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Assignment 2 – Data Definition Languages

Create an ACADEMIC database

```
Setting environment for using XAMPP for Windows.
them@-- c:\xampp
# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 8
Server version: 10.4.24-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> CREATE DATABASE ACADEMIC;
Query OK, 1 row affected (0.001 sec)

MariaDB [(none)]> SHOW DATABASES;
+-----+
| Database |
+-----+
| academic |
| information_schema |
| mysql |
| performance_schema |
| phpmyadmin |
| test |
+-----+
6 rows in set (0.024 sec)

MariaDB [(none)]> .
```

student table (attributes: NIM, student_name, gender, birth_place, birth_date, address, phone)

```
1 CREATE TABLE IF NOT EXISTS student(
2     NIM INT NOT NULL AUTO_INCREMENT PRIMARY KEY,
3     student_name VARCHAR(255),
4     gender ENUM('M','F'),
5     birth_place TINYTEXT,
6     birth_date DATE,
7     address TEXT,
8     phone INT
9 ) ENGINE=INNODB;
```

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0005 seconds.)

```
CREATE TABLE IF NOT EXISTS student( NIM INT NOT NULL AUTO_INCREMENT PRIMARY KEY, student_name VARCHAR(255), gender ENUM('M','F'), birth_place TINYTEXT,
birth_date DATE, address TEXT, phone INT ) ENGINE=INNODB;
```

[Edit inline] [Edit] [Create PHP code]

lecturer table (attributes: NIP, lecturer_name, gender, laboratory, interests, address, phone),

```
11 CREATE TABLE IF NOT EXISTS lecturer(
12     NIP INT NOT NULL AUTO_INCREMENT PRIMARY KEY,
13     lecture_name VARCHAR(255),
14     gender ENUM('M','F'),
15     laboratory VARCHAR(255),
16     interests VARCHAR(255),
17     address TEXT,
18     phone INT
19 ) ENGINE=INNODB;
```

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)

```
CREATE TABLE IF NOT EXISTS lecturer( NIP INT NOT NULL AUTO_INCREMENT PRIMARY KEY, lecture_name VARCHAR(255) NOT NULL, gender ENUM('M','F') NOT NULL,
laboratory VARCHAR(255) NOT NULL, interests VARCHAR(255) NOT NULL, address TEXT NOT NULL, phone INT NOT NULL ) ENGINE=INNODB;
```

[Edit inline] [Edit] [Create PHP code]

subject table (attributes: course_code, course_name, NIP, credits, day, hour, classroom, description),

```
21 CREATE TABLE IF NOT EXISTS subject(  
22     course_code INT NOT NULL AUTO_INCREMENT PRIMARY KEY,  
23     course_name VARCHAR(255),  
24     NIP INT NOT NULL,  
25     FOREIGN KEY (NIP) REFERENCES lecturer(NIP),  
26     credits TINYINT,  
27     day DATE,  
28     hour TINYINT,  
29     classroom VARCHAR(255),  
30     description TEXT  
31 ) ENGINE=INNODB;
```

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0006 seconds.)

```
CREATE TABLE IF NOT EXISTS subject( course_code INT NOT NULL AUTO_INCREMENT PRIMARY KEY, course_name VARCHAR(255), NIP INT NOT NULL, FOREIGN KEY (NIP)  
REFERENCES lecturer(NIP), credits TINYINT, day DATE, hour TINYINT, classroom VARCHAR(255), description TEXT ) ENGINE=INNODB;
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

```
33 CREATE TABLE IF NOT EXISTS KRS(  
34     KRS_id INT NOT NULL PRIMARY KEY AUTO_INCREMENT,  
35     course_code INT,  
36     FOREIGN KEY(course_code) REFERENCES subject(course_code),  
37     NIM INT NOT NULL,  
38     FOREIGN KEY(NIM) REFERENCES student(NIM),  
39     data_year YEAR,  
40     semester TINYINT  
41 ) ENGINE=INNODB;
```

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0005 seconds.)

```
CREATE TABLE IF NOT EXISTS KRS( KRS_id INT NOT NULL PRIMARY KEY AUTO_INCREMENT, course_code INT, FOREIGN KEY(course_code) REFERENCES subject(course_code), NIM INT NOT  
NULL, FOREIGN KEY(NIM) REFERENCES student(NIM), data_year YEAR, semester TINYINT ) ENGINE=INNODB;
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

1. Show all existing tables in the database

Your SQL query has been executed successfully.

[SHOW TABLES;](#)

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)

Extra options

Tables_in_academic

krs

lecturer

student

subject

2. Show the structure of each table in the database.

Your SQL query has been executed successfully.

`DESCRIBE student;`

[Edit inline] [Edit] [Create PHP code]

Extra options

Field	Type	Null	Key	Default	Extra
NIM	int(11)	NO	PRI	NULL	auto_increment
student_name	varchar(255)	NO		NULL	
gender	enum('M','F')	YES		NULL	
birth_place	tinytext	YES		NULL	
birth_date	date	YES		NULL	
address	text	YES		NULL	
phone	int(11)	YES		NULL	

Your SQL query has been executed successfully.

`DESCRIBE lecturer;`

[Edit inline] [Edit] [Create PHP code]

Extra options

Field	Type	Null	Key	Default	Extra
NIP	int(11)	NO	PRI	NULL	auto_increment
lecture_name	varchar(255)	YES		NULL	
gender	enum('M','F')	YES		NULL	
laboratory	varchar(255)	YES		NULL	
interests	varchar(255)	YES		NULL	
address	text	YES		NULL	
phone	int(11)	YES		NULL	

Your SQL query has been executed successfully.

`DESCRIBE krs;`

[Edit inline] [Edit] [Create PHP code]

Extra options

Field	Type	Null	Key	Default	Extra
KRS_id	int(11)	NO	PRI	NULL	auto_increment
course_code	int(11)	YES	MUL	NULL	
NIM	int(11)	NO	MUL	NULL	
data_year	year(4)	YES		NULL	
semester	tinyint(4)	YES		NULL	

Your SQL query has been executed successfully.

`DESCRIBE subject;`

[Edit inline] [Edit] [Create PHP code]

Extra options

Field	Type	Null	Key	Default	Extra
course_code	int(11)	NO	PRI	NULL	auto_increment
course_name	varchar(255)	YES		NULL	
NIP	int(11)	NO	MUL	NULL	
credits	tinyint(4)	YES		NULL	
day	date	YES		NULL	
hour	tinyint(4)	YES		NULL	
classroom	varchar(255)	YES		NULL	
description	text	YES		NULL	

3. Change the table name "lecturer" to "professor"

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0005 seconds.)

`RENAME TABLE lecturer to professor;`

[Edit inline] [Edit] [Create PHP code]

4. Change the name of the attribute " lecturer_name" with "prof_name"

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

`ALTER TABLE professor CHANGE COLUMN lecturer_name prof_name VARCHAR(255);`

[Edit inline] [Edit] [Create PHP code]

5. Add a new column "mother_name" after birth_date attribute in the student table

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)

`ALTER TABLE student ADD COLUMN mother_name VARCHAR(255) AFTER birth_date;`

[Edit inline] [Edit] [Create PHP code]

6. Change the data type “gender” in student table became enum{'male', 'female'}

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0005 seconds.)

```
ALTER TABLE student MODIFY COLUMN gender ENUM('male','female');
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

7. Change the data type “phone” in student table into int

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)

```
ALTER TABLE student MODIFY COLUMN phone INT;
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

8. Remove the primary key in the "ID_KRS" attribute.

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)

```
ALTER TABLE krs MODIFY COLUMN KRS_id INT NOT NULL;
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)

```
ALTER TABLE krs DROP PRIMARY KEY;
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

9. Re-add the primary key to the "ID_KRS" attribute

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)

```
ALTER TABLE krs MODIFY COLUMN KRS_id INT AUTO_INCREMENT;
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)

```
ALTER TABLE krs ADD PRIMARY KEY(KRS_id);
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

10. Delete attribute “description” in subject table

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0005 seconds.)

```
ALTER TABLE subject DROP COLUMN description;
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)