

**LAPORAN MINGGU KE-12 TM 1**  
**BASIS DATA (PRAKTIKUM)**



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**S1 SISTEM INFORMASI**  
**FAKULTAS SAINS DAN TEKNOLOGI**  
**UNIVERSITAS AIRLANGGA**

**2021**

## **Data Definition Language (DDL)**

**Selasa, 25 Mei 2021**

### **Petunjuk Praktikum:**

- Ada 11 soal yang harus Anda kerjakan. Pada setiap soal, buatlah *script SQL*-nya dan *capture* hasilnya. Kedua-duanya di-*paste*-kan di dokumen word.
- Nama basis data yang Anda buat adalah **bikestore** ditambah 3 digit angka terakhir dari NIM Anda. Contoh: jika NIM Anda **081911633081**, maka nama basis data-nya adalah **bikestore\_081**. Hal ini juga berlaku apabila Anda diminta untuk **mengubah nama field/kolom**.
- Hasil pengerjaan yang Anda kumpulkan berupa dokumen PDF dengan ketentuan penamaan file **Week12\_TM1\_NIM.pdf**. Contoh: **Week12\_TM1\_081911633081.pdf**

### **Soal:**

- Buatlah basis data dengan nama **bikestore\_nim!**
- Buatlah tabel **productGroups** seperti di bawah ini!

Field	Type	Null	Key	Default	Extra
productGroup	varchar(50)	YES		NULL	
textDescription	varchar(4000)	YES		NULL	
htmlDescription	mediumtext	YES		NULL	
image	mediumblob	YES		NULL	

- Setelah kolom/field **htmlDescription**, tambahkan kolom baru dengan nama **dimensionDescription** dengan tipe data berupa *text*, boleh *null*, dan default *null*.
- Tambahkan identifier **primary key** pada **productGroup**!
- Ubahlah tipe data kolom **textDescription** menjadi **varchar(2000)** dan kolom **htmlDescription** menjadi **text**!
- Ubahlah nama kolom **image** menjadi **picture**!
- Ubahlah nama tabel **productGroups** menjadi **productGroups\_nim**!

8. Buatlah tabel **products\_nim** seperti di bawah ini!

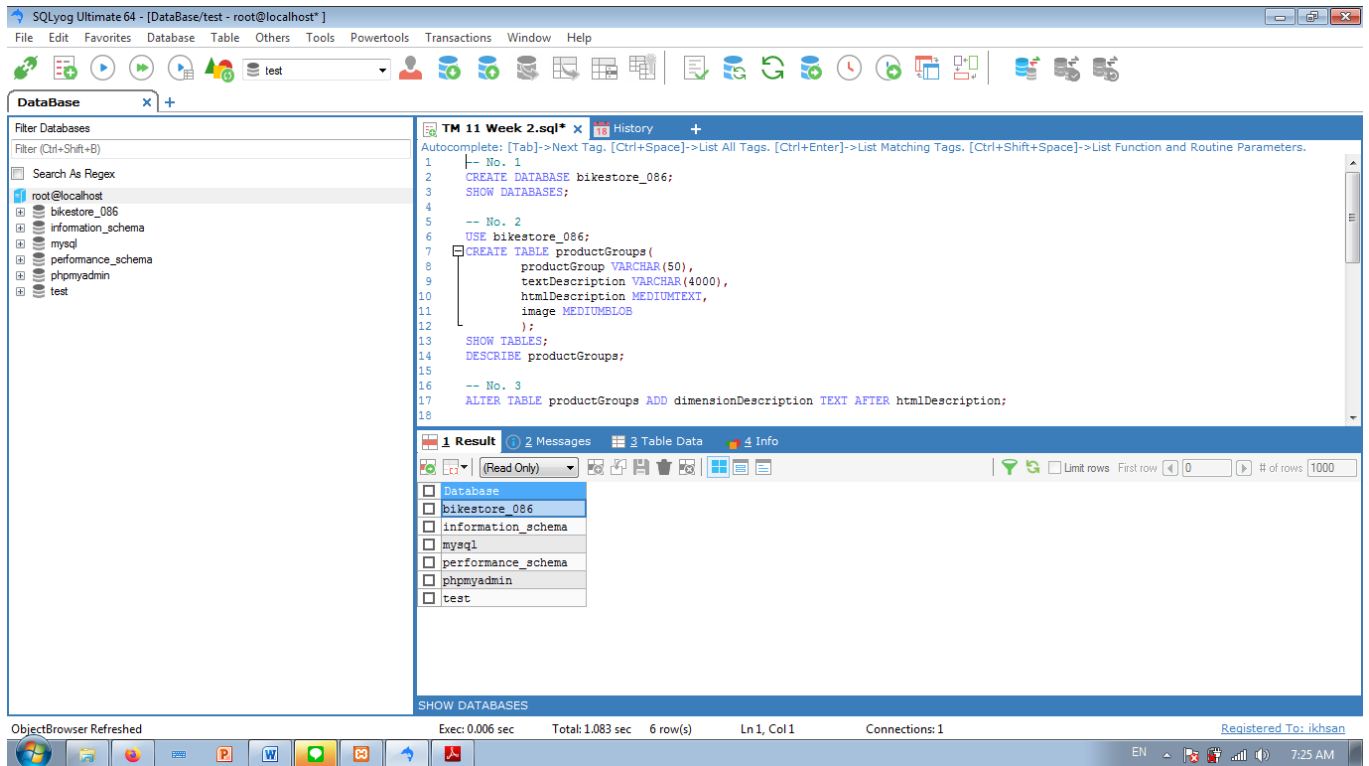
Field	Type	Null	Key	Default	Extra
productCode	varchar(15)	NO	PRI	NULL	
productName	varchar(70)	NO		NULL	
productScale	varchar(10)	NO		NULL	
productVendor	varchar(50)	NO		NULL	
productDescription	text	NO		NULL	
quantityInStock	smallint(6)	NO		NULL	
buyPrice	double	NO		NULL	
MSRP	double	NO		NULL	

9. Setelah kolom **productName**, tambahkan kolom **productGroup varchar(50)** serta jadikan kolom ini sebagai **foreign key** yang merujuk ke kolom **productGroup** di tabel **productGroups\_nim**!

10. Setelah kolom **buyPrice**, tambahkan kolom **sellPrice type double**!

11. **Delete**/hapus kolom **MSRP**!

```
-- No. 1
CREATE DATABASE bikestore_086;
SHOW DATABASES;
```



```
-- No. 2
USE bikestore_086;
CREATE TABLE productGroups(
    productGroup VARCHAR(50),
    textDescription VARCHAR(4000),
    htmlDescription MEDIUMTEXT,
    image MEDIUMBLOB
);
SHOW TABLES;
DESCRIBE productGroups;
```

SQLyog Ultimate 64 - [DataBase/bikestore\_086 - root@localhost\*]

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bikestore\_086

DataBase

Filter tables in bikestore\_086

Filter (Ctrl+Shift+B)

Search As Regex

root@localhost

bikestore\_086

information\_schema

mysql

performance\_schema

phpmyadmin

test

TM 11 Week 2.sql\* x History +

Autocomplete: [Tab]->Next Tag. [Ctrl+Space]->List All Tags. [Ctrl+Enter]->List Matching Tags. [Ctrl+Shift+Space]->List Function and Routine Parameters.

```

1 -- No. 1
2 CREATE DATABASE bikestore_086;
3 SHOW DATABASES;
4
5 -- No. 2
6 USE bikestore_086;
7 CREATE TABLE productGroups (
8     productGroup VARCHAR(50),
9     textDescription VARCHAR(4000),
10    htmlDescription MEDIUMTEXT,
11    image MEDIUMBLOB
12 );
13 SHOW TABLES;
14 DESCRIBE productGroups;
15
16 -- No. 3
17 ALTER TABLE productGroups ADD dimensionDescription TEXT AFTER htmlDescription;
18

```

1 Result 2 Messages 3 Table Data 4 Info

(Read Only)

Field	Type	Null	Key	Default	Extra
productGroup	varchar(50)	11B YES		(NULL)	OK
textDescription	varchar(4000)	13B YES		(NULL)	OK
htmlDescription	mediumtext	10B YES		(NULL)	OK
image	mediumblob	10B YES		(NULL)	OK

DESCRIBE productGroups

Query batch completed successfully Exec: 0.005 sec Total: 0.015 sec 4 row(s) Ln 5, Col 1 Connections: 1

Registered To: ikhsan

7:26 AM

-- No. 3

```

ALTER TABLE productGroups ADD dimensionDescription TEXT AFTER
htmlDescription;
DESCRIBE productGroups;

```

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bikestore\_086

DataBase

Filter tables in bikestore\_086

Filter (Ctrl+Shift+B)

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bikestore\_086

information\_schema

mysql

performance\_schema

phpmyadmin

test

TM 11 Week 2.sql\* x History +

Autocomplete: [Tab]->Next Tag. [Ctrl+Space]->List All Tags. [Ctrl+Enter]->List Matching Tags. [Ctrl+Shift+Space]->List Function and Routine Parameters.

```

4
5 -- No. 2
6 USE bikestore_086;
7 CREATE TABLE productGroups (
8     productGroup VARCHAR(50),
9     textDescription VARCHAR(4000),
10    htmlDescription MEDIUMTEXT,
11    image MEDIUMBLOB
12 );
13 SHOW TABLES;
14 DESCRIBE productGroups;
15
16 -- No. 3
17 ALTER TABLE productGroups ADD dimensionDescription TEXT AFTER htmlDescription;
18 DESCRIBE productGroups;
19
20 -- No. 4
21 ALTER TABLE productGroups ADD PRIMARY KEY (productGroup);

```

1 Result 2 Messages 3 Table Data 4 Info

(Read Only)

Field	Type	Null	Key	Default	Extra
productGroup	varchar(50)	11B YES		(NULL)	OK
textDescription	varchar(4000)	13B YES		(NULL)	OK
htmlDescription	mediumtext	10B YES		(NULL)	OK
dimensionDescription	text	4B YES		(NULL)	OK
image	mediumblob	10B YES		(NULL)	OK

DESCRIBE productGroups

Query batch completed successfully Exec: 0.006 sec Total: 0.007 sec 5 row(s) Ln 16, Col 1 Connections: 1

Registered To: ikhsan

7:28 AM

-- No. 4

```
ALTER TABLE productGroups ADD PRIMARY KEY (productGroup);  
DESCRIBE productGroups;
```

The screenshot shows the SQLyog Ultimate 64 interface. The left sidebar displays the database structure for 'bikestore\_086'. The main window shows a SQL script with several queries, including the one executed: `ALTER TABLE productGroups ADD PRIMARY KEY (productGroup);` and `DESCRIBE productGroups;`. The 'Result' tab at the bottom shows the output of the `DESCRIBE` query as a table.

Field	Type	Null	Key	Default	Extra
productGroup	varchar(50)	11B NO	PRI	(NULL)	OK
textDescription	varchar(4000)	13B YES		(NULL)	OK
htmlDescription	mediumtext	10B YES		(NULL)	OK
dimensionDescription	text	4B YES		(NULL)	OK
image	mediumblob	10B YES		(NULL)	OK

Query batch completed successfully  
Exec: 0.139 sec Total: 1.215 sec 5 row(s) Ln 20, Col 1 Connections: 1  
Registered To: ikhsan  
7:29 AM

-- No. 5

```
ALTER TABLE productGroups CHANGE textDescription textDescription  
VARCHAR(2000);  
ALTER TABLE productGroups CHANGE htmlDescription htmlDescription TEXT;  
DESCRIBE productGroups;
```

SQLyog Ultimate 64 - [DataBase/bikestore\_086 - root@localhost\*]

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Filter tables in bikestore\_086

Filter (Ctrl+Shift+B)

Search As Regex

root@localhost

bikestore\_086

information\_schema

mysql

performance\_schema

phpmyadmin

test

TM 11 Week 2.sql\* x History +

Autocomplete: [Tab]->Next Tag. [Ctrl+Space]->List All Tags. [Ctrl+Enter]->List Matching Tags. [Ctrl+Shift+Space]->List Function and Routine Parameters.

```

13 SHOW TABLES;
14 DESCRIBE productGroups;
15
16 -- No. 3
17 ALTER TABLE productGroups ADD dimensionDescription TEXT AFTER htmlDescription;
18 DESCRIBE productGroups;
19
20 -- No. 4
21 ALTER TABLE productGroups ADD PRIMARY KEY (productGroup);
22 DESCRIBE productGroups;
23
24 -- No. 5
25 ALTER TABLE productGroups CHANGE textDescription textDescription VARCHAR(2000);
26 ALTER TABLE productGroups CHANGE htmlDescription htmlDescription TEXT;
27 DESCRIBE productGroups;
28
29 -- No. 6
30 ALTER TABLE productGroups CHANGE image picture MEDIUMBLOB;

```

1 Result 2 Messages 2 Table Data 4 Info

(Read Only) Limit rows First row 0 # of rows 1000

Field	Type	Null	Key	Default	Extra
productGroup	varchar(50)	11B NO	PRI	(NULL)	OK
textDescription	varchar(2000)	13B YES		(NULL)	OK
htmlDescription	text	4B YES		(NULL)	OK
dimensionDescription	text	4B YES		(NULL)	OK
image	mediumblob	10B YES		(NULL)	OK

DESCRIBE productGroups

Query batch completed successfully Exec: 0.294 sec Total: 2.446 sec 5 row(s) Ln 24, Col 1 Connections: 1 Registered To: ikhsan

-- No. 6

```

ALTER TABLE productGroups CHANGE image picture MEDIUMBLOB;
DESCRIBE productGroups;

```

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Filter tables in bikestore\_086

Filter (Ctrl+Shift+B)

Search As Regex

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bikestore\_086

information\_schema

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phpmyadmin

test

TM 11 Week 2.sql\* x History +

Autocomplete: [Tab]->Next Tag. [Ctrl+Space]->List All Tags. [Ctrl+Enter]->List Matching Tags. [Ctrl+Shift+Space]->List Function and Routine Parameters.

```

22 DESCRIBE productGroups;
23
24 -- No. 5
25 ALTER TABLE productGroups CHANGE textDescription textDescription VARCHAR(2000);
26 ALTER TABLE productGroups CHANGE htmlDescription htmlDescription TEXT;
27 DESCRIBE productGroups;
28
29 -- No. 6
30 ALTER TABLE productGroups CHANGE image picture MEDIUMBLOB;
31 DESCRIBE productGroups;
32
33 -- No. 7
34 ALTER TABLE productGroups RENAME TO productGroups_086;
35 DESCRIBE productGroups_086;
36
37 -- No. 8
38 CREATE TABLE products_086(
39   DESCRIBE products_086;

```

1 Result 2 Messages 2 Table Data 4 Info

(Read Only) Limit rows First row 0 # of rows 1000

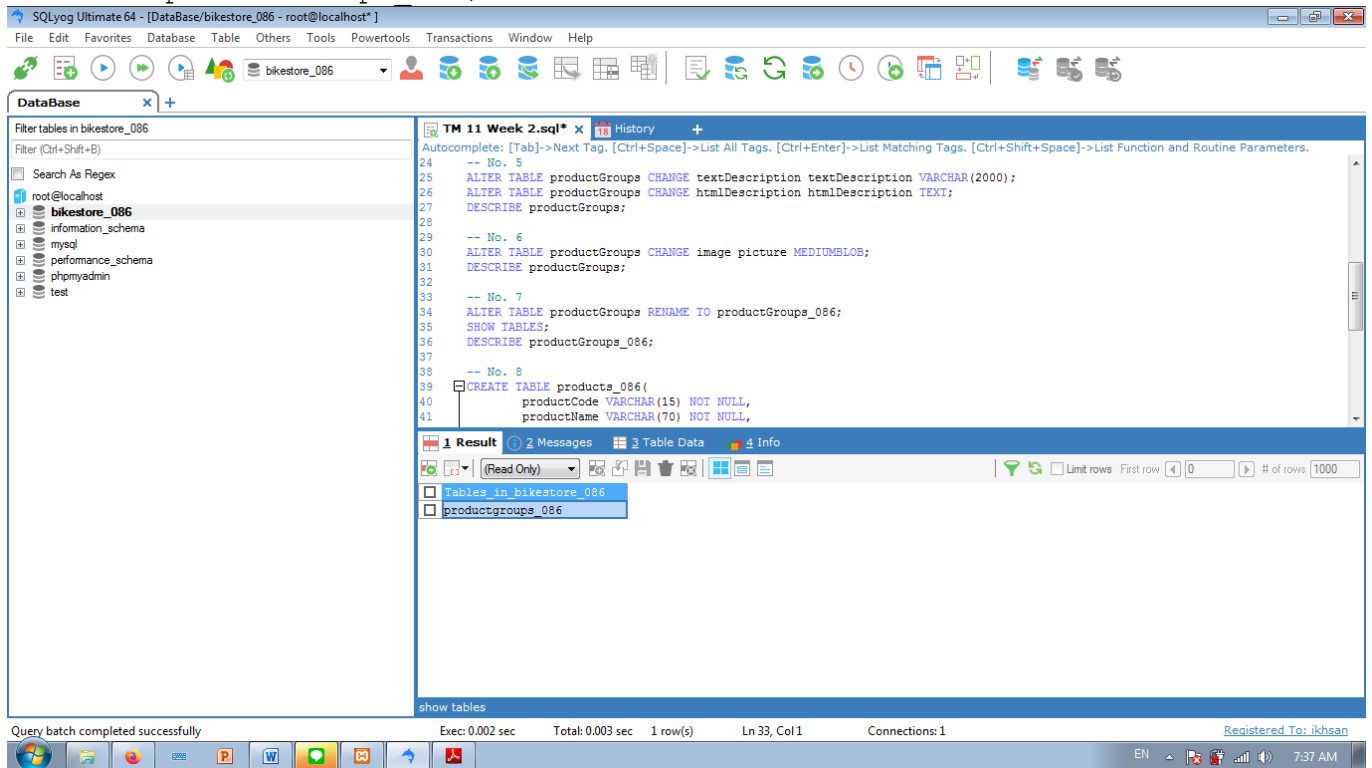
Field	Type	Null	Key	Default	Extra
productGroup	varchar(50)	11B NO	PRI	(NULL)	OK
textDescription	varchar(2000)	13B YES		(NULL)	OK
htmlDescription	text	4B YES		(NULL)	OK
dimensionDescription	text	4B YES		(NULL)	OK
picture	mediumblob	10B YES		(NULL)	OK

DESCRIBE productGroups

Query batch completed successfully Exec: 0.057 sec Total: 1.133 sec 5 row(s) Ln 29, Col 1 Connections: 1 Registered To: ikhsan

-- No. 7

```
ALTER TABLE productGroups RENAME TO productGroups_086;  
SHOW TABLES;  
DESCRIBE productGroups_086;
```



-- No. 8

```
CREATE TABLE products_086(  
    productCode VARCHAR(15) NOT NULL,  
    productName VARCHAR(70) NOT NULL,  
    productScale VARCHAR(10) NOT NULL,  
    productVendor VARCHAR(50) NOT NULL,  
    productDescription TEXT NOT NULL,  
    quantityInStock SMALLINT NOT NULL,  
    buyPrice DOUBLE NOT NULL,  
    MSRP DOUBLE NOT NULL,  
    PRIMARY KEY (productCode)  
);  
DESCRIBE products_086;
```



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Search As Regex

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bikestore\_086

information\_schema

mysql

performance\_schema

phpmyadmin

test

TM 11 Week 2.sql\* x History +

Autocomplete: [Tab]->Next Tag. [Ctrl+Space]->List All Tags. [Ctrl+Enter]->List Matching Tags. [Ctrl+Shift+Space]->List Function and Routine Parameters.

```

35 SHOW TABLES;
36 DESCRIBE productGroups_086;
37
38 -- No. 8
39 CREATE TABLE products_086(
40     productCode VARCHAR(15) NOT NULL,
41     productName VARCHAR(70) NOT NULL,
42     productScale VARCHAR(10) NOT NULL,
43     productVendor VARCHAR(50) NOT NULL,
44     productDescription TEXT NOT NULL,
45     quantityInStock SMALLINT NOT NULL,
46     buyPrice DOUBLE NOT NULL,
47     MSRP DOUBLE NOT NULL,
48     PRIMARY KEY (productCode)
49 );
50 DESCRIBE products_086;
51
52 -- No. 9

```

1 Result 2 Messages 2 Table Data 4 Info

(Read Only)

Limit rows First row 0 # of rows 1000

Field	Type	Null	Key	Default	Extra
productCode	varchar(15)	11B NO	PRI	(NULL)	OK
productName	varchar(70)	11B NO		(NULL)	OK
productScale	varchar(10)	11B NO		(NULL)	OK
productVendor	varchar(50)	11B NO		(NULL)	OK
productDescription	text	4B NO		(NULL)	OK
quantityInStock	smallint(6)	11B NO		(NULL)	OK
buyPrice	double	6B NO		(NULL)	OK
MSRP	double	6B NO		(NULL)	OK

DESCRIBE products\_086

Query batch completed successfully Exec: 0.076 sec Total: 1.152 sec 8 row(s) Ln 38, Col 1 Connections: 1 Registered To: ikhsan

EN 7:38 AM

-- No. 9

**ALTER TABLE** products\_086 **ADD** productGroup **VARCHAR**(50) **AFTER** productName;

**ALTER TABLE** products\_086 **ADD FOREIGN KEY** (productGroup) **REFERENCES** productGroups\_086(productGroup);

**DESCRIBE** products\_086;

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DataBase

Filter tables in bikestore\_086

Filter (Ctrl+Shift+B)

Search As Regex

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bikestore\_086

information\_schema

mysql

performance\_schema

phpmyadmin

test

TM 11 Week 2.sql\* x History +

Autocomplete: [Tab]->Next Tag, [Ctrl+Space]->List All Tags, [Ctrl+Enter]->List Matching Tags, [Ctrl+Shift+Space]->List Function and Routine Parameters.

```

47      MSRP DOUBLE NOT NULL,
48      PRIMARY KEY (productCode)
49  );
50  DESCRIBE products_086;
51
52  -- No. 9
53  ALTER TABLE products_086 ADD productGroup VARCHAR(50) AFTER productName;
54  ALTER TABLE products_086 ADD FOREIGN KEY (productGroup) REFERENCES productGroups_086(productGroup);
55  DESCRIBE products_086;
56
57  -- No. 10
58  ALTER TABLE products_086 ADD sellPrice DOUBLE AFTER buyPrice;
59  DESCRIBE products_086;
60
61  -- No. 11
62  ALTER TABLE products_086 DROP MSRP;
63  DESCRIBE products_086;
64

```

1 Result 2 Messages 3 Table Data 4 Info

(Read Only)

Limit rows First row 0 # of rows 1000

Field	Type	Null	Key	Default	Extra
productCode	varchar(15)	11B NO	PRI	(NULL)	OK
productName	varchar(70)	11B NO		(NULL)	OK
productGroup	varchar(50)	11B YES	MUL	(NULL)	OK
productScale	varchar(10)	11B NO		(NULL)	OK
productVendor	varchar(50)	11B NO		(NULL)	OK
productDescription	text	4B NO		(NULL)	OK
quantityInStock	smallint(6)	11B NO		(NULL)	OK
buyPrice	double	6B NO		(NULL)	OK
MSRP	double	6B NO		(NULL)	OK

DESCRIBE products\_086

Query batch completed successfully Exec: 0.141 sec Total: 1.221 sec 9 row(s) Ln 52, Col 1 Connections: 1 Registered To: ikhsan

```

-- No. 10
ALTER TABLE products_086 ADD sellPrice DOUBLE AFTER buyPrice;
DESCRIBE products_086;

```

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DataBase

Filter tables in bikestore\_086

Filter (Ctrl+Shift+B)

Search As Regex

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bikestore\_086

information\_schema

mysql

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phpmyadmin

test

TM 11 Week 2.sql\* x History +

Autocomplete: [Tab]->Next Tag, [Ctrl+Space]->List All Tags, [Ctrl+Enter]->List Matching Tags, [Ctrl+Shift+Space]->List Function and Routine Parameters.

```

47      MSRP DOUBLE NOT NULL,
48      PRIMARY KEY (productCode)
49  );
50  DESCRIBE products_086;
51
52  -- No. 9
53  ALTER TABLE products_086 ADD productGroup VARCHAR(50) AFTER productName;
54  ALTER TABLE products_086 ADD FOREIGN KEY (productGroup) REFERENCES productGroups_086(productGroup);
55  DESCRIBE products_086;
56
57  -- No. 10
58  ALTER TABLE products_086 ADD sellPrice DOUBLE AFTER buyPrice;
59  DESCRIBE products_086;
60
61  -- No. 11
62  ALTER TABLE products_086 DROP MSRP;
63  DESCRIBE products_086;
64

```

1 Result 2 Messages 3 Table Data 4 Info

(Read Only)

Limit rows First row 0 # of rows 1000

Field	Type	Null	Key	Default	Extra
productCode	varchar(15)	11B NO	PRI	(NULL)	OK
productName	varchar(70)	11B NO		(NULL)	OK
productGroup	varchar(50)	11B YES	MUL	(NULL)	OK
productScale	varchar(10)	11B NO		(NULL)	OK
productVendor	varchar(50)	11B NO		(NULL)	OK
productDescription	text	4B NO		(NULL)	OK
quantityInStock	smallint(6)	11B NO		(NULL)	OK
buyPrice	double	6B NO		(NULL)	OK
sellPrice	double	6B YES		(NULL)	OK
MSRP	double	6B NO		(NULL)	OK

DESCRIBE products\_086

Query batch completed successfully Exec: 0.058 sec Total: 1.134 sec 10 row(s) Ln 57, Col 1 Connections: 1 Registered To: ikhsan

```
-- No. 11
ALTER TABLE products_086 DROP MSRP;
DESCRIBE products_086;
```

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Filter tables in bikestore\_086

Filter (Ctrl+Shift+B)

Search As Regex

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bikestore\_086

information\_schema

mysql

performance\_schema

phpmyadmin

test

TM 11 Week 2.sql\* x History

Autocomplete: [Tab]->Next Tag, [Ctrl+Space]->List All Tags, [Ctrl+Enter]->List Matching Tags, [Ctrl+Shift+Space]->List Function and Routine Parameters.

```
47 MSRP DOUBLE NOT NULL,
48 PRIMARY KEY (productCode)
49 );
50 DESCRIBE products_086;
51
52
53 -- No. 9
54 ALTER TABLE products_086 ADD productGroup VARCHAR(50) AFTER productName;
55 ALTER TABLE products_086 ADD FOREIGN KEY (productGroup) REFERENCES productGroups_086 (productGroup);
56 DESCRIBE products_086;
57
58 -- No. 10
59 ALTER TABLE products_086 ADD sellPrice DOUBLE AFTER buyPrice;
60 DESCRIBE products_086;
61
62 -- No. 11
63 ALTER TABLE products_086 DROP MSRP;
64 DESCRIBE products_086;
```

1 Result 2 Messages 3 Table Data 4 Info

(Read Only)

Limit rows: First row 0 # of rows 1000

Field	Type	Null	Key	Default	Extra
productCode	varchar(15)	11B NO	PRI	(NULL)	OK
productName	varchar(70)	11B NO		(NULL)	OK
productGroup	varchar(50)	11B YES	MUL	(NULL)	OK
productScale	varchar(10)	11B NO		(NULL)	OK
productVendor	varchar(50)	11B NO		(NULL)	OK
productDescription	text	4B NO		(NULL)	OK
quantityInStock	smallint(6)	11B NO		(NULL)	OK
buyPrice	double	6B NO		(NULL)	OK
sellPrice	double	6B YES		(NULL)	OK

DESCRIBE products\_086

Query batch completed successfully Exec: 0.040 sec Total: 1.116 sec 9 row(s) Ln 61, Col 1 Connections: 1 Registered To: ikhsan

EN 7:40 AM