball', 'Diane', 'Hamster', 'F', '1999-03-03', null),
-> ('Claws', 'Gwen', 'Cat', 'M', '1994-03-17', null),
-> ('Fluffy', 'Harrold', 'Cat', 'F', '1993-02-04', null),
-> ('Buffy', 'Harrold', 'Dog', 'F', '1989-05-13', null),
-> ('Fang', 'Benny', 'Dog', 'M', '1990-08-27', null),
-> ('Bowser', 'Diane', 'Dog', 'M', '1989-08-31', '1995-07-29'),
-> ('Chirpy', 'Gwen', 'Bird', 'F', '1998-09-11', null),
-> ('Whistler', 'Gwen', 'Bird', null, '1997-12-09', null),
-> ('Slim', 'Benny', 'Snake', 'M', '1996-04-29', null);
Query OK, 9 rows affected (0.09 sec)
Records: 9 Duplicates: 0 Warnings: 0
```

2. Tampilkan jumlah hewan yang dimiliki setiap owner.

```
MariaDB [latihan3]> select owner, count(name) as jml_peliharaan from pet group by owner;
```

owner	jml_peliharaan
Benny	2
Diane	2
Gwen	3
Harrold	2

```
4 rows in set (0.00 sec)
```

3. Tampilkan jumlah hewan berdasarkan spesies

```
MariaDB [latihan3]> select species, count(species) as jumlah from pet group by species;
```

species	jumlah
Bird	2
Cat	2
Dog	3
Hamster	1
Snake	1

```
5 rows in set (0.00 sec)
```

4. Tampilkan jumlah hewan berdasarkan jenis kelamin

```
MariaDB [latihan3]> select sex, count(sex) as jumlah from pet group by sex;
```

sex	jumlah
NULL	0
F	4
M	4

```
3 rows in set (0.00 sec)
```

5. Tampilkan jumlah hewan berdasarkan spesies dan jenis kelamin

```
MariaDB [latihan3]> select species, sex, count(sex) as jumlah from pet group by species, sex;
```

species	sex	jumlah
Bird	NULL	0
Bird	F	1
Cat	F	1
Cat	M	1
Dog	F	1
Dog	M	2
Hamster	F	1
Snake	M	1

```
8 rows in set (0.00 sec)
```

6. Tampilkan jumlah hewan berdasarkan spesies (cat dan dog saja) dan jenis kelamin

```
MariaDB [latihan3]> select species, sex, count(sex) as jumlah from pet group by species, sex having pet.species="Cat" or pet.species="Dog";
```

species	sex	jumlah
Cat	F	1
Cat	M	1
Dog	F	1
Dog	M	2

```
4 rows in set (0.00 sec)
```

7. Tampilkan jumlah hewan berdasarkan jenis kelamin yang diketahui saja

```
MariaDB [latihan3]> select species, sex, count(sex) as jumlah from pet group by species, sex, sex having pet.sex is not null;
```

species	sex	jumlah
Bird	F	1
Cat	F	1
Cat	M	1
Dog	F	1
Dog	M	2
Hamster	F	1
Snake	M	1

7 rows in set (0.00 sec)

KESIMPULAN

MySQL menyediakan beberapa fungsi untuk pengelompokan data, dan pengecekan data seperti :

- GROUP BY : Untuk mengelompokkan data berdasarkan field
- HAVING : Untuk mengecek data apakah memiliki nilai tertentu