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18221041

Lembar Kerja Praktikum 2 IF2140 Pemodelan Basis Data

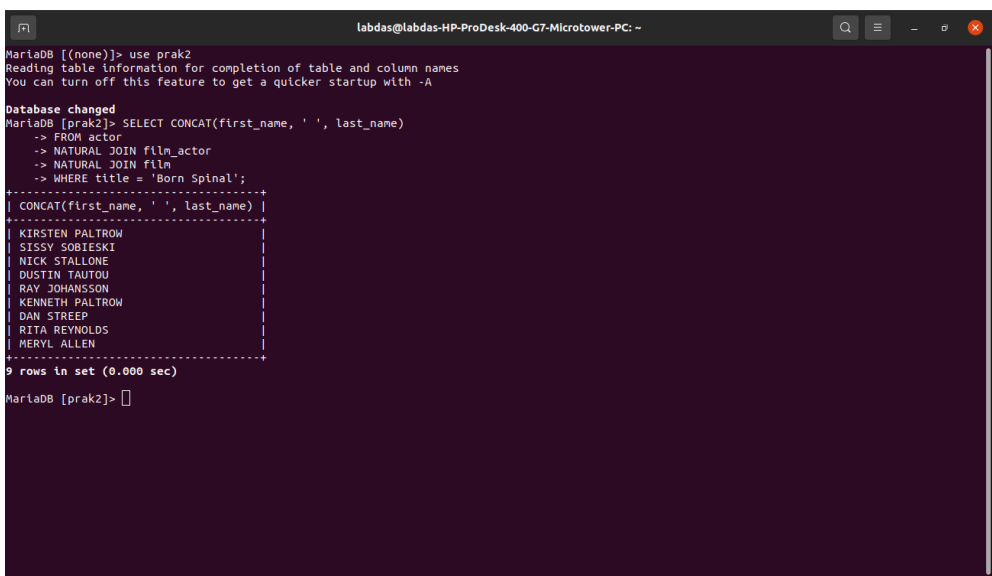
Waktu: 100 Menit
7.10 WIB - 8.50 WIB

I. Soal

A. Bagian 1

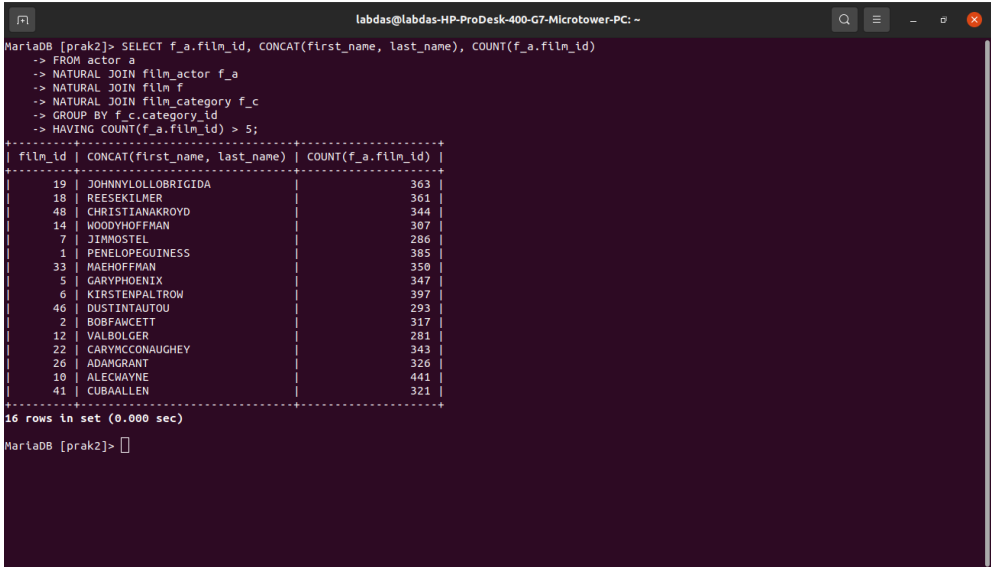
Kerjakan bagian ini terlebih dahulu sebelum pindah ke bagian 2. Query dan SS yang diminta sama dengan praktikum sebelumnya. Pastikan SS yang dilampirkan sesuai dengan ketentuan yang telah tercantum pada file **Panduan Praktikum 2**.

1. Tampilkan seluruh nama lengkap aktor yang tampil pada film “BORN SPINAL”!
(Gunakan Join Statement)

Query	<pre>SELECT CONCAT(first_name, ' ', last_name) FROM actor NATURAL JOIN film_actor NATURAL JOIN film WHERE title = 'Born Spinal';</pre>
SS	 <pre>labdas@labdas-HP-ProDesk-400-G7-Microtower-PC: ~ MariaDB [(none)]> use prak2 Reading table information for completion of table and column names You can turn off this feature with -A Database changed MariaDB [prak2]> SELECT CONCAT(first_name, ' ', last_name) -> FROM actor -> NATURAL JOIN film_actor -> NATURAL JOIN film -> WHERE title = 'Born Spinal'; +-----+ CONCAT(first_name, ' ', last_name) +-----+ KIRSTEN PALTROW SISSY SOBIESKI NICK STALLONE DUSTIN TAUTOU RAY JOHANSSON KENNETH PALTROW DAN STREEP RITA REYNOLDS MERYL ALLEN +-----+ 9 rows in set (0.000 sec) MariaDB [prak2]></pre>

2. Tampilkan kategori film, nama aktor, dan jumlah film yang dimainkan oleh masing-masing aktor di dalam masing-masing kategori dengan ketentuan aktor

tersebut pernah bermain lebih dari 5 film pada kategori tersebut.

Query	<pre> SELECT f_a.film_id, CONCAT(first_name, last_name), COUNT(f_a.film_id) FROM actor a NATURAL JOIN film_actor f_a NATURAL JOIN film f NATURAL JOIN film_category f_c GROUP BY f_c.category_id HAVING COUNT(f_a.film_id) > 5; </pre>
SS	 <pre> labdas@labdas-HP-ProDesk-400-G7-Microtower-PC: ~ MariaDB [prak2]> SELECT f_a.film_id, CONCAT(first_name, last_name), COUNT(f_a.film_id) -> FROM actor a -> NATURAL JOIN film_actor f_a -> NATURAL JOIN film f -> NATURAL JOIN film_category f_c -> GROUP BY f_c.category_id -> HAVING COUNT(f_a.film_id) > 5; +-----+-----+-----+ film_id CONCAT(first_name, last_name) COUNT(f_a.film_id) +-----+-----+-----+ 19 JohnnY LoloBrigida 363 18 Reese Kilmer 361 48 Christian Kroyd 344 14 Woody Hoffman 307 7 Jim Hostel 286 1 Penelope Guinness 385 33 Mae Hoffman 350 5 Gary Phoenix 347 6 Kirsten Paltrou 397 46 Dustintautou 293 2 Bob Fawcett 317 12 Val Bolger 281 22 Caryn McCaughy 343 26 Adam Grant 326 10 Alec Wayne 441 41 Cuba Allen 321 +-----+-----+-----+ 16 rows in set (0.000 sec) MariaDB [prak2]> </pre>

- Buatlah sebuah query untuk menunjukkan id film yang memiliki length lebih dari 100 satuan, berkategori Family, dan memiliki *special feature* berupa Behind the Scenes namun tidak pernah dirental antara bulan Juli sampai bulan Desember! Cobalah untuk membuat query ini hanya dengan menggunakan 3 join statement!
Hint: Gunakan fungsi MONTH()

Query	<pre> SELECT f.film_id FROM film f NATURAL JOIN film_category fc NATURAL JOIN category c WHERE length > 100 AND name = 'Family' AND special_features = 'Behind the Scenes' AND rental_duration NOT IN (7, 8, 9, 10, 11, 12); </pre>
-------	--

SS

labdas@labdas-HP-ProDesk-400-G7-Microtower-PC: ~

```

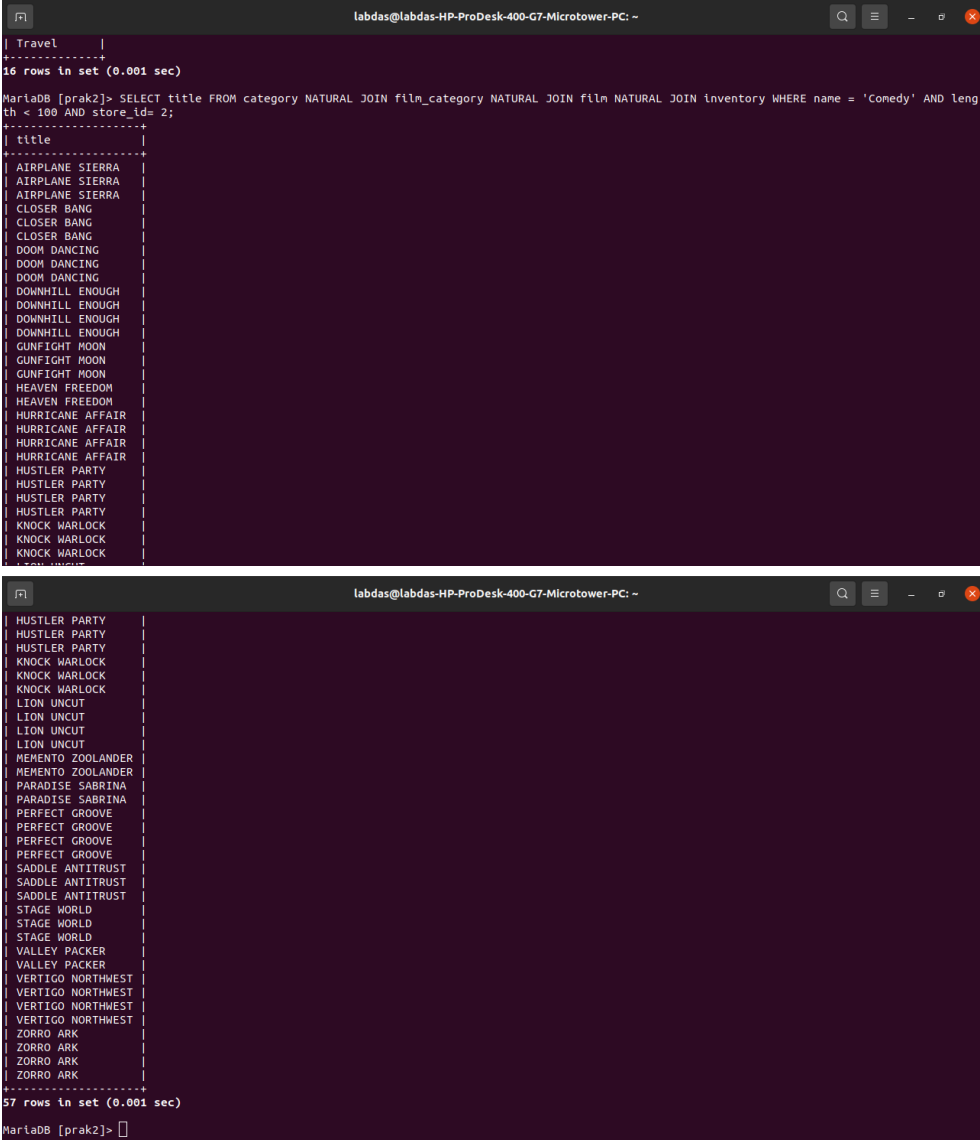
MariaDB [prak2]> SELECT f.film_id
-> FROM film f
-> NATURAL JOIN film_category fc
-> NATURAL JOIN category c
-> WHERE length > 100
-> AND name = 'Family'
-> AND special_features = 'Behind the Scenes'
-> AND rental_duration NOT IN (7,8,9,10,11,12);
+-----+
| film_id |
+-----+
| 43 |
| 262 |
| 695 |
| 822 |
+-----+
4 rows in set (0.001 sec)

MariaDB [prak2]>

```

4. Nona Nin sedang sedih sekali. Oleh karena itu, Nona Nin berniat menonton film dengan kategori komedi untuk menghibur diri. Tetapi, karena deadline tugas besar yang menumpuk, ia hanya bisa menonton film dengan jangka waktu singkat, yaitu *length* di bawah 100. Ia juga hanya mau meminjam di store dengan ID 2 karena jarak store itu lebih dekat dengan rumahnya. Bantu Nona Nin dengan menampilkan pilihan judul film yang bisa ia tonton!

Query	SELECT title FROM category NATURAL JOIN film_category NATURAL JOIN film NATURAL JOIN inventory WHERE name = 'Comedy' AND length < 100 AND store_id = 2;
-------	--

SS	 <pre> labdas@labdas-HP-ProDesk-400-G7-Microtower-PC: ~ Travel -----+----- 16 rows in set (0.001 sec) MariaDB [prak2]> SELECT title FROM category NATURAL JOIN film_category NATURAL JOIN film NATURAL JOIN inventory WHERE name = 'Coney' AND length < 100 AND store_id= 2; -----+----- title -----+----- AIRPLANE SIERRA AIRPLANE SIERRA AIRPLANE SIERRA CLOSER BANG CLOSER BANG CLOSER BANG DOOM DANCING DOOM DANCING DOOM DANCING DOWNHILL ENOUGH DOWNHILL ENOUGH DOWNHILL ENOUGH GUNFIGHT MOON GUNFIGHT MOON GUNFIGHT MOON HEAVEN FREEDOM HEAVEN FREEDOM HURRICANE AFFAIR HURRICANE AFFAIR HURRICANE AFFAIR HUSTLER PARTY HUSTLER PARTY HUSTLER PARTY HUSTLER PARTY KNOCK WARLOCK KNOCK WARLOCK KNOCK WARLOCK LION UNCUT LION UNCUT LION UNCUT MEMENTO ZOOLANDER MEMENTO ZOOLANDER PARADISE SABRINA PARADISE SABRINA PERFECT GROOVE PERFECT GROOVE PERFECT GROOVE PERFECT GROOVE SADDLE ANTITRUST SADDLE ANTITRUST SADDLE ANTITRUST STAGE WORLD STAGE WORLD STAGE WORLD VALLEY PACKER VALLEY PACKER VERTIGO NORTHWEST VERTIGO NORTHWEST VERTIGO NORTHWEST ZORRO ARK ZORRO ARK ZORRO ARK ZORRO ARK -----+----- 57 rows in set (0.001 sec) MariaDB [prak2]> </pre>
----	---

- Buatlah sebuah query untuk menampilkan id aktor dan nama lengkap dari aktor yang pernah bermain di film dengan category Family atau Music.

Query	<pre> SELECT actor_id, CONCAT(first_name, ' ', last_name) FROM actor NATURAL JOIN film_actor NATURAL JOIN film NATURAL JOIN film_category NATURAL JOIN category WHERE name = 'Family' OR name = 'Music'; </pre>
-------	---

SS

```
labdas@labdas-HP-ProDesk-400-G7-Microtower-PC: ~
-> NATURAL JOIN film_category\
-> NATURAL JOIN category
-> WHERE category = 'Family' OR category = 'Music';
ERROR 1054 (42S22): Unknown column 'category' in 'where clause'
MariaDB [prak2]> SELECT actor_id, CONCAT(first_name, ' ', last_name) FROM actor NATURAL JOIN film_actor NATURAL JOIN film NATURAL JOIN film_category NATURAL JOIN category WHERE name = 'Family' OR name = 'Music';
+-----+-----+
| actor_id | CONCAT(first_name, ' ', last_name) |
+-----+-----+
| 51 | GARY PHOENIX |
| 59 | DUSTIN TAUTOU |
| 103 | MATTHEW LEIGH |
| 181 | MATTHEW CARREY |
| 200 | THORA TEMPLE |
| 2 | NICK WAHLBERG |
| 15 | CUBA OLIVIER |
| 49 | ANNE CRONYN |
| 60 | HENRY BERRY |
| 28 | WOODY HOFFMAN |
| 34 | AUDREY OLIVIER |
| 123 | JULIANNE DENCH |
| 126 | FRANCES OMEI |
| 130 | GRETA KEITEL |
| 141 | CATE HARRIS |
| 160 | CHRIS DEPP |
| 161 | HARVEY HOPE |
| 189 | CUBA BIRCH |
| 70 | MICHELLE MCCONAUGHEY |
| 6 | BETTE NICHOLSON |
| 30 | SANDRA PECK |
| 47 | JULIA BARRYMORE |
| 70 | MICHELLE MCCONAUGHEY |
| 102 | WALTER TORN |
| 149 | RUSSELL TEMPLE |
| 156 | FAY WOOD |
| 20 | LUCILLE TRACY |
| 51 | GARY PHOENIX |
| 56 | DAN HARRIS |
+-----+-----+
```

```
labdas@labdas-HP-ProDesk-400-G7-Microtower-PC: ~
149 | RUSSELL TEMPLE
161 | HARVEY HOPE
173 | ALAN DREYFUSS
181 | MATTHEW CARREY
8 | MATTHEW JOHANSSON
56 | DAN HARRIS
73 | GARY PENN
101 | SUSAN DAVIS
134 | GENE HOPKINS
1 | PENELOPE GUINNESS
10 | CHRISTIAN GABLE
32 | TIM HACKMAN
46 | PARKER GOLDBERG
49 | ANNE CRONYN
53 | HENA TEMPLE
64 | RAY JOHANSSON
101 | SUSAN DAVIS
102 | WALTER TORN
10 | CHRISTIAN GABLE
21 | KIRSTEN PALTROW
178 | LISA MONROE
183 | RUSSELL CLOSE
186 | JULIA ZELLWEGER
96 | GENE WILLIS
110 | SUSAN DAVIS
124 | SCARLETT BENING
132 | ADAM HOPPER
147 | FAY WINSLET
155 | IAN TANDY
23 | SANDRA KILMER
37 | VAL BOLGER
124 | SCARLETT BENING
155 | IAN TANDY
198 | MARY KEITEL
+-----+-----+
628 rows in set (0.004 sec)

MariaDB [prak2]> |
```

- Tampilkan tanggal dan jumlah film terbanyak yang berhasil disewakan oleh perusahaan Sakila dalam 1 hari! (Perusahaan Sakila yang dimaksud adalah secara keseluruhan, bukan cabang tertentu)

HINT : Gunakan Sub-query

Query	SELECT DAY(rental_date), COUNT(film_id) FROM rental NATURAL JOIN inventory NATURAL JOIN film GROUP BY DAY(rental_date) WHERE COUNT(film_id) IN (SELECT MAX(COUNT(film_id))
-------	--

	<pre> FROM rental NATURAL JOIN inventory NATURAL JOIN film GROUP BY DAY(rental_date)); </pre>
SS	

7. Buatlah sebuah query untuk menampilkan semua nama lengkap aktor yang memainkan film dengan rental terbanyak.

Hint : Gunakan fungsi CONCAT()

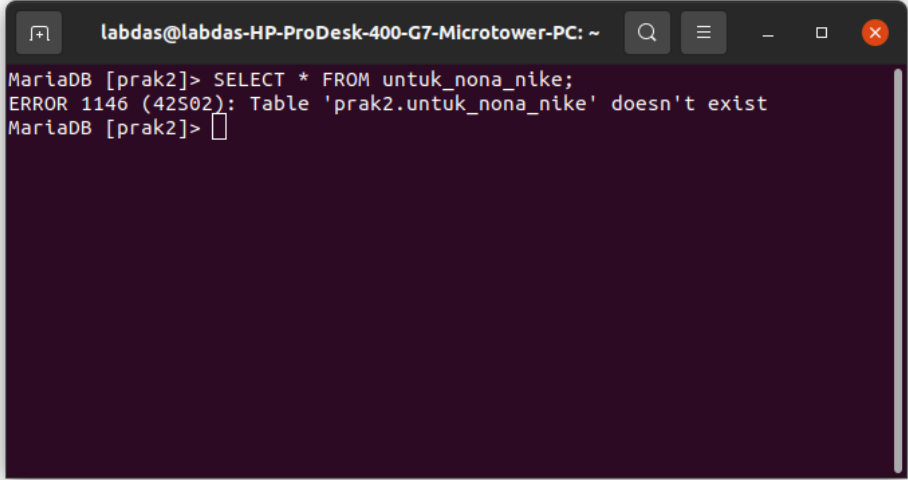
Query	<pre> SELECT CONCAT(first_name, ' ', last_name) FROM actor NATURAL JOIN film_actor NATURAL JOIN film NATURAL JOIN inventory WHERE inventory_id IN (SELECT inventory_id </pre>
SS	

B. Bagian 2

Kerjakan bagian ini **setelah** selesai mengerjakan bagian 1. Terdapat 3 file SS yang diminta pada bagian ini, yaitu **sebelum**, **saat**, dan **sesudah** melakukan modifikasi). Bukti SS sebelum dan sesudah harus menunjukkan keadaan sebelum modifikasi dan bukti SS setelah harus menunjukkan keadaan

setelah dilakukan modifikasi. SS saat pastikan terdapat tulisan 'Query OK' dan berapa rows yang dimodifikasi.

8. Buatlah sebuah query untuk membuat view dengan nama `untuk_nona_nike` yang berisi judul, deskripsi, dan durasi rental dari film-film yang disewa selama lebih dari 8 hari dan memiliki fitur spesial Trailer dan Behind the Scenes. Pastikan view diurutkan berdasarkan durasi rental dari yang paling tinggi dan judul sesuai dengan abjad.

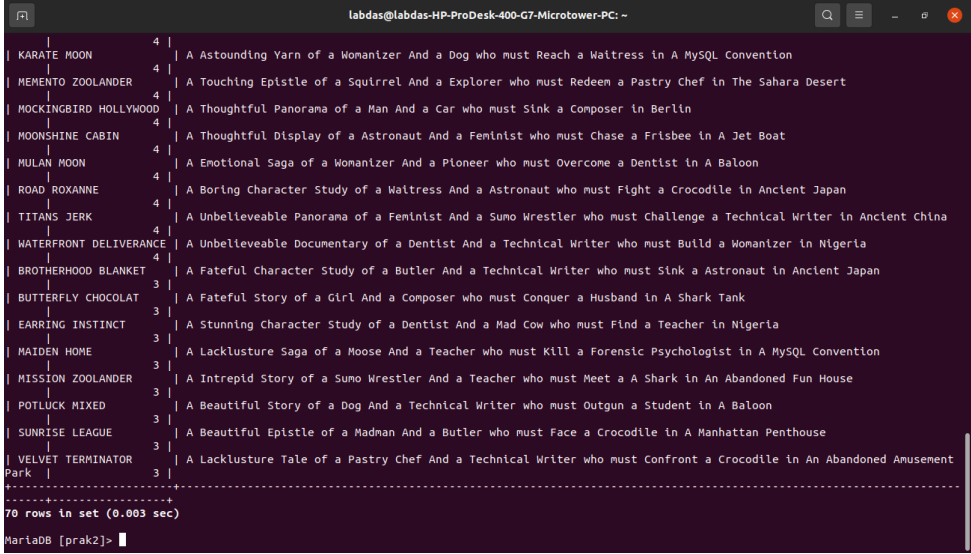
Query	<pre>CREATE VIEW untuk_nona_nike AS SELECT title, description, rental_duration FROM film WHERE rental_duration > 8 AND special_features = 'Trailer' OR special_features = 'Behind the Scenes' ORDER BY rental_duration DESC, title;</pre>
SS sebelum	

SS saat

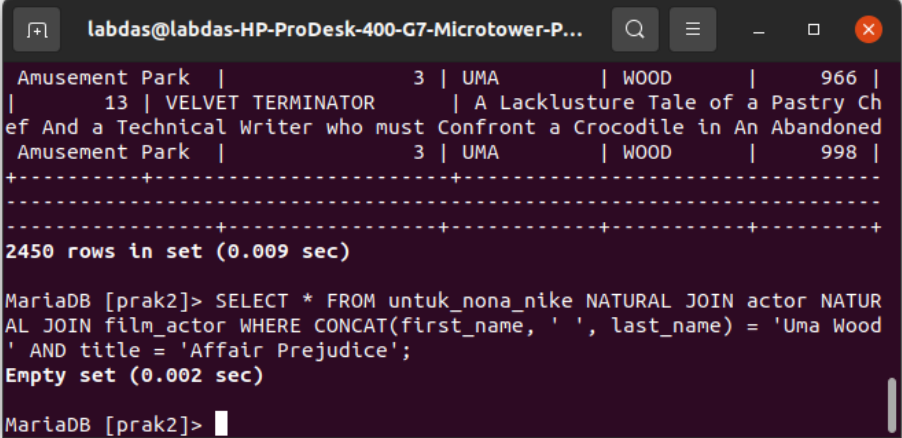
```
labdas@labdas-HP-ProDesk-400-G7-Microtower-PC: ~  
MariaDB [prak2]> SELECT * FROM untuk_nona_nike;  
ERROR 1146 (42S02): Table 'prak2.untuk_nona_nike' doesn't exist  
MariaDB [prak2]> CREATE VIEW untuk_nona_nike AS SELECT title, description  
, rental_duration FROM FILM WHERE rental_duration > 8 AND special_feature  
s = 'Trailer' OR special_features = 'Behind the Scenes' ORDER BY rental_d  
uration DESC, title;  
ERROR 1146 (42S02): Table 'prak2.FILM' doesn't exist  
MariaDB [prak2]> CREATE VIEW untuk_nona_nike AS SELECT title, description  
, rental_duration FROM film WHERE rental_duration > 8 AND special_feature  
s = 'Trailer' OR special_features = 'Behind the Scenes' ORDER BY rental_d  
uration DESC, title;  
Query OK, 0 rows affected (0.008 sec)  
  
MariaDB [prak2]> █
```

SS
sesudah

```
labdas@labdas-HP-ProDesk-400-G7-Microtower-PC: ~  
MariaDB [prak2]> CREATE VIEW untuk_nona_nike AS SELECT title, description, rental_duration FROM FILM WHERE rental_duration > 8 AND special_fea  
tures = 'Trailer' OR special_features = 'Behind the Scenes' ORDER BY rental_duration DESC, title;  
ERROR 1146 (42S02): Table 'prak2.FILM' doesn't exist  
MariaDB [prak2]> CREATE VIEW untuk_nona_nike AS SELECT title, description, rental_duration FROM film WHERE rental_duration > 8 AND special_fea  
tures = 'Trailer' OR special_features = 'Behind the Scenes' ORDER BY rental_duration DESC, title;  
Query OK, 0 rows affected (0.008 sec)  
  
MariaDB [prak2]> select * from untuk_nona_nike;  
+-----+-----+-----+-----+-----+-----+  
| title | rental_duration | description |  
+-----+-----+-----+-----+-----+-----+  
| BOONDOCK BALLROOM | 7 | A Fateful Panorama of a Crocodile And a Boy who must Defeat a Monkey in The Gulf of Mexico |  
| CHAPLIN LICENSE | 7 | A Boring Drama of a Dog And a Forensic Psychologist who must Outrace a Explorer in Ancient India |  
| CIDER DESIRE | 7 | A Stunning Character Study of a Composer And a Mad Cow who must Succumb a Cat in Soviet Georgia |  
| CONFESSIONS MAGUIRE | 7 | A Insightful Story of a Car And a Boy who must Battle a Technical Writer in A Baloon |  
| GAMES BOWFINGER | 7 | A Astounding Documentary of a Butler And a Explorer who must Challenge a Butler in A Monastery |  
| GUN BONNIE | 7 | A Boring Display of a Sumo Wrestler And a Husband who must Build a Waitress in The Gulf of Mexico |  
| HOLLOW JEOPARDY | 7 | A Beautiful Character Study of a Robot And a Astronaut who must Overcome a Boat in A Monastery |  
| MARRIED GO | 7 | A Fanciful Story of a Womanizer And a Dog who must Face a Forensic Psychologist in The Sahara Desert |  
| MIGHTY LUCK | 7 | A Astounding Epistle of a Mad Scientist And a Pioneer who must Escape a Database Administrator in A MySQL Conventio  
n |  
| OKLAHOMA JUMANJI | 7 | A Thoughtful Drama of a Dentist And a Womanizer who must Meet a Husband in The Sahara Desert |  
| OSCAR GOLD | 7 | A Insightful Tale of a Database Administrator And a Dog who must Face a Madman in Soviet Georgla |  
| RECORDS ZORRO | 7 | A Amazing Drama of a Mad Scientist And a Composer who must Build a Husband in The Outback |  
| SENSIBILITY DEAD | 7 | A Sentential Tale of a Robot And a Sumo Wrestler who must Defeat a Butrey Chef in A Baloon Factory |
```


	
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9. Setelah ditonton ulang, ternyata aktor Uma Wood juga terlibat dalam film Affair Prejudice. Buatlah query untuk memasukkan data bahwa Uma Wood juga tampil dalam film Affair Prejudice.

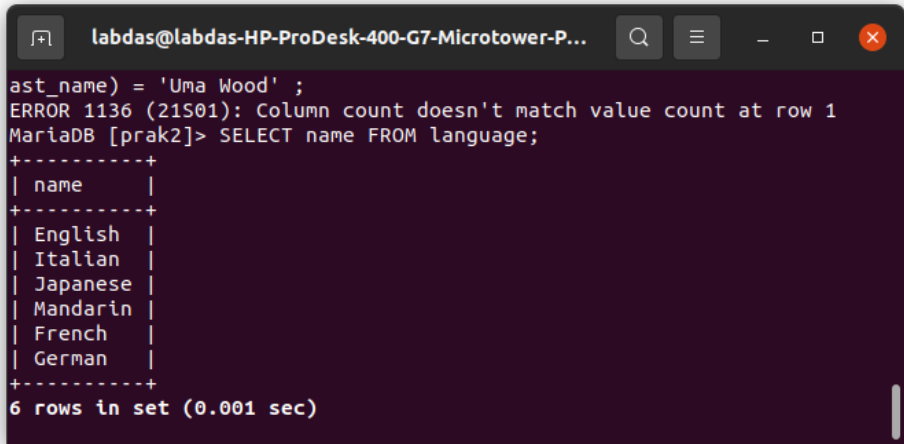
Query	INSERT INTO untuk_nona_nike(title) VALUES ('Affair Prejudice')
SS sebelum	
SS saat	
SS sesudah	

10. Belakangan ini, nama aktor Dan Streep kembali viral karena sensasi yang ia buat. Hal ini berdampak positif pada film-film yang pernah ia bintangi. Film-film yang dibintangi oleh Dan Streep kembali dicari-cari oleh masyarakat dan membuat perusahaan rental film dapat meraup keuntungan yang cukup signifikan. Hal ini dimanfaatkan oleh Tuan Jek, manager perusahaan rental, untuk dapat menaikkan harga rental film-film yang dibintangi oleh Dan Streep. Tuan Jek memerintahkan Database Administrator perusahaan untuk dapat menaikkan harga rental film yang dibintangi oleh Dan Street sebesar 20% dari harga awal.

Bayangkan Anda sebagai Database Administrator dari perusahaan Tuan Jek. Bantulah Tuan Jek untuk dapat menaikkan harga rental film pada database perusahaan!

Query	
SS sebelum	
SS saat	
SS sesudah	

11. Buatlah query untuk menghapus seluruh bahasa yang ada di tabel language selain bahasa inggris.

Query	DELETE FROM language WHERE name <> 'English';
SS sebelum	 <pre>labdas@labdas-HP-ProDesk-400-G7-Microtower-P... ast_name) = 'Uma Wood' ; ERROR 1136 (21S01): Column count doesn't match value count at row 1 MariaDB [prak2]> SELECT name FROM language; +-----+ name +-----+ English Italian Japanese Mandarin French German +-----+ 6 rows in set (0.001 sec)</pre>

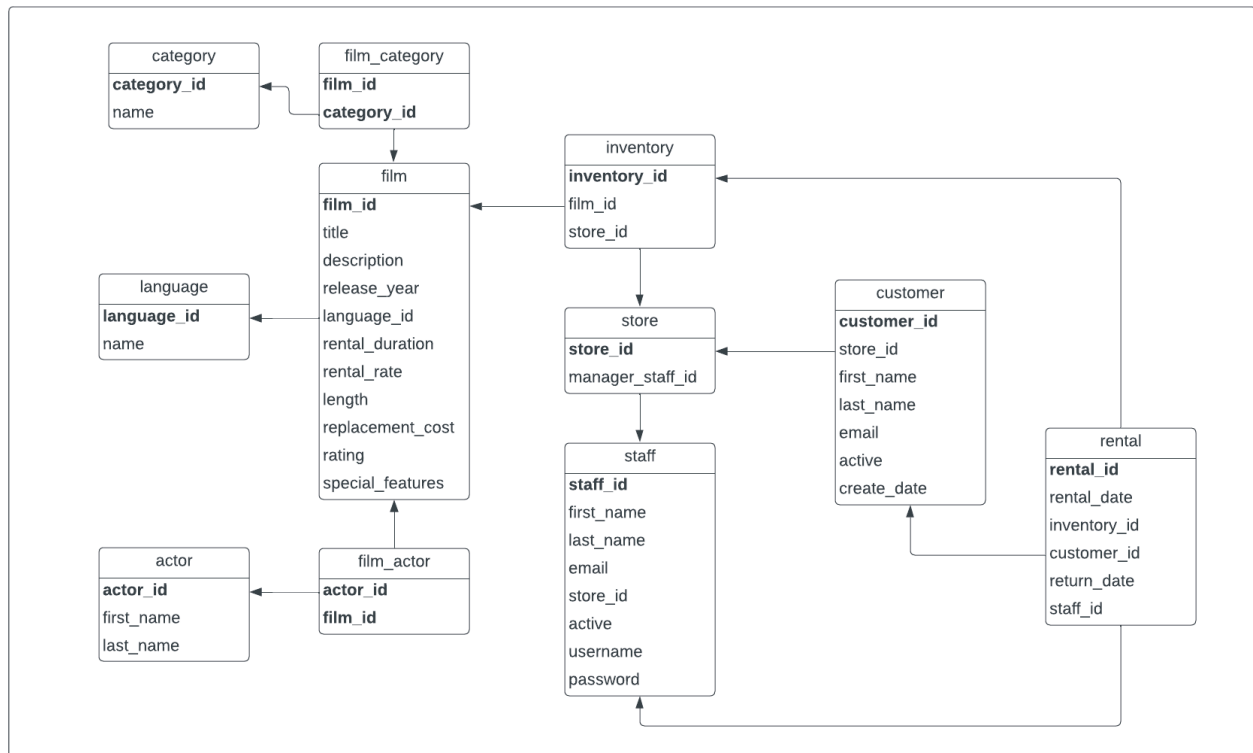
SS saat

```
labdas@labdas-HP-ProDesk-400-G7-Microtower-P...  
| Japanese |  
| Mandarin |  
| French   |  
| German   |  
+-----+  
6 rows in set (0.001 sec)  
  
MariaDB [prak2]> DELETE FROM language  
-> WHERE name <> 'English';  
ERROR 1054 (42S22): Unknown column 'English' in 'where clause'  
MariaDB [prak2]> DELETE FROM language  
-> WHERE name <> 'English';  
Query OK, 5 rows affected (0.008 sec)  
  
MariaDB [prak2]> 
```

SS
sesudah

```
labdas@labdas-HP-ProDesk-400-G7-Microtower-P...  
-> WHERE name <> 'English';  
ERROR 1054 (42S22): Unknown column 'English' in 'where clause'  
MariaDB [prak2]> DELETE FROM language  
-> WHERE name <> 'English';  
Query OK, 5 rows affected (0.008 sec)  
  
MariaDB [prak2]> SELECT name FROM language;  
+-----+  
| name   |  
+-----+  
| English |  
+-----+  
1 row in set (0.001 sec)  
  
MariaDB [prak2]> 
```

I. Skema Basis Data



actor = (actor_id, first_name, last_name)

film_actor = (film_id, actor_id)

film = (film_id, title, description, release_year, language_id, rental_duration, rental_rate, length, replacement_cost, rating, special_features)

film_category = (film_id, category_id)

category = (category_id, name)

inventory = (inventory_id, film_id, store_id)

store = (store_id, manager_staff_id)

staff = (staff_id, first_name, last_name, email, store_id, active, username, password)

rental = (rental_id, rental_date, inventory_id, customer_id, return_date, staff_id)

customer = (customer_id, store_id, first_name, last_name, email, active, create_date)

II. Hint

1. Penggabungan pada string, dapat dilakukan dengan fungsi `CONCAT(string1, string2, ..., string-n)`

Contoh:

`CONCAT('aku', 'kamu')` akan mengembalikan "akukamu".

2. Untuk mengambil bulan dari sebuah atribut bertipe data *date* atau *datetime* dapat menggunakan fungsi `MONTH(datetime1)`.

Contoh:

`MONTH('2022-09-30')` akan mengembalikan nilai 9.