

TUGAS

INSTRUKSI

1. Perhatikan soal-soal di bawah!
2. Tampilkan data berikut menggunakan PROCEDURE & TRANSACTION!
3. Berikan **kode program SQL** dan **screenshot penggunaan kode** tersebut!
4. Disimpan dan disubmit ke kantong tugas dalam format **.docx** atau **.pdf**

SOAL 22.1 - PROCEDURE

1. Buatlah Procedure untuk mengupdate harga_jual berdasarkan jenis produk tertentu (jenis_produk_id), beri nama procedure pro_naikan_harga memiliki parameter yang akan menerima argumen: Jenis Produk ID dan Persentase kenaikan harga.

```

. . .
XAMPP for Windows - mysql -u root -p
MariaDB [db_koperasi]> select * from produk;
+----+-----+-----+-----+-----+-----+-----+-----+
| id | kode | nama          | harga_beli | harga_jual | stok | min_stok | jenis_produk_id |
+----+-----+-----+-----+-----+-----+-----+-----+
| 1  | TV01 | Televisi 21 inch | 3500000    | 5040000    | 29   | 2         | 1                 |
| 2  | TV02 | Televisi 40 inch | 5500000    | 342240000  | 4     | 2         | 1                 |
| 3  | K001 | Kulkas 2 pintu  | 3500000    | 2106000    | 6     | 2         | 1                 |
| 4  | M001 | Meja Makan      | 500000     | 604000     | 4     | 3         | 2                 |
| 5  | TK01 | Teh Kotak       | 3000       | 3500       | 6     | 10        | 4                 |
| 6  | PC01 | PC Desktop HP   | 7000000    | 9600000    | 9     | 2         | 5                 |
| 7  | TB01 | Teh Botol       | 2000       | 2500       | 53    | 10        | 4                 |
| 8  | AC01 | Notebook Acer   | 8000000    | 10800000   | 7     | 2         | 5                 |
| 9  | LN01 | Notebook Lenovo | 9000000    | 12000000   | 9     | 2         | 5                 |
| 10 | L004 | Laptop HP       | 12000000   | 13000000   | 20    | 5         | 5                 |
+----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.001 sec)

MariaDB [db_koperasi]> select * from produk;
+----+-----+-----+-----+-----+-----+-----+-----+
| id | kode | nama          | harga_beli | harga_jual | stok | min_stok | jenis_produk_id |
+----+-----+-----+-----+-----+-----+-----+-----+
| 1  | TV01 | Televisi 21 inch | 3500000    | 5040000    | 29   | 2         | 1                 |
| 2  | TV02 | Televisi 40 inch | 5500000    | 342240000  | 4     | 2         | 1                 |
| 3  | K001 | Kulkas 2 pintu  | 3500000    | 96876000   | 6     | 2         | 1                 |
| 4  | M001 | Meja Makan      | 500000     | 604000     | 4     | 3         | 2                 |
| 5  | TK01 | Teh Kotak       | 3000       | 3500       | 6     | 10        | 4                 |
| 6  | PC01 | PC Desktop HP   | 7000000    | 9600000    | 9     | 2         | 5                 |
| 7  | TB01 | Teh Botol       | 2000       | 2500       | 53    | 10        | 4                 |
| 8  | AC01 | Notebook Acer   | 8000000    | 10800000   | 7     | 2         | 5                 |
| 9  | LN01 | Notebook Lenovo | 9000000    | 12000000   | 9     | 2         | 5                 |
| 10 | L004 | Laptop HP       | 12000000   | 13000000   | 20    | 5         | 5                 |
+----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.001 sec)

MariaDB [db_koperasi]>
XAMPP for Windows - mysql -u root -p
MariaDB [db_koperasi]> DELIMITER /
MariaDB [db_koperasi]> CREATE PROCEDURE pro_naikan_harga(
  IN id_produk INT,
  IN persentase_kenaikan INT
)
BEGIN
  UPDATE produk SET harga_jual= harga_jual + (harga_jual * persentase_kenaikan) WHERE
  id = id_produk;
END /
Query OK, 0 rows affected (0.149 sec)

MariaDB [db_koperasi]> DELIMITER ;
MariaDB [db_koperasi]>
MariaDB [db_koperasi]> DELIMITER /
MariaDB [db_koperasi]> CREATE PROCEDURE pro_naikan_harga(
  IN id_produk INT,
  IN persentase_kenaikan INT
)
BEGIN
  UPDATE produk SET harga_jual= harga_jual + (harga_jual * persentase_kenaikan) WHERE
  id = id_produk;
END /
Query OK, 0 rows affected (0.161 sec)

MariaDB [db_koperasi]> DELIMITER ;
MariaDB [db_koperasi]> CALL pro_naikan_harga(3, 45);
Query OK, 1 row affected (0.078 sec)

MariaDB [db_koperasi]>

```

Nama: Azhar Fikri

2. Buat fungsi umur dengan parameter yang menerima inputan argumen tipe data date dan mengembalikan hasil perhitungan umur (tahun sekarang dikurang tahun inputan) dengan tipe data bilangan bulat (integer) positif.

```
MariaDB [db_koperasi]> CREATE FUNCTION umur(tgl_lahir DATE)
-> RETURNS INT
-> BEGIN
-> DECLARE umur DATE;
-> RETURN YEAR(now()) - YEAR(tgl_lahir)
-> END $
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server
on for the right syntax to use near 'END' at line 6
MariaDB [db_koperasi]> CREATE FUNCTION umur(tgl_lahir DATE)
-> RETURNS INT
-> BEGIN
-> DECLARE umur DATE;
-> RETURN YEAR(now()) - YEAR(tgl_lahir);
-> END $
Query OK, 0 rows affected (0.009 sec)

MariaDB [db_koperasi]>
MariaDB [db_koperasi]> DELIMITER ;
MariaDB [db_koperasi]> SELECT umur();
```

```
MariaDB [db_koperasi]> SELECT *, umur(tgl_lahir) AS umur FROM pelanggan;
+-----+-----+-----+-----+-----+-----+-----+-----+
| id | kode | nama          | jk | tmp_lahir | tgl_lahir | email                | kartu_id | umur |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | C001 | Agung Sedayu | L | Solo      | 2010-01-01 | sedayu@gmail.com     | 1 | 14 |
| 2 | C002 | Pandan Wangi | P | Yogyakarta | 1950-01-01 | wangi@gmail.com      | 2 | 74 |
| 3 | C003 | Sekar Mirah  | P | Kediri    | 1983-02-20 | mirah@yahoo.com      | 1 | 41 |
| 4 | C004 | Swandaru Geni | L | Kediri    | 1981-01-04 | swandaru@yahoo.com   | 4 | 43 |
| 5 | C005 | Pradabashu   | L | Pati      | 1985-04-02 | prada85@gmail.com    | 2 | 39 |
| 6 | C006 | Gayatri Dwi  | P | Jakarta   | 1987-11-28 | gaya87@gmail.com     | 1 | 37 |
| 7 | C007 | Dewi Gyat    | P | Jakarta   | 1988-12-01 | giyat@gmail.com      | 1 | 36 |
| 8 | C008 | Andre Haru   | L | Surabaya  | 1990-07-15 | andre.haru@gmail.com | 4 | 34 |
| 9 | C009 | Ahmad Hasan  | L | Surabaya  | 1992-10-15 | ahasan@gmail.com     | 4 | 32 |
| 10 | C010 | Cassandra   | P | Belfast   | 1990-11-20 | casa90@gmail.com     | 1 | 34 |
+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.001 sec)

MariaDB [db_koperasi]> SELECT umur('2012-03-03');
+-----+
| umur('2012-03-03') |
+-----+
| 12 |
+-----+
1 row in set (0.000 sec)

MariaDB [db_koperasi]> |
```

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3. Buat fungsi kategori_harga dengan parameter yang menerima inputan argument tipe data double dan mengembalikan tipe data string kategori harga berdasarkan:
- o 0 – 500rb : murah
 - o 500rb – 3 juta : sedang
 - o 3jt – 10 juta : mahal
 - o > 10 juta : sangat mahal

```
MariaDB [db_koperasi]> DELIMITER $
MariaDB [db_koperasi]> CREATE FUNCTION kategori_harga(harga_beli DOUBLE)
-> RETURNS VARCHAR(20)
-> DETERMINISTIC
-> BEGIN
-> RETURN case
-> WHEN harga_beli >= 0 AND harga_beli <= 500000 THEN "Murah"
-> WHEN harga_beli > 500000 AND harga_beli <= 3000000 THEN "Sedang"
-> WHEN harga_beli > 3000000 AND harga_beli <= 10000000 THEN ' Mahal'
-> WHEN harga_beli > 10000000 THEN 'SANGAT MAHAL'
-> ELSE 'Tidak Valid'
-> END;
-> END $
Query OK, 0 rows affected (0.008 sec)

MariaDB [db_koperasi]> SELECT *, kategori_harga(harga_beli) FROM produk;
-> $
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | kode | nama | harga_beli | harga_jual | stok | min_stok | jenis_produk_id | kategori_harga(harga_beli) |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | TV01 | Televisi 21 inch | 3500000 | 5040000 | 5 | 2 | 1 | Mahal |
| 2 | TV02 | Televisi 40 inch | 5500000 | 7440000 | 4 | 2 | 1 | Mahal |
| 3 | K001 | Kulkas 2 pintu | 3500000 | 4680000 | 6 | 2 | 1 | Mahal |
| 4 | M001 | Meja Makan | 500000 | 600000 | 4 | 3 | 2 | Murah |
| 5 | TK01 | Teh Kotak | 3000 | 3500 | 6 | 10 | 4 | Murah |
| 6 | PC01 | PC Desktop HP | 7000000 | 9600000 | 9 | 2 | 5 | Mahal |
| 7 | TB01 | Teh Botol | 2000 | 2500 | 53 | 10 | 4 | Murah |
| 8 | AC01 | Notebook Acer | 8000000 | 10800000 | 7 | 2 | 5 | Mahal |
| 9 | LN01 | Notebook Lenovo | 9000000 | 12000000 | 9 | 2 | 5 | Mahal |
| 10 | L004 | Laptop HP | 12000000 | 13000000 | 20 | 5 | 5 | SANGAT MAHAL |
+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.001 sec)

MariaDB [db_koperasi]> |
```

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SOAL 22.2 - STORED PROCEDURE

1. Buatlah Stored Procedure dengan nama kurangi_stok untuk mengurangi stok produk. Stok berkurang sesuai dengan jumlah pesanan produk.

CREATE PROCEDURE ...

```
MariaDB [db_koperasi]> CREATE PROCEDURE kurangi_stok(
  -> IN produk_id INT,
  -> IN jumlah_pesanan INT
  -> )
  -> BEGIN
  -> UPDATE produk SET stok = stok - jumlah_pesanan WHERE id = produk_id AND stok >= jumlah_pesanan;
  -> END $
Query OK, 0 rows affected (0.167 sec)

MariaDB [db_koperasi]> DELIMITER ;
MariaDB [db_koperasi]> CALL kurangi_stok(1, 10);
Query OK, 1 row affected (0.061 sec)

MariaDB [db_koperasi]> SELECT * FROM produk;
```

id	kode	nama	harga_beli	harga_jual	stok	min_stok	jenis_produk_id
1	TV01	Televisi 21 inch	3500000	5040000	19	2	1
2	TV02	Televisi 40 inch	5500000	342240000	4	2	1
3	K001	Kulkas 2 pintu	3500000	96876000	9	2	1
4	M001	Meja Makan	500000	604000	4	3	2
5	TK01	Teh Kotak	3000	3500	6	10	4
6	PC01	PC Desktop HP	7000000	9600000	9	2	5
7	TB01	Teh Botol	2000	2500	53	10	4
8	AC01	Notebook Acer	8000000	10800000	7	2	5
9	LN01	Notebook Lenovo	9000000	12000000	9	2	5
10	L004	Laptop HP	12000000	13000000	20	5	5
17	L005	HP Samsung	450000	600000	10	4	5
18	L006	Notebook Samsung	450000	600000	5	4	5
19	L007	Macbook	450000	600000	7	4	5

```
13 rows in set (0.001 sec)
```

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SOAL 22.3 - TRANSACTION

1. Buatlah sebuah transaction dengan skenario-skenario statement sebagai berikut:
 - a. Mulai transaction
 - b. Insert data produk sebanyak 3 record
 - c. Update data stok salah satu produk
 - d. Buat savepoint
 - e. Hapus salah satu data pembayaran
 - f. Kembali ke savepoint
 - g. Update data iuran salah satu kartu
 - h. Akhiri transaction dengan commit

```
MariaDB [db_koperasi]> CALL pro_naikan_harga(3, 45);
Query OK, 1 row affected (0.078 sec)

MariaDB [db_koperasi]> START Transaction;
Query OK, 0 rows affected (0.000 sec)
```

```
10 rows in set (0.000 sec)

MariaDB [db_koperasi]> select * from produk;
+----+-----+-----+-----+-----+-----+-----+-----+
| id | kode | nama          | harga_beli | harga_jual | stok | min_stok | jenis_produk_id |
+----+-----+-----+-----+-----+-----+-----+-----+
| 1  | TV01 | Televisi 21 inch | 3500000    | 5040000    | 29   | 2        | 1                |
| 2  | TV02 | Televisi 40 inch | 5500000    | 342240000  | 4    | 2        | 1                |
| 3  | K001 | Kulkas 2 pintu  | 3500000    | 96876000   | 6    | 2        | 1                |
| 4  | M001 | Meja Makan      | 500000     | 604000     | 4    | 3        | 2                |
| 5  | TK01 | Teh Kotak       | 3000       | 3500       | 6    | 10       | 4                |
| 6  | PC01 | PC Desktop HP   | 7000000    | 9600000    | 9    | 2        | 5                |
| 7  | TB01 | Teh Botol       | 2000       | 2500       | 53   | 10       | 4                |
| 8  | AC01 | Notebook Acer   | 8000000    | 10800000   | 7    | 2        | 5                |
| 9  | LN01 | Notebook Lenovo | 9000000    | 12000000   | 9    | 2        | 5                |
| 10 | L004 | Laptop HP       | 12000000   | 13000000   | 20   | 5        | 5                |
+----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.001 sec)
```

```
MariaDB [db_koperasi]> INSERT INTO produk VALUES
-> (Default, 'L005', 'HP Samsung', 450000, 600000, 10, 4, 5),
-> (Default, 'L006', 'Notebook Samsung', 450000, 600000, 5, 4, 5),
-> (Default, 'L007', 'Macbook', 450000, 600000, 7, 4, 5);
Query OK, 3 rows affected (0.024 sec)
Records: 3 Duplicates: 0 Warnings: 0

MariaDB [db_koperasi]>
```

```
MariaDB [db_koperasi]> SELECT * FROM produk;
+----+-----+-----+-----+-----+-----+-----+-----+
| id | kode | nama          | harga_beli | harga_jual | stok | min_stok | jenis_produk_id |
+----+-----+-----+-----+-----+-----+-----+-----+
| 1  | TV01 | Televisi 21 inch | 3500000    | 5040000    | 29   | 2        | 1                |
| 2  | TV02 | Televisi 40 inch | 5500000    | 342240000  | 4    | 2        | 1                |
| 3  | K001 | Kulkas 2 pintu  | 3500000    | 96876000   | 9    | 2        | 1                |
| 4  | M001 | Meja Makan      | 500000     | 604000     | 4    | 3        | 2                |
| 5  | TK01 | Teh Kotak       | 3000       | 3500       | 6    | 10       | 4                |
| 6  | PC01 | PC Desktop HP   | 7000000    | 9600000    | 9    | 2        | 5                |
| 7  | TB01 | Teh Botol       | 2000       | 2500       | 53   | 10       | 4                |
| 8  | AC01 | Notebook Acer   | 8000000    | 10800000   | 7    | 2        | 5                |
| 9  | LN01 | Notebook Lenovo | 9000000    | 12000000   | 9    | 2        | 5                |
| 10 | L004 | Laptop HP       | 12000000   | 13000000   | 20   | 5        | 5                |
| 17 | L005 | HP Samsung      | 450000     | 600000     | 10   | 4        | 5                |
| 18 | L006 | Notebook Samsung | 450000     | 600000     | 5    | 4        | 5                |
| 19 | L007 | Macbook         | 450000     | 600000     | 7    | 4        | 5                |
+----+-----+-----+-----+-----+-----+-----+-----+
13 rows in set (0.000 sec)
```

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```
MariaDB [db_koperasi]> SAVEPOINT update_produk;  
Query OK, 0 rows affected (0.001 sec)  
  
MariaDB [db_koperasi]> _
```

```
MariaDB [db_koperasi]> select * from kartu;  
+-----+-----+-----+-----+-----+  
| id | kode | nama          | diskon | iuran |  
+-----+-----+-----+-----+-----+  
| 1 | GOLD | Gold Utama    | 0.05   | 100000 |  
| 2 | PLAT | Platinum Jaya | 0.1    | 150000 |  
| 3 | SLV  | Silver        | 0.025  | 50000  |  
| 4 | NO   | Non Member    | 0       | 0       |  
+-----+-----+-----+-----+-----+  
4 rows in set (0.000 sec)  
  
MariaDB [db_koperasi]> UPDATE kartu set iuran = 20000 WHERE id = 3;  
Query OK, 1 row affected (0.001 sec)  
Rows matched: 1  Changed: 1  Warnings: 0  
  
MariaDB [db_koperasi]> select * from kartu;  
+-----+-----+-----+-----+-----+  
| id | kode | nama          | diskon | iuran |  
+-----+-----+-----+-----+-----+  
| 1 | GOLD | Gold Utama    | 0.05   | 100000 |  
| 2 | PLAT | Platinum Jaya | 0.1    | 150000 |  
| 3 | SLV  | Silver        | 0.025  | 20000  |  
| 4 | NO   | Non Member    | 0       | 0       |  
+-----+-----+-----+-----+-----+  
4 rows in set (0.001 sec)  
  
MariaDB [db_koperasi]>
```

Nama: Azhar Fikri

```
ke
MariaDB [db_koperasi]> delete from pembayaran WHERE id = 2;
Query OK, 1 row affected (0.001 sec)

3
MariaDB [db_koperasi]> SELECT * FROM pembayaran;
+-----+-----+-----+-----+-----+-----+
| id | nokuitansi | tanggal | jumlah | ke | pesanan_id |
+-----+-----+-----+-----+-----+-----+
| 3 | P003 | 2042-02-10 | 30000 | 3 | 4 |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.000 sec)

MariaDB [db_koperasi]> ROLLBACK TO savepoint pembayaran;
Query OK, 0 rows affected (0.000 sec)

e
MariaDB [db_koperasi]> SELECT * FROM pembayaran;
+-----+-----+-----+-----+-----+-----+
| id | nokuitansi | tanggal | jumlah | ke | pesanan_id |
+-----+-----+-----+-----+-----+-----+
| 2 | P002 | 2022-02-10 | 10000 | 2 | 3 |
| 3 | P003 | 2042-02-10 | 30000 | 3 | 4 |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.000 sec)

MariaDB [db_koperasi]>
```

```
MariaDB [db_koperasi]> COMMIT ;
Query OK, 0 rows affected (0.085 sec)

MariaDB [db_koperasi]> _
```

2. Berikan penjelasan kapan saat yang tepat menggunakan LOCK TABLES READ
ketika sebuah table hanya boleh di read aja, saat SESSION aja dan privilege yang terbatas
3. Berikan penjelasan kapan saat yang tepat menggunakan LOCK TABLES WRITE
ketika sebuah table bisa melakukan CRUD (Create, READ, UPDATE, Delete)