เรื่อง โครงงาน (Project Assignment)

รายชื่อนักศึกษา

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เสนอ

ผู้ช่วยศาสตราจารย์ ดร.พร้อมพงศ์ สุกัณศีล

รายงานนี้เป็นส่วนหนึ่งของวิชา การออกแบบระบบฐานข้อมูล

ภาคการศึกษาที่ 1 ปีการศึกษา 2564

(Digital Industry Integration)

วิทยาลัยศิลปะ สื่อ และเทคโนโลยี มหาวิทยาลัยเชียงใหม่

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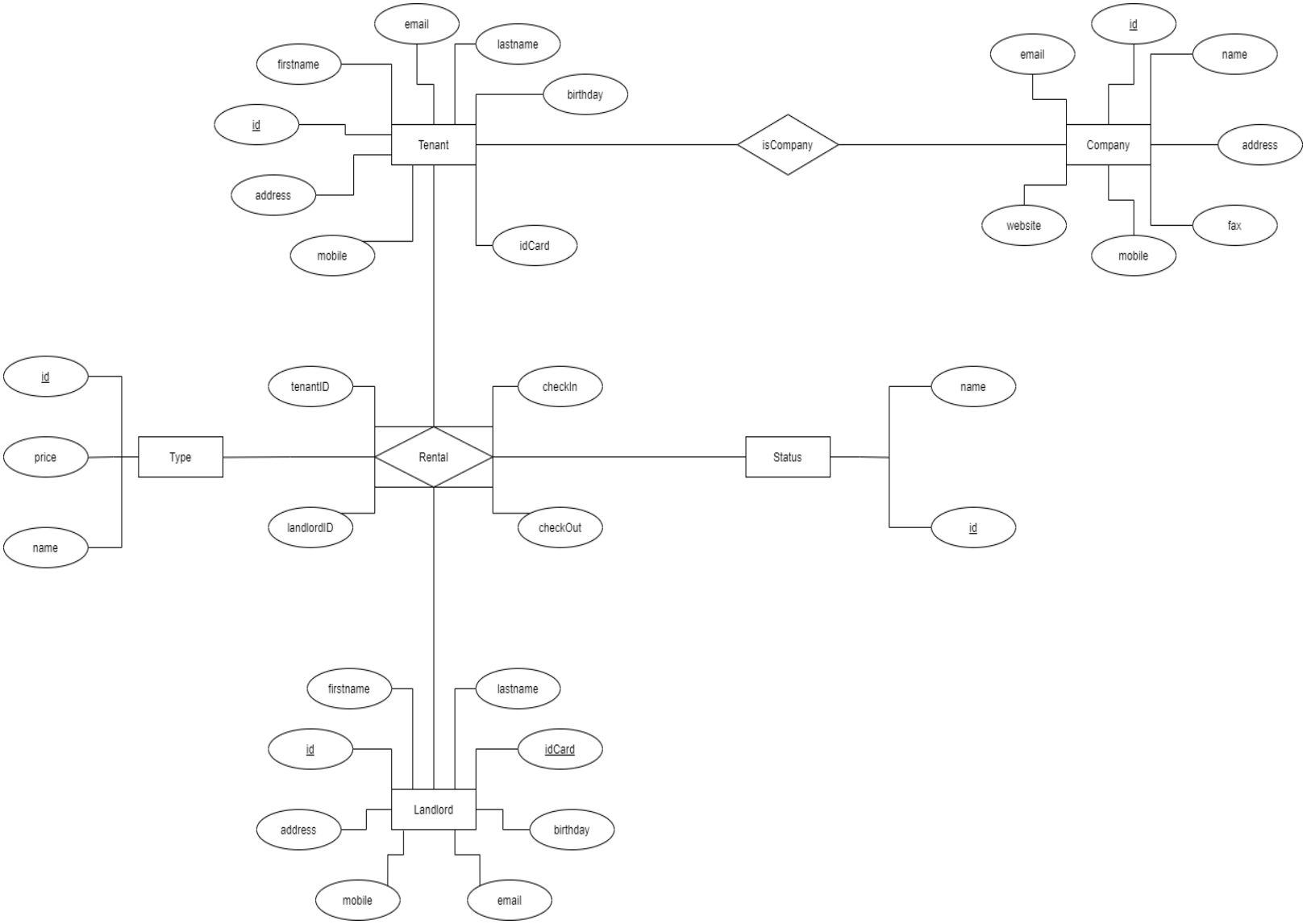
ข้อที่ 1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birthday
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Tenant
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Company
address
address
website
fax
mobile
idCard
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name
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Rental
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name
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lastname
id
idCard
Landlord
address
birthday
mobile
email

Data Dictionary

Tenant

Name	Description	Data type	Size	Key	Example
Tenant_id	Identity of each user	Varchar	5	PK	001
Tenant_firstname	The first name of user	Varchar	50		Tony
Tenant_lastname	The last name of user	Varchar	50		Happy
Tenant_idCard	The ID card number of the user	Varchar	13		1639966072119
Tenant_mobile	The mobile number of the user	Varchar	10		0845970256
Tenant_email	The email of user	Varchar	60		Test1@gmail.com
Tenant_address	User's address	Varchar	200		127/2 อ.เมือง ต.ท่าศาลา จ.เชียงใหม่
Tenant_birthday	The birthday of the user	Date	-		10/09/1998
Company_id	The identity of each company	Varchar	20	FK	001

Company

Name	Description	Data type	Size	Key	Example
Company_id	Identity of each company	Varchar	5	PK	001
Company_name	The name of company	Varchar	50		DII Company
Company_address	Company's address	Varchar	200		College of Arts, Media and Technology
Company_email	The email of company	Varchar	60		camt@cmu.ac.th
Company_website	The website link of the company	Varchar	100		https://www.camt.cmu.ac.th/
Company_fax	The fax number of the company	Varchar	10		053941803
Company_mobile	The mobile number of the company	Varchar	10		053920299

Rental

Name	Description	Data type	Size	Key	Example
Tenant_id	Identity of each user	Varchar	5	FK	001
Landlord_id	Identity of landlord	Varchar	5	FK	001
checkIn	The start date of renting	Date	-		30/8/2021
checkOut	The end date of renting	Date	-		1/9/2021
Type_id	Identity of each type	Varchar	5	FK	001

Status

Name	Description	Data type	Size	Key	Example
Status_id	Identity of each status	Varchar	5	PK	001
Status_name	The name of the status	Varchar	50		End of contact

Type

Name	Description	Data type	Size	Key	Example
Type_id	Identity of each type	Varchar	5	PK	001
Type_name	The name of rental type	Varchar	20		Monthly
Type_price	The price of rental	Int	20		4000

Landlord

Name	Description	Data type	Size	Key	Example
Landlord_id	Identity of the landlord	Varchar	5	PK	001
Landlord _firstname	The first name of landlord	Varchar	50		Johnny
Landlord _lastname	The last name of landlord	Varchar	50		Sins
Landlord _idCard	The ID card number of the landlord	Varchar	13		1639966071025
Landlord _mobile	The mobile number of the landlord	Varchar	10		0860253014
Landlord _email	The email of landlord	Varchar	60		Test2@gmail.com
Landlord_birthday	The birthday of landlord	Date	-		04/09/2000
Landlord_address	Landlord's address	Varchar	200		128/45 อ.เมือง ต.เต่างอย จ. ลอนดอน

Normalization

Tenant

id	firstname	lastname	idCard	address	email	mobile	birthday
001	Tony	Happy	1639966072119	129/6 อ.เมือง ต.ท่าศาลา จ.เชียงใหม่	Test1@gmail.com	0845970256	10/09/1998
002	Rae	Lilblack	1509966963751	42/0 อ.หมาน้อย ต.หมาใหญ่ จ.ดาวหมา	Test3@gmail.com	0869421102	06/01/1996

Status

id	name
001	End of contract
002	Transfer owner
003	Drop out

Type

id	name	price
001	Daily	300
002	Monthly	4000

Landlord

id	firstname	lastname	idCard	address	email	mobile	birthday
001	Johnny	Sins	1639966071025	128/45 อ.เมือง ต.เต่างอย จ. ลอนดอน	Test2@gmail.com	0860253014	04/09/2000

Company

id	name	address	email	website	mobile	fax
001	DII Company	College of Arts, Media and Technology	camt@cmu.ac.th	https://www.camt.cmu.ac.th/	053920299	053941803

Rental

Tenant_id	Landlord_id	checkIn	checkOut	Type_id
001	001	30/8/2021	1/9/2021	001
002	001	15/7/2021	-	002

SQL TABLE

```
CREATE DATABASE room_data1 CHARACTER SET utf8 COLLATE utf8_general_ci;

CREATE TABLE status_type (
   id INT NOT NULL AUTO_INCREMENT,
   status_name VARCHAR(50),
   PRIMARY KEY (id)
);

CREATE TABLE type (
   id INT NOT NULL AUTO_INCREMENT,
   name VARCHAR(100) NOT NULL,
   price DECIMAL(11,2) NOT NULL,
   PRIMARY KEY (id)
);

CREATE TABLE company (
   id INT NOT NULL,
   name VARCHAR(100) NOT NULL,
   address TEXT NOT NULL,
   email VARCHAR(100) NOT NULL,
   mobile_phone VARCHAR(10) NOT NULL,
   fax VARCHAR(9) NOT NULL,
   website VARCHAR(100) NOT NULL,
   PRIMARY KEY (id)
);
```

```
CREATE TABLE landlord (
   id INT NOT NULL AUTO_INCREMENT,
   card_id VARCHAR(13) NOT NULL,
   f_name VARCHAR(50) NOT NULL,
   l_name VARCHAR(50) NOT NULL,
   address TEXT NOT NULL,
   email VARCHAR(100) NOT NULL,
   mobile_phone VARCHAR(10) NOT NULL,
   birthday DATE NOT NULL,
   PRIMARY KEY (id)
);

CREATE TABLE tenant (
   id INT NOT NULL AUTO_INCREMENT,
   card_id VARCHAR(13) NOT NULL,
   f_name VARCHAR(50) NOT NULL,
   l_name VARCHAR(50) NOT NULL,
   address TEXT NOT NULL,
   email VARCHAR(100) NOT NULL,
   mobile_phone VARCHAR(10) NOT NULL,
   birthday DATE NOT NULL,
   company_id INT,
   PRIMARY KEY (id),
   FOREIGN KEY (company_id) REFERENCES company (id)
);
```

```
CREATE TABLE rental (
   id INT NOT NULL AUTO_INCREMENT,
   tenant_id INT NOT NULL,
   landlord_id INT NOT NULL,
   type_id INT NOT NULL,
   status_id INT,
   checkin DATE NOT NULL,
   checkout DATE ,
   PRIMARY KEY (id),
   FOREIGN KEY (tenant_id) REFERENCES tenant (id),
   FOREIGN KEY (landlord_id) REFERENCES landlord (id),
   FOREIGN KEY (type_id) REFERENCES type (id),
   FOREIGN KEY (status_id) REFERENCES status_type (id)
);
```

Table Example #1

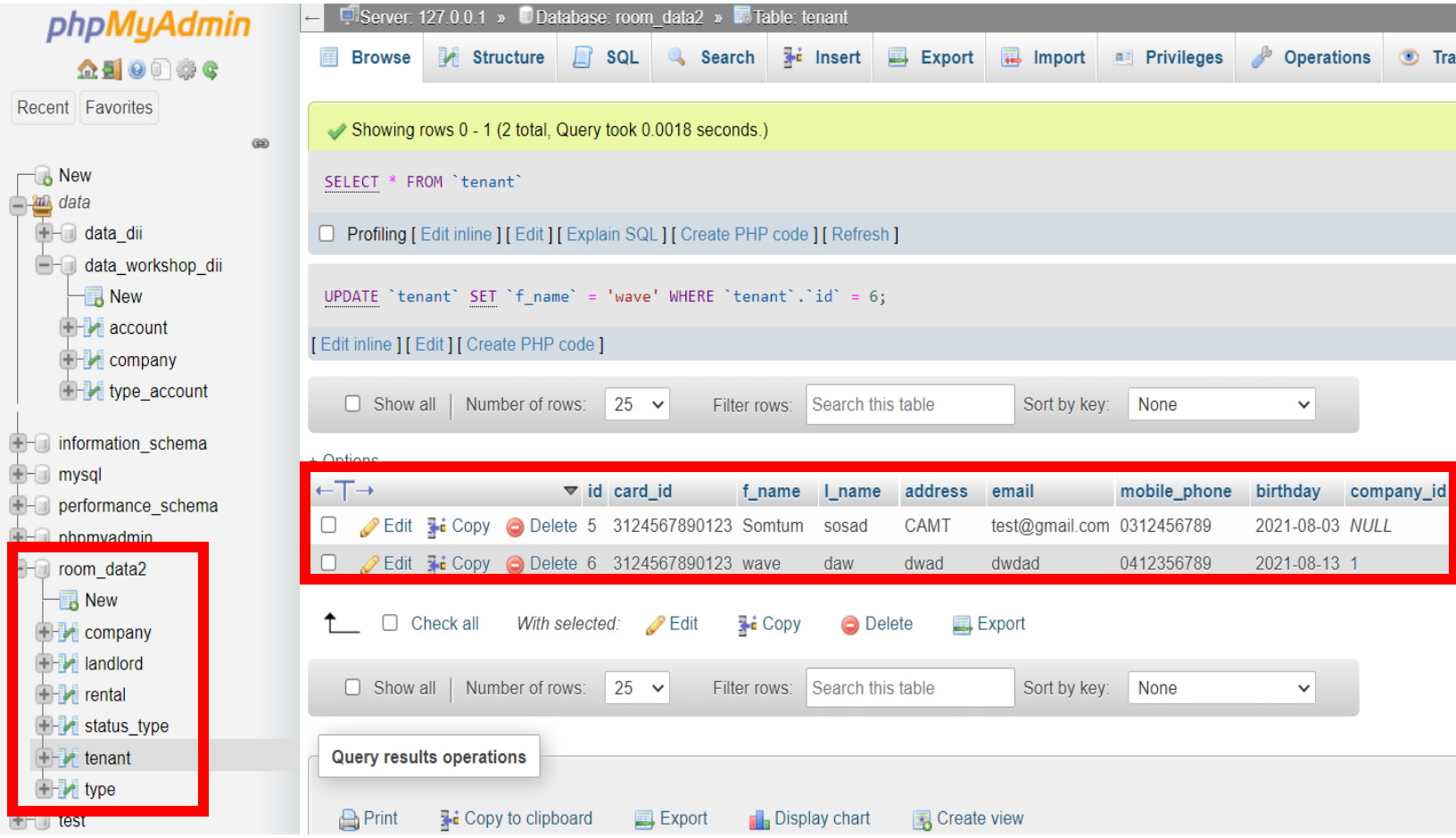
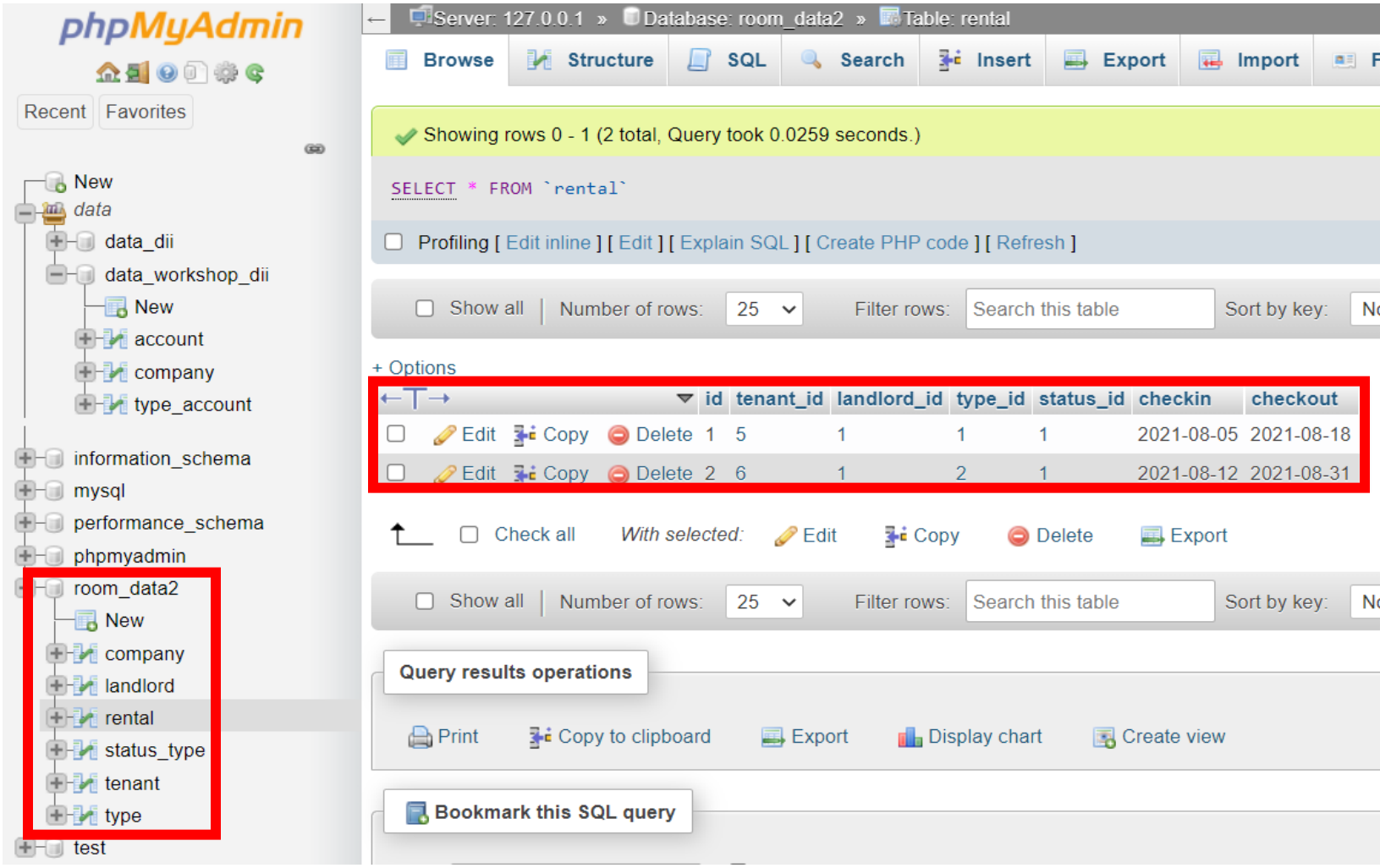
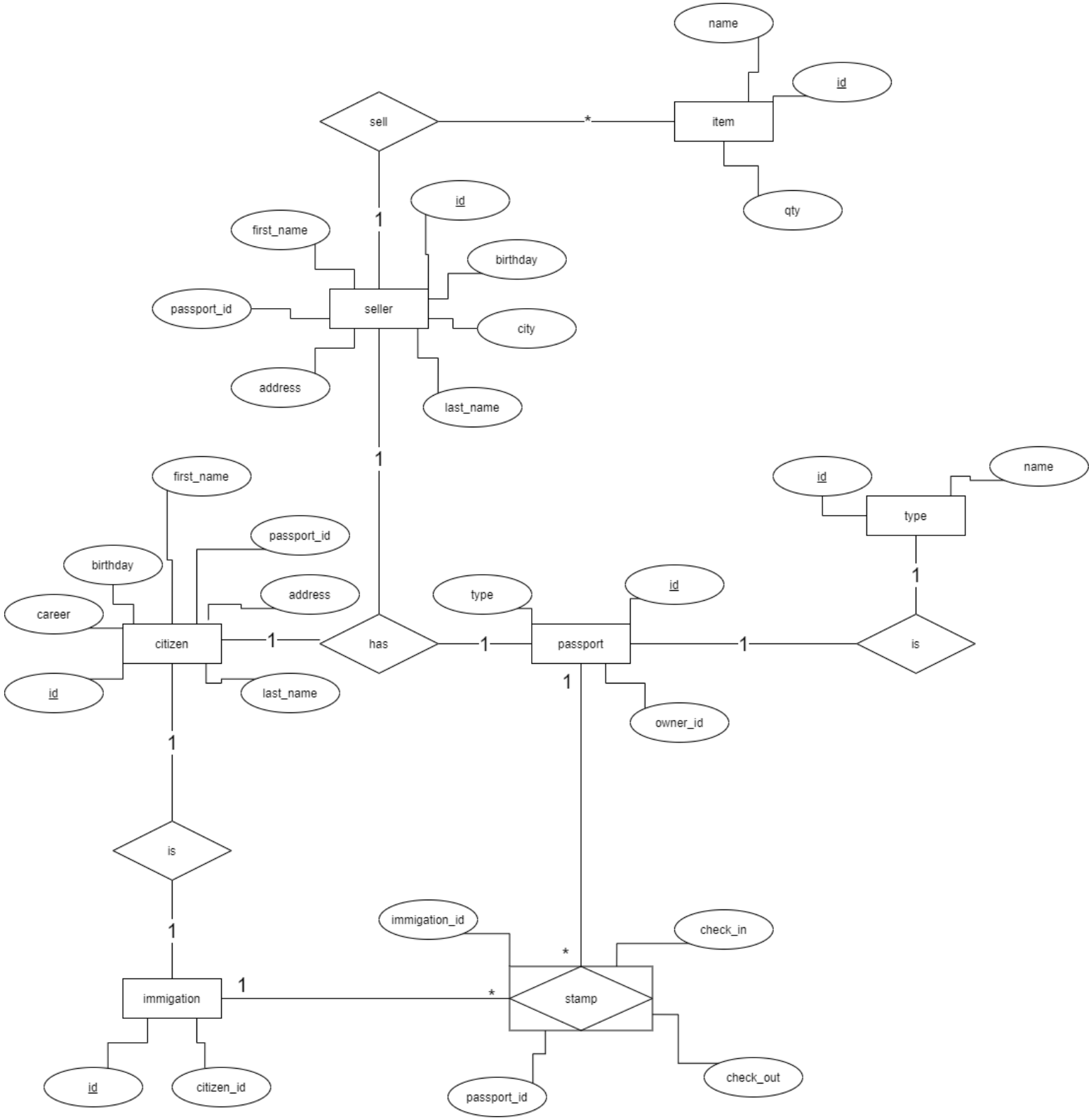


Table Example #2



ข้อที่ 2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passport_id
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city
address
last_name
1
first_name
id
name
type
passport_id
birthday
address
type
id
career
citizen
1
has
1
passport
1
is
id
last_name
1
owner_id
1
is
1
immigation_id
check_in
*
1
immigation
*
stamp
id
citizen_id
passport_id
check_out

Data Dictionary

Citizen

Name	Description	Data type	Size	Key	Example
Citizen_id	Identity of each citizen	Varchar	6	PK	001
Citizen_firstname	The first name of citizen	Varchar	50		Rimuru
Citizen_lastname	The last name of citizen	Varchar	50		Tempest
Citizen_passportID	The passport ID of each citizen	Varchar	13		1509966426853
Citizen_career	Career of the citizen	Varchar	50		King
Citizen_address	The address of citizen	Varchar	200		1/1 town hall, Rimuru city
Citizen_birthday	The birthday of citizen	Date	-		1/11/1991

Immigation

Name	Description	Data type	Size	Key	Example
Immigation_id	Identity of immigration officer	Varchar	3	PK	123
Citizen_id	Identity of each citizen	Varchar	6	FK	001

Type

Name	Description	Data type	Size	Key	Example
Type_id	Identity of the type	Varchar	3	PK	001
Type_name	The name of each type	Varchar	50		Citizen

Passport

Name	Description	Data type	Size	Key	Example
Passport_id	Identity of the passport	Varchar	6	PK	1563
Type_id	The type of passport	Varchar	3	FK	001
Owner_id	The identity of the owner	Varchar	6	FK	238

Stamp

Name	Description	Data type	Size	Key	Example
Passport_id	Identity of the passport	Varchar	6	FK	1563
Immigation_id	The identity of immigration officer	Varchar	3	FK	001
Check_in	The date when get in town	Date	-		08/05/2021
Check_out	The date when get out of town	Date	-		14/09/2021

Seller

Name	Description	Data type	Size	Key	Example
Seller_id	Identity of each citizen	Varchar	6	PK	38
Seller_firstname	The first name of citizen	Varchar	50		Kagali
Seller_lastname	The last name of citizen	Varchar	50		Kazaream
Seller_passportID	The passport ID of each citizen	Varchar	13		1365298961147
Seller_city	The home city of the seller	Varchar	50		Sorcery Kingdom
Seller _address	The address of citizen	Varchar	200		Loyal palace of Sorcery Kingdom
Seller _birthday	The birthday of citizen	Date	-		02/04/1025

Item

Name	Description	Data type	Size	Key	Example
Item_id	Identity of each item	Varchar	6	PK	007
Item_name	The name of an item	Varchar	50	-	Katana
Item _qty	The identity of the owner	Int	-		99

Normalization

Citizen

id	firstname	lastname	passportID	address	career	birthday
001	Rimuru	Tempest	1639966072119	1/1 town hall, Rimuru city	King	22/10/2018
002	Veldora	Tempest	1509876963751	1/2 town hall, Rimuru city	Dungeon Keeper	18/07/0008
003	Diablo	Noir	1219966963716	1/3 town hall, Rimuru city	Servant	06/06/666

Immigration

Immigration_id	Citizen_id
001	128
002	45

Type

Type_id	Type_name
001	Citizen
002	Seller

Passport

Passport_id	Type_id	Owner_id
49	001	955
1274	002	2053

Stamp

Passport_id	Immigation_id	Check_in	Check_out
49	191	04/09/2021	10/09/2021
1274	420	21/07/2021	-

Seller

id	firstname	lastname	passportID	address	city	birthday
058	Kagali	Kazaream	1365298961147	Loyal palace of Sorcery Kingdom	Sorcery Kingdom	02/04/1025
352	Luminous	Valentine	1234567890123	The Church of Luminas	Holy Empire Ruberios	06/08/1009

Item

Item_id	Item_name	Item_qty
011	Beef	1000
094	Carrot	500

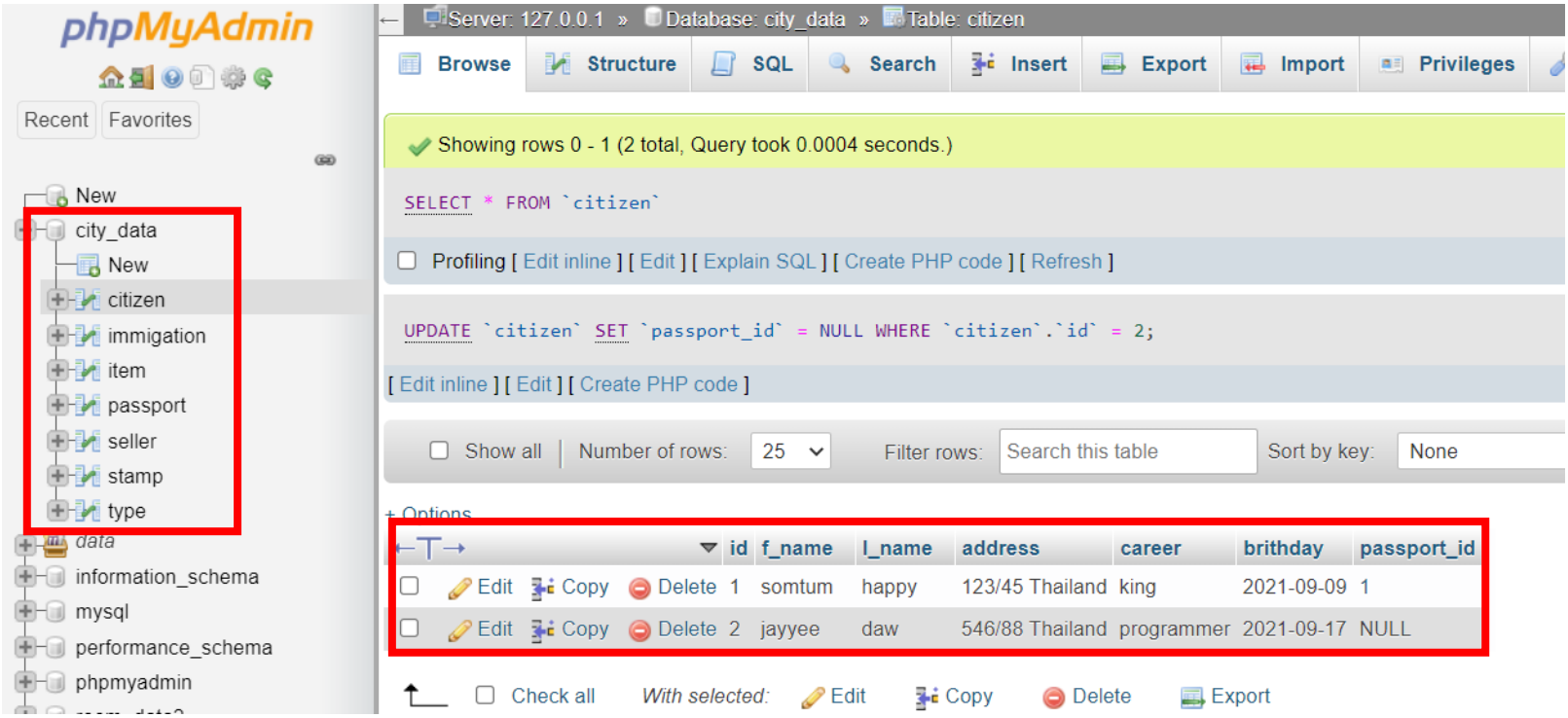
SQL TABLE

```
CREATE DATABASE city_data CHARACTER SET utf8 COLLATE utf8_general_ci;
USE city_data;

CREATE TABLE type (
   id INT NOT NULL AUTO_INCREMENT,
   type_name VARCHAR(50) NOT NULL,
   PRIMARY KEY (id)
);

CREATE TABLE passport (
   id INT NOT NULL AUTO_INCREMENT,
   type_id INT NOT NULL,
   owner_id INT NOT NULL,
   PRIMARY KEY (id)
   FOREIGN KEY (type_id) REFERENCES type (id)
);

CREATE TABLE citizen (
   id INT NOT NULL AUTO_INCREMENT,
   f_name VARCHAR(50) NOT NULL,
   l_name VARCHAR(50) NOT NULL,
   address TEXT NOT NULL,
   career VARCHAR(200) NOT NULL,
   brithday DATE NOT NULL,
   passport_id INT DEFAULT NULL,
   PRIMARY KEY (id),
```

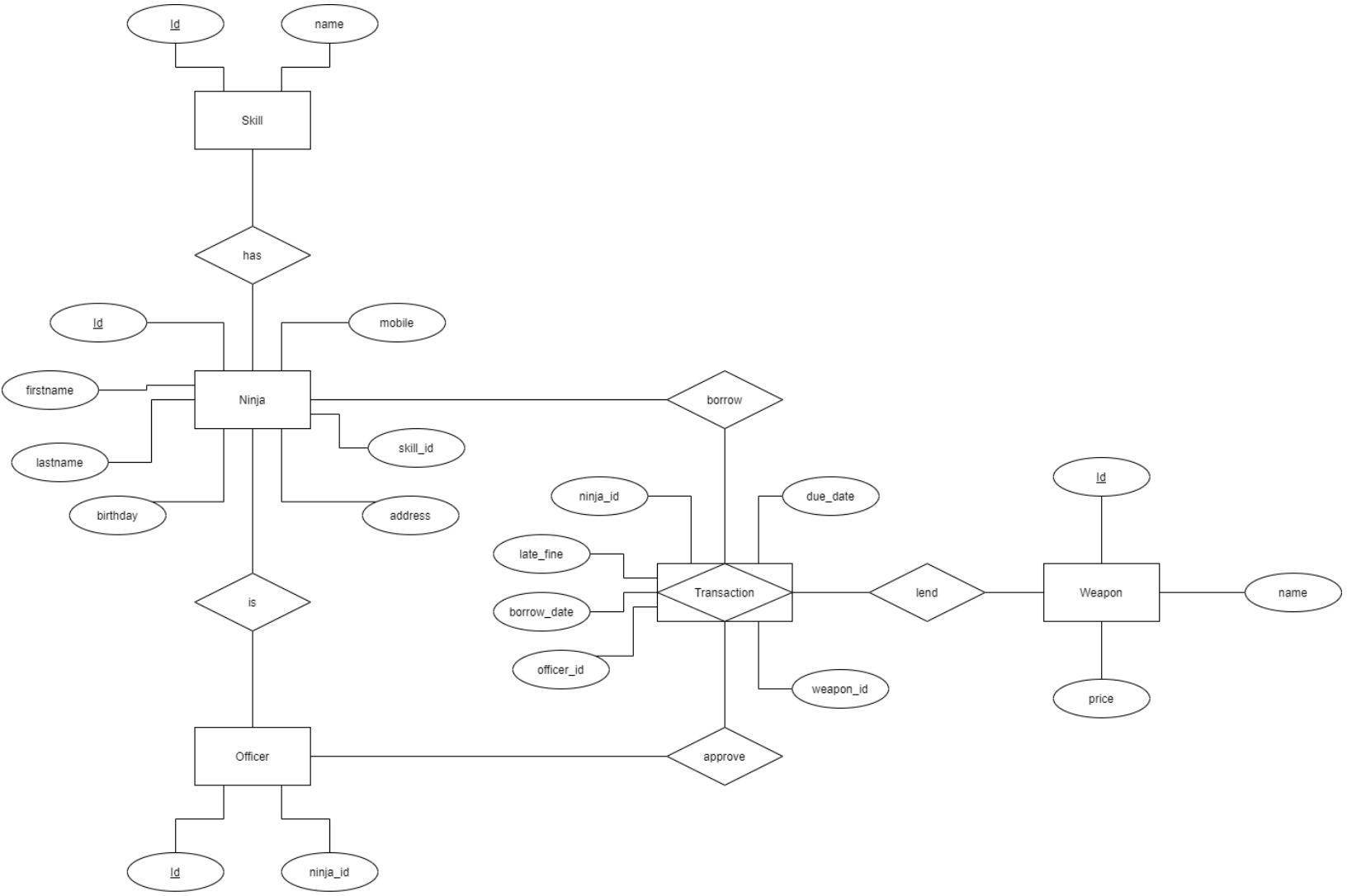
```
    FOREIGN KEY (passport_id) REFERENCES passport (id)
);

CREATE TABLE immigation (
    id INT NOT NULL AUTO_INCREMENT,
    citizen_id INT NOT NULL,
    PRIMARY KEY (id),
    FOREIGN KEY (citizen_id) REFERENCES citizen (id)
);

CREATE TABLE seller (
    id INT NOT NULL AUTO_INCREMENT,
    f_name VARCHAR(50) NOT NULL,
    l_name VARCHAR(50) NOT NULL,
    address TEXT NOT NULL,
    city VARCHAR(200) NOT NULL,
    brithday DATE NOT NULL,
    passport_id INT DEFAULT NULL,
    PRIMARY KEY (id),
    FOREIGN KEY (passport_id) REFERENCES passport (id)
);

CREATE TABLE item (
    id INT NOT NULL AUTO_INCREMENT,
    seller_id INT NOT NULL,
    item_name VARCHAR(50) NOT NULL,
    price DECIMAL(11, 2) NOT NULL,
    qty INT NOT NULL,
    PRIMARY KEY (id),
```

```
    FOREIGN KEY (seller_id) REFERENCES seller (id)
);

CREATE TABLE stamp (
    id INT NOT NULL,
    passport_id INT NOT NULL,
    immigation_id INT NOT NULL,
    check_in DATE NOT NULL,
    check_out DATE,
    PRIMARY KEY (id),
    FOREIGN KEY (passport_id) REFERENCES passport (id),
    FOREIGN KEY (immigation_id) REFERENCES immigation (id)
);
```

Table Example #1



ข้อที่ 3


Id
name
Skill
has
Id
mobile
firstname
Ninja
borrow
lastname
skill_id
birthday
address
ninja_id
due_date
late_fine
Transaction
lend
Weapon
name
borrow_date
officer_id
weapon_id
Id
price
is
Officer
approve
Id
ninja_id

Data Dictionary

Ninja

Name	Description	Data type	Size	Key	Example
ninja_id	Identity of the ninja	Varchar	5	PK	001
ninja_firstname	The first name of ninja	Varchar	70		Johnny
ninja_lastname	The last name of ninja	Varchar	70		Sins
ninja_mobile	The mobile number of the ninja	Varchar	10		0860253014
ninja_birthday	The birthday of ninja	Date	-		04/09/2000
ninja_address	The address of ninja	Varchar	255		128/45 อ.เมือง ต.เต่างอย จ. ลอนดอน
skill_id	The identity number of each skill	Varchar		FK	001

Skill

Name	Description	Data type	Size	Key	Example
skill_id	Identity of the skill	Varchar	5	PK	001
skill_name	The name of skill	Varchar	70		Fire ninjutsu

Officer

Name	Description	Data type	Size	Key	Example
officer_id	Identity of the officer	Varchar	5	PK	011
ninja_id	Identity of the ninja	Varchar	5	FK	089

Transaction

Name	Description	Data type	Size	Key	Example
ninja_id	Identity of the ninja	Varchar	5	PK	001
borrow_date	The day that borrows weapon	Date	-		07/09/2021
due_date	The day to give back weapon	Date	-		10/09/2021
late_fine	The price that needs to be paid when give back late	Int	6		1500
weapon_id	The identity of the weapon	Varchar	5	FK	101
officer_id	Identity of the officer	Varchar	5	FK	011

Weapon

Name	Description	Data type	Size	Key	Example
weapon_id	The identity of the weapon	Varchar	5	PK	101
weapon _name	The name of weapon	Varchar	70		Kunai
weapon_price	The price of the weapon	Int	6		200

Normalization

Ninja

id	firstname	lastname	mobile	birthday	address	skill_id
001	Naruto	Uzumaki	0860253014	04/09/2000	1/1 หมู่บ้านโคโนฮะ	001
002	Sasuke	Uchiha	0888888888	18/07/0008	1/2 หมู่บ้านโคโนฮะ	002
003	Kakashi	Hatake	0877777777	06/06/666	1/3 หมู่บ้านโคโนฮะ	003

Skill

id	name
001	Water Release
002	Sharingan
003	Lighting Release

Officer

id	ninja_id
001	018
002	032
003	127

Transaction

ninja_id	borrow_date	due_date	late_fine	weapon_id	officer_id
001	29/08/2021	019/09/2021	1500	002	002
125	04/09/2021	09/09/2021	-	001	003
352	01/09/2021	06/09/2021	-	008	001

Weapon

id	name	price
001	Kunai	100
002	Katana	500
008	Gun	1000

SQL TABLE

```
CREATE DATABASE konoha CHARACTER SET utf8 COLLATE utf8_general_ci;
USE konoha

CREATE TABLE skills (
   skill_id INT NOT NULL,
   skill_name VARCHAR(50) NOT NULL,
   PRIMARY KEY (skill_id)
);

CREATE TABLE weapon (
   weapon_id INT NOT NULL AUTO_INCREMENT,
   weapon_name VARCHAR(50) NOT NULL,
   price DECIMAL(11, 2) NOT NULL,
   PRIMARY KEY (weapon_id)
);

CREATE TABLE ninja (
   ninja_id INT NOT NULL AUTO_INCREMENT,
   f_name VARCHAR(50) NOT NULL,
   l_name VARCHAR(50) NOT NULL,
   mobile VARCHAR(10) NOT NULL,
   brithday DATE NOT NULL,
```

```
    address TEXT NOT NULL,
    skill_id INT NOT NULL,
    PRIMARY KEY (ninja_id),
    FOREIGN KEY (skill_id) REFERENCES skills (skill_id)
);

CREATE TABLE officer (
    id INT NOT NULL AUTO_INCREMENT,
    ninja_id INT NOT NULL,
    PRIMARY KEY (id),
    FOREIGN KEY (ninja_id) REFERENCES ninja (ninja_id)
);

CREATE TABLE trasaction (
    id INT NOT NULL AUTO_INCREMENT,
    ninja_id INT NOT NULL,
    officer_id INT NOT NULL,
    weapon INT NOT NULL,
    borrow_date DATE NOT NULL,
    due_date DATE NOT NULL,
    late_fine DATE NOT NULL,
    PRIMARY KEY (id),
    FOREIGN KEY (ninja_id) REFERENCES ninja (ninja_id),
    FOREIGN KEY (officer_id) REFERENCES officer (id)
```

FOREIGN KEY (weapon) REFERENCES weapon (weapon_id)

);

Table Example #1