

ใบงานการทดลองที่ 1

เรื่อง **Data Definition Language**

วัตถุประสงค์เชิงพฤติกรรม

1. เขียนคำสั่งสร้างฐานข้อมูลได้ถูกต้อง
2. เขียนคำสั่งสร้างตารางได้ถูกต้อง
3. เขียนคำสั่งเพิ่ม **Primary Key** ได้ถูกต้อง
4. เขียนคำสั่งเพิ่ม **Foreign Key** ได้ถูกต้อง

เครื่องมือและอุปกรณ์

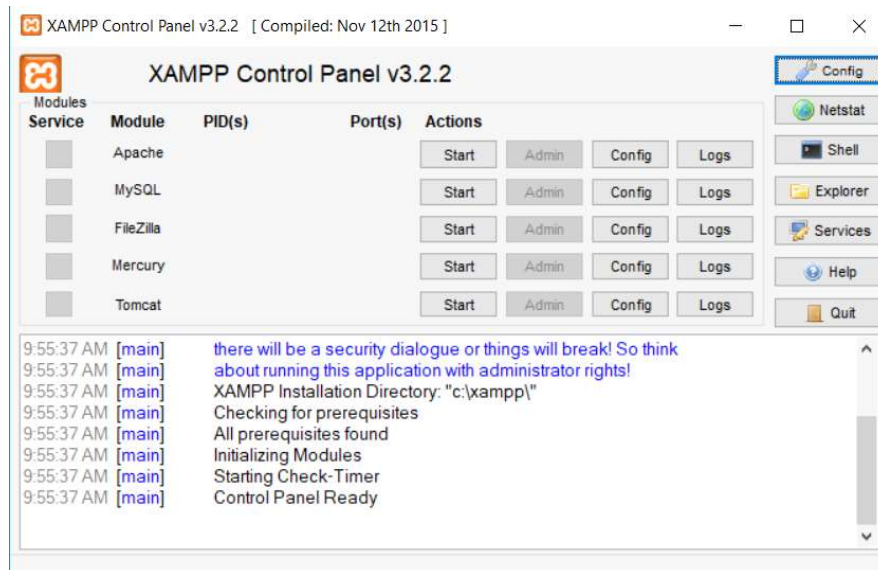
เครื่องมือ

- Notebook พร้อมใช้งาน 1 เครื่อง
- โปรแกรม XAMPP
- บราวเซอร์ที่ใช้แสดงผล Internet Explorer หรือ chrome

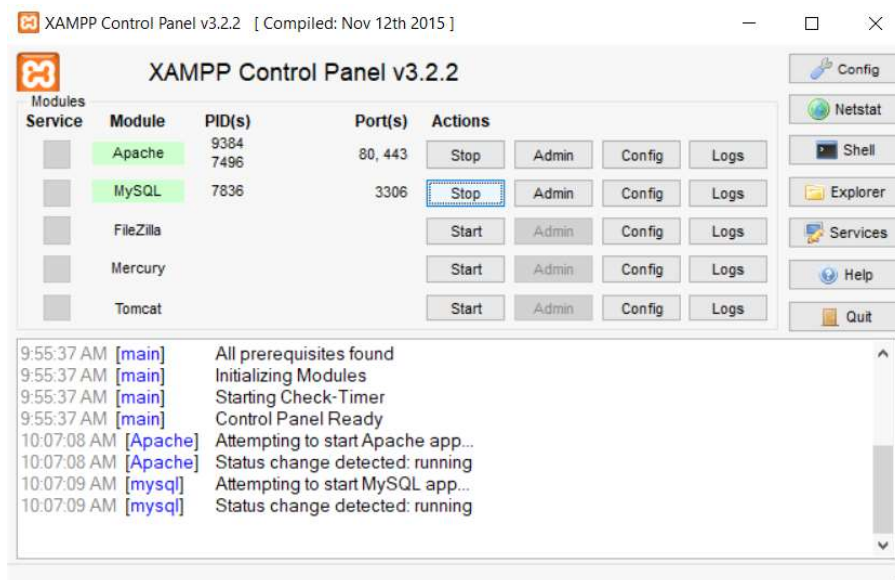
กิจกรรมที่ 1 การสร้างฐานข้อมูล

ขั้นตอนการทดลอง

1. การเปิดโปรแกรม XAMPP Control Panel โดยไปที่ Search Windows > XAMPP

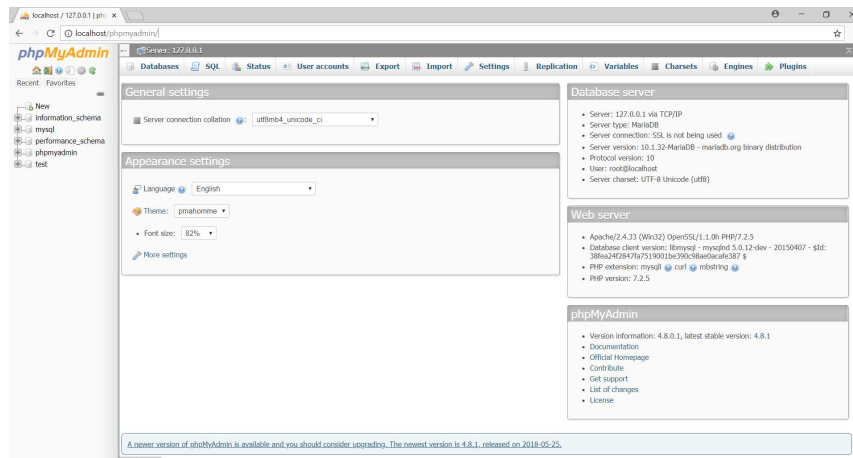


2. คลิกที่ปุ่ม Start โปรแกรม Apache เพื่อให้ Personal Server ทำงาน และ คลิกที่ปุ่ม Start โปรแกรม MySQL เพื่อให้ระบบฐานข้อมูล MySQL ทำงาน



3. เปิดบราวเซอร์ แล้วพิมพ์ URL :

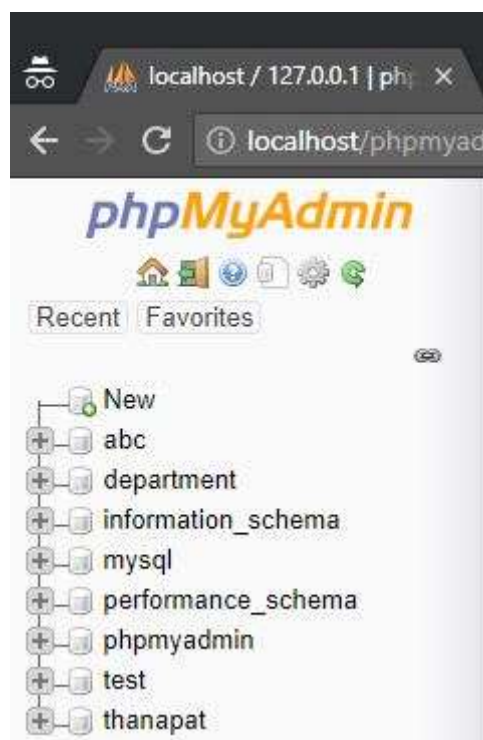
<http://localhost/phpmyadmin/>



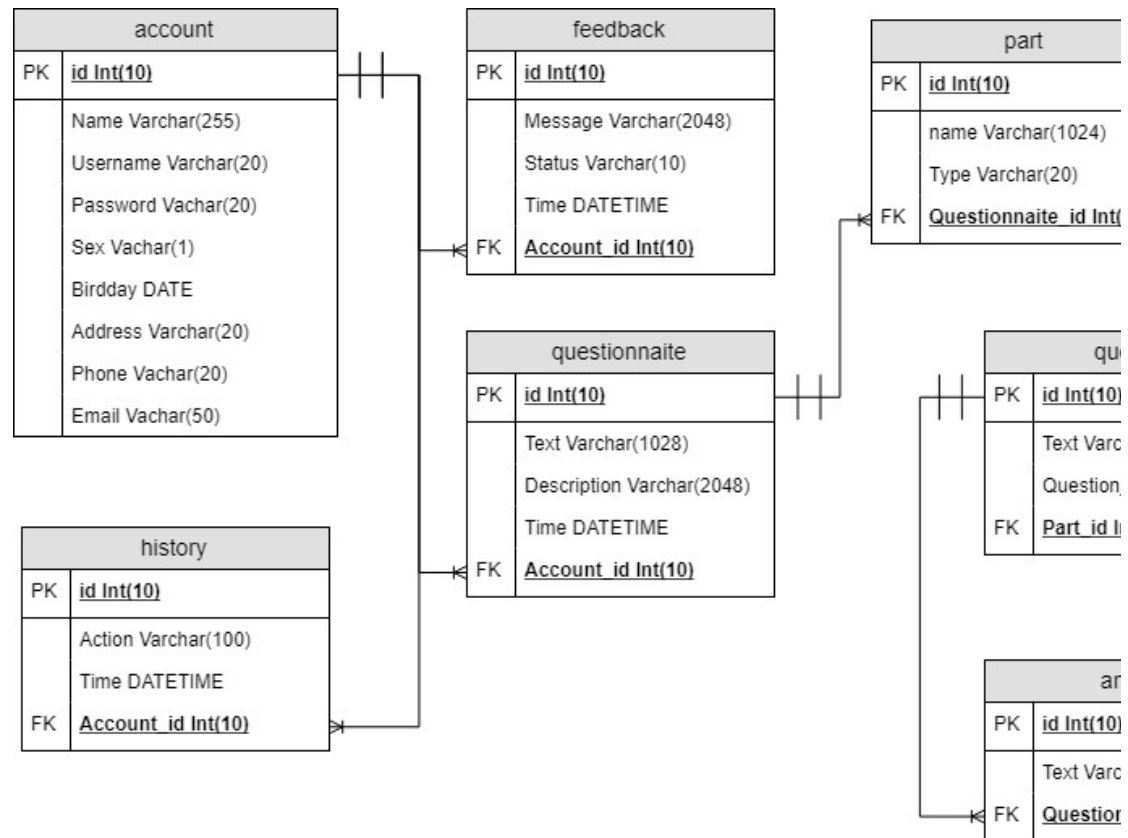
4.คลิกที่เมนู SQL แล้วพิมพ์คำสั่ง
คำสั่งที่ 1

```
1 CREATE DATABASE Lab_1 ;
```

บันทึกผลการทดลอง



กิจกรรมที่ 2 เขียนคำสั่งสร้างตารางฐานข้อมูลที่มีความสัมพันธ์กันดังรูปตัวอย่าง



Code : ตาราง **account**

```

1 CREATE TABLE account
2 (
3     Id Int(10),
4     Name Varchar(255),
5     Username Varchar(20),
6     Password Varchar(20),
7     Sex Varchar(1),
8     Birdday Date,
9     Address Varchar(255),
10    Phone Varchar(20),
11    Email Varchar(50)
12 );

```

บันทึกผลการทดลอง

The screenshot shows a MySQL database management tool interface. The top bar indicates the server is at 127.0.0.1, the database is 'thanapat', and the table is 'account'. Below the bar are tabs for 'Browse', 'Structure', 'SQL', 'Search', 'Insert', 'Export', and 'More'. The 'SQL' tab is active, showing a message: 'MySQL returned an empty result set (i.e. zero rows). (Query took 0.0018 seconds.)'. Below this message is the SQL query: 'SELECT * FROM `account`'. At the bottom, there is a table structure header with columns: 'id', 'Name', 'Username', 'PASSWORD', 'Sex', 'Birdday', 'Address', 'Phone', and 'Email'.

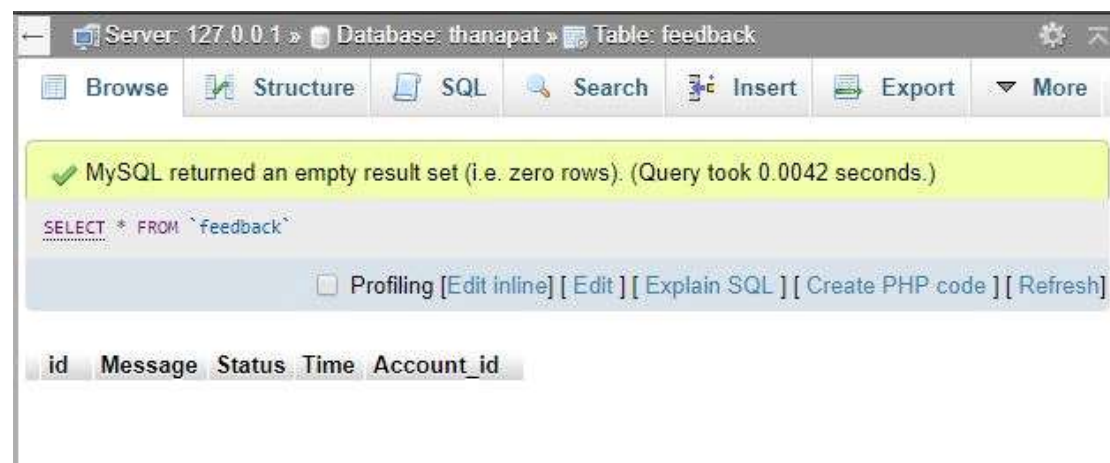
Code : ตาราง **feedback**

```

1 CREATE TABLE feedback
2 (
3     Id Int(10),
4     Message Varchar(10),
5     Status Varchar(10),
6     Time Datetime,
7     Account_id Int(10)
8 );

```

บันทึกผลการทดลอง



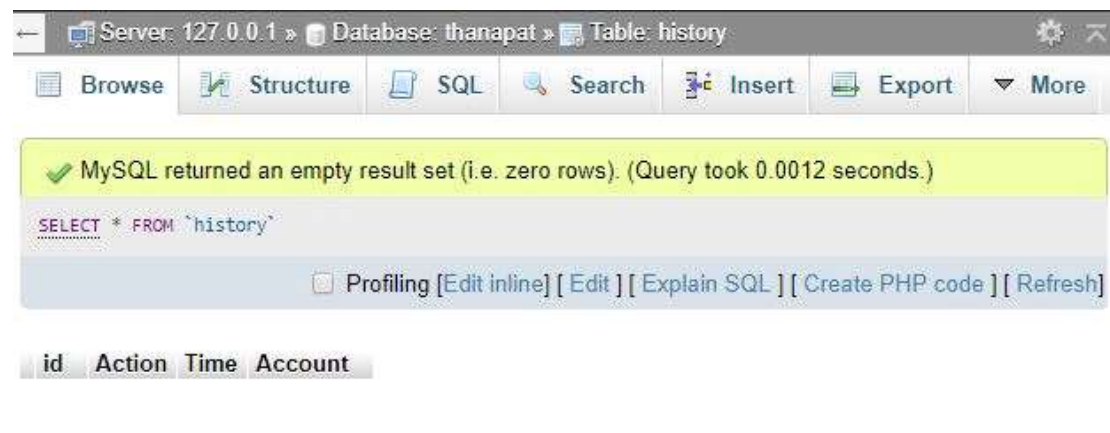
Code : ตาราง history

```

1 CREATE TABLE history
2 (
3     Id Int(10),
4     Action Varchar(100),
5     Time Datetime,
6     Account Int(10)
7 );

```

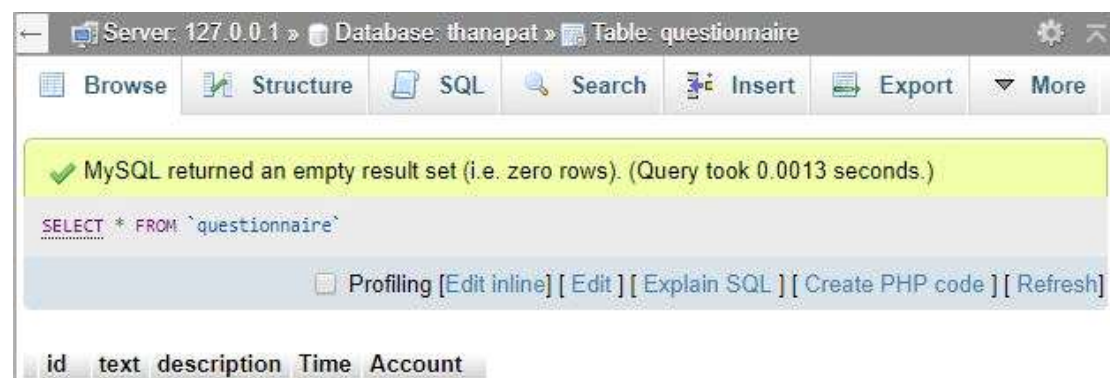
บันทึกผลการทดลอง



Code : ตาราง questionnaire

```
1 CREATE TABLE questionnaire
2 (
3   Id Int(10),
4   text Varchar(1024),
5   description Varchar(2048),
6   Time Datetime,
7   Account Int(10)
8 );
```

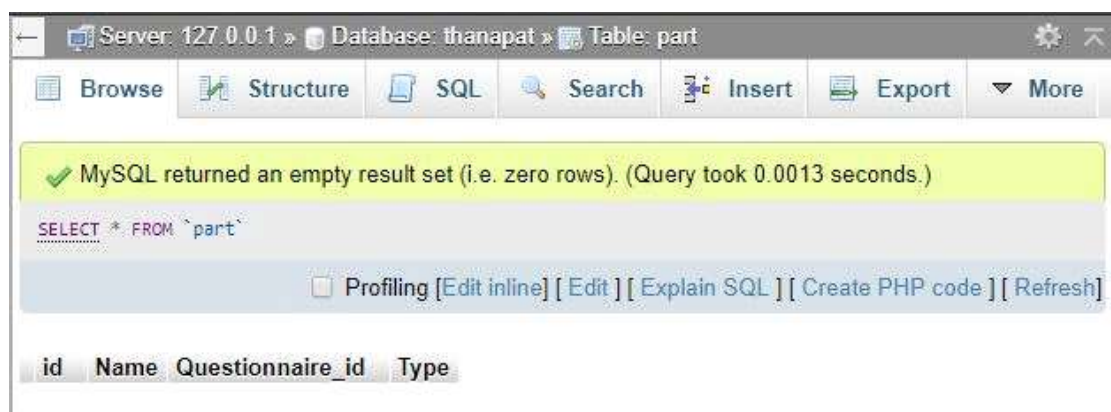
บันทึกผลการทดลอง



Code : ตาราง part

```
1 CREATE TABLE part
2 (
3     Id Int(10),
4     Name Varchar(1024),
5     Questionnaire_id Int(10),
6     Type Varchar(20)
7 );
```

บันทึกผลการทดลอง



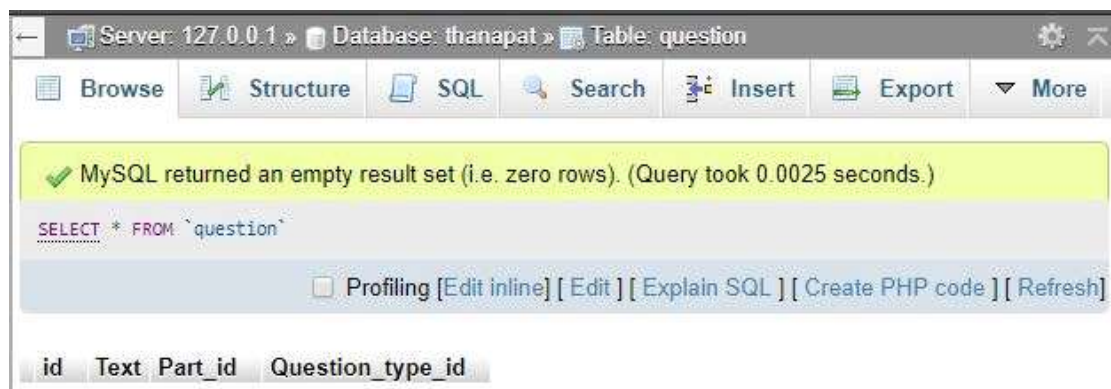
Code : ตาราง question


```

1 CREATE TABLE question
2 (
3     Id Int(10),
4     Text Varchar(2048),
5     Part_id Int(10),
6     Question_type_id Int(10)
7 );

```

บันทึกผลการทดลอง



Code : กำหนด **Primary Key** ของแต่ละตาราง

```

1 Alter table account add Primary key (id);
2
3 Alter table feedback add Primary key (id);
4
5 Alter table questionnaire add Primary key (id);
6
7 Alter table part add Primary key (id);
8
9 Alter table question add Primary key (id);
10
11 Alter table answer add Primary key (id);
12
13 Alter table history add Primary key (id);

```

บันทึกผลการทดลอง

account

Server: 127.0.0.1 » Database: thanapat » Table: account

Browse Structure SQL Search Insert Export Import Privileges Operations

Table structure Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(10)			No	None			Change Drop More
2	Name	varchar(255)	latin1_swedish_ci		Yes	None			Change Drop More
3	Username	varchar(20)	latin1_swedish_ci		Yes	None			Change Drop More
4	PASSWORD	varchar(20)	latin1_swedish_ci		Yes	None			Change Drop More
5	Sex	varchar(1)	latin1_swedish_ci		Yes	None			Change Drop More
6	Birthday	date			Yes	None			Change Drop More
7	Address	varchar(255)	latin1_swedish_ci		Yes	None			Change Drop More
8	Phone	varchar(20)	latin1_swedish_ci		Yes	None			Change Drop More
9	Email	varchar(50)	latin1_swedish_ci		Yes	None			Change Drop More

answer

Server: 127.0.0.1 » Database: thanapat » Table: answer

Browse Structure SQL Search Insert Export Import Privileges Operations Tracking Triggers

Table structure Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(10)			No	None			Change Drop More
2	Text	varchar(2048)	latin1_swedish_ci		Yes	None			Change Drop More
3	Question_id	int(10)			Yes	None			Change Drop More

Check all With selected: Browse Change Drop Primary Unique Index Fulltext Add to central columns Remove from central columns

feedback

Server: 127.0.0.1 » Database: thanapat » Table: feedback

Browse Structure SQL Search Insert Export Import Privileges Operations Tracking Triggers

Table structure Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(10)			No	None			Change Drop More
2	Message	varchar(10)	latin1_swedish_ci		Yes	None			Change Drop More
3	Status	varchar(10)	latin1_swedish_ci		Yes	None			Change Drop More
4	Time	datetime			Yes	None			Change Drop More
5	Account_id	int(10)			Yes	None			Change Drop More

Check all With selected: Browse Change Drop Primary Unique Index Fulltext Add to central columns Remove from central columns

history

Server: 127.0.0.1 » Database: thanapat » Table: history

Table structure Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(10)			No	None			Change Drop More
2	Action	varchar(100)	latin1_swedish_ci		Yes	None			Change Drop More
3	Time	datetime			Yes	None			Change Drop More
4	Account	int(10)			Yes	None			Change Drop More

Check all With selected: Browse Change Drop Primary Unique Index Fulltext Add to central columns Remove from central columns

part

Server: 127.0.0.1 » Database: thanapat » Table: part

Table structure Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(10)			No	None			Change Drop More
2	Name	varchar(1024)	latin1_swedish_ci		Yes	None			Change Drop More
3	Questionnaire_id	int(10)			Yes	None			Change Drop More
4	Type	varchar(20)	latin1_swedish_ci		Yes	None			Change Drop More

Check all With selected: Browse Change Drop Primary Unique Index Fulltext Add to central columns Remove from central columns

question

Server: 127.0.0.1 » Database: thanapat » Table: question

Table structure Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(10)			No	None			Change Drop More
2	Text	varchar(2048)	latin1_swedish_ci		Yes	None			Change Drop More
3	Part_id	int(10)			Yes	None			Change Drop More
4	Question_type_id	int(10)			Yes	None			Change Drop More

Check all With selected: Browse Change Drop Primary Unique Index Fulltext Add to central columns Remove from central columns

questionnaire

Server: 127.0.0.1 » Database: thanapat » Table: questionnaire

Table structure Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(10)			No	None			Change Drop More
2	text	varchar(1024)	latin1_swedish_ci		Yes	None			Change Drop More
3	description	varchar(2048)	latin1_swedish_ci		Yes	None			Change Drop More
4	Time	datetime			Yes	None			Change Drop More
5	Account	int(10)			Yes	None			Change Drop More

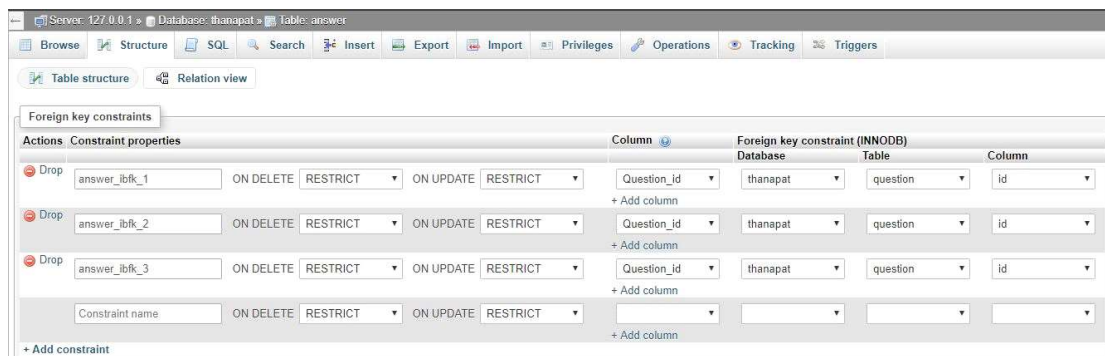
Check all With selected: Browse Change Drop Primary Unique Index Fulltext Add to central columns Remove from central columns

Code : กำหนด Foreign Key ของแต่ละตาราง

```
1 Alter table feedback add Foreign Key (account_id)
2 REFERENCES account (id);
3
4 Alter table questionnaire add Foreign key (account_id)
5 REFERENCES account (id);
6
7 Alter table part add Foreign key (questionnaire_id)
8 REFERENCES questionnaire (id);
9
10 Alter table question add Foreign key (part_id)
11 REFERENCES part (id);
12
13 Alter table answer add Foreign key (question_id)
14 REFERENCES question (id);
15
16 Alter table history add Foreign key (account_id)
17 REFERENCES account (id);
```

บันทึกผลการทดลอง

answer



feedback

Server: 127.0.0.1 » Database: thanapat » Table: feedback

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Foreign key constraints

Actions	Constraint properties	Column	Foreign key constraint (INNODB)		
			Database	Table	Column
Drop	feedback_ibfk_1	ON DELETE RESTRICT ON UPDATE RESTRICT	Account_id	thanapat	account id
+ Add column					
Drop	feedback_ibfk_2	ON DELETE RESTRICT ON UPDATE RESTRICT	Account_id	thanapat	account id
+ Add column					
Drop	feedback_ibfk_3	ON DELETE RESTRICT ON UPDATE RESTRICT	Account_id	thanapat	account id
+ Add column					
Drop	feedback_ibfk_4	ON DELETE RESTRICT ON UPDATE RESTRICT	Account_id	thanapat	account id
+ Add column					
Drop	feedback_ibfk_5	ON DELETE RESTRICT ON UPDATE RESTRICT	Account_id	thanapat	account id
+ Add column					
Drop	feedback_ibfk_6	ON DELETE RESTRICT ON UPDATE RESTRICT	Account_id	thanapat	account id
+ Add column					
	Constraint name	ON DELETE RESTRICT ON UPDATE RESTRICT			
+ Add column					

+ Add constraint

history

Server: 127.0.0.1 » Database: thanapat » Table: history

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Foreign key constraints

Actions	Constraint properties	Column	Foreign key constraint (INNODB)		
			Database	Table	Column
Drop	history_ibfk_1	ON DELETE RESTRICT ON UPDATE RESTRICT	Account_id	thanapat	account id
+ Add column					
	Constraint name	ON DELETE RESTRICT ON UPDATE RESTRICT			
+ Add column					

+ Add constraint

part

Server: 127.0.0.1 » Database: thanapat » Table: part

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Foreign key constraints

Actions	Constraint properties	Column	Foreign key constraint (INNODB)		
			Database	Table	Column
Drop	part_ibfk_1	ON DELETE RESTRICT ON UPDATE RESTRICT	Questionnaire_ix	thanapat	questionnaire id
+ Add column					
Drop	part_ibfk_2	ON DELETE RESTRICT ON UPDATE RESTRICT	Questionnaire_ix	thanapat	questionnaire id
+ Add column					
Drop	part_ibfk_3	ON DELETE RESTRICT ON UPDATE RESTRICT	Questionnaire_ix	thanapat	questionnaire id
+ Add column					
	Constraint name	ON DELETE RESTRICT ON UPDATE RESTRICT			
+ Add column					

+ Add constraint

question

Server: 127.0.0.1 » Database: thanapat » Table: question

Table structure

Foreign key constraints

Actions	Constraint properties	Column	Foreign key constraint (INNODB)		
			Database	Table	Column
Drop	question_ibfk_1 ON DELETE RESTRICT ON UPDATE RESTRICT	Part_id	thanapat	part	id
		+ Add column			
Drop	question_ibfk_2 ON DELETE RESTRICT ON UPDATE RESTRICT	Part_id	thanapat	part	id
		+ Add column			
Drop	question_ibfk_3 ON DELETE RESTRICT ON UPDATE RESTRICT	Part_id	thanapat	part	id
		+ Add column			
	Constraint name ON DELETE RESTRICT ON UPDATE RESTRICT				
		+ Add column			

+ Add constraint

questionnaire

Server: 127.0.0.1 » Database: thanapat » Table: questionnaire

Table structure

Foreign key constraints

Actions	Constraint properties	Column	Foreign key constraint (INNODB)		
			Database	Table	Column
Drop	questionnaire_ibfk_1 ON DELETE RESTRICT ON UPDATE RESTRICT	Account_id	thanapat	questionnaire	id
		+ Add column			
	Constraint name ON DELETE RESTRICT ON UPDATE RESTRICT				
		+ Add column			

+ Add constraint

นายธนภัทร เกสรราช

