Project Name:

Mall Management System

Project Description:

The Mall Management System is a database system designed to centralize and organize information related to a shopping mall. It enables efficient management of mall operations and enhances the overall shopping experience for visitors. The system stores data about malls, departments, stores, activities, and items within the mall. It provides administrators, store owners, and visitors with easy access to essential information such as mall details, department descriptions, store locations, activity information, and item categories. The system facilitates effective mall administration, inventory management, and visitor planning, ultimately improving operational efficiency and customer satisfaction.

Tasks table:

Student Name	Tasks
Shaimaa Lafi Al-Zubaidi (444003238)	
Zainab Al-Zubaidi (444000414)	ER Diagram and Schema
Abeer Hassan Al-Abdali (44411616)	
Elaf Yasin Al-Alawi (44410884)	
Dana Ahmed Bazghaivan (444003400)	SQL manipulation commands SQL COMPLEX querying on project da

SQL manipulation commands
SQL definition commands:

atabase

Scenario:

Imagine you are working on the Mall Management System for City Oasis Mall, a bustling shopping destination in the heart of the city. The mall management wants to implement a comprehensive database system to streamline their operations and enhance the shopping experience for visitors.

The Mall Management System consists of several entities, including malls, departments, stores, activities, and items. Let's explore the relationships between these entities and the cardinality ratios, total participation, and partial participation details:

1. Mall and Department Relationship:

- Relationship: One-to-Many
- Cardinality: One mall can have many departments, but each department belongs to only one mall.
- Participation: Total participation on both sides (a mall must have at least one department, and a department must belong to a mall).

2. Department and Store Relationship and Activity:

- Relationship: Department (1) to Stores (Many), Department (1) to Activities (Many)
- Cardinality: One department can have many stores and activities, but each store and activity belongs to only one department.
- Participation: Partial participation on both sides (a department might not have any stores or activities yet, and a store or activity might not be assigned to a department yet).

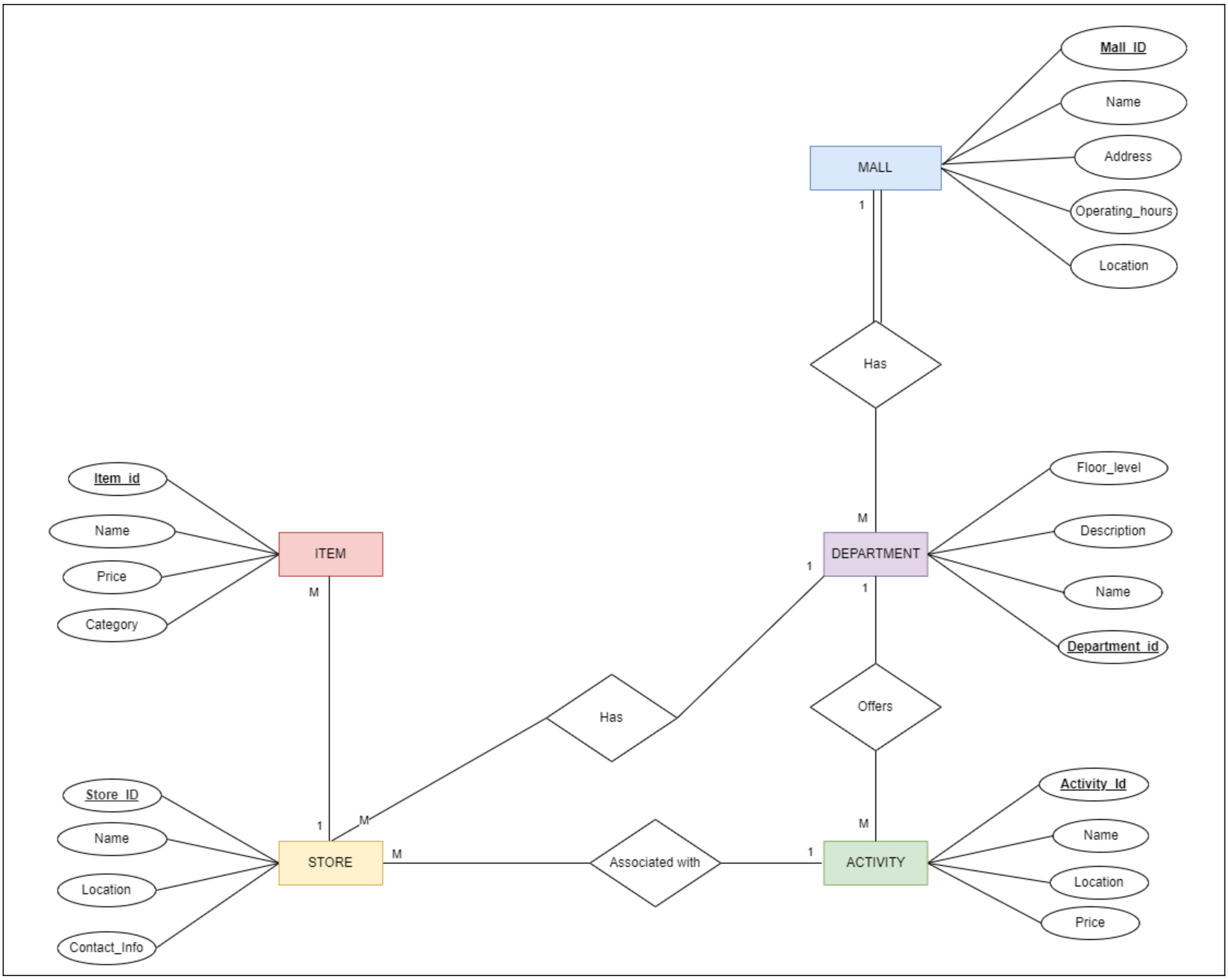
3. Store and Item Relationship:

- Relationship: Store (1) to Items (Many)
- Cardinality: One store can have many items, but each item belongs to only one store.
- Participation: Partial participation on both sides (a store might not have any items in stock yet, and an item might not be assigned to a store yet).

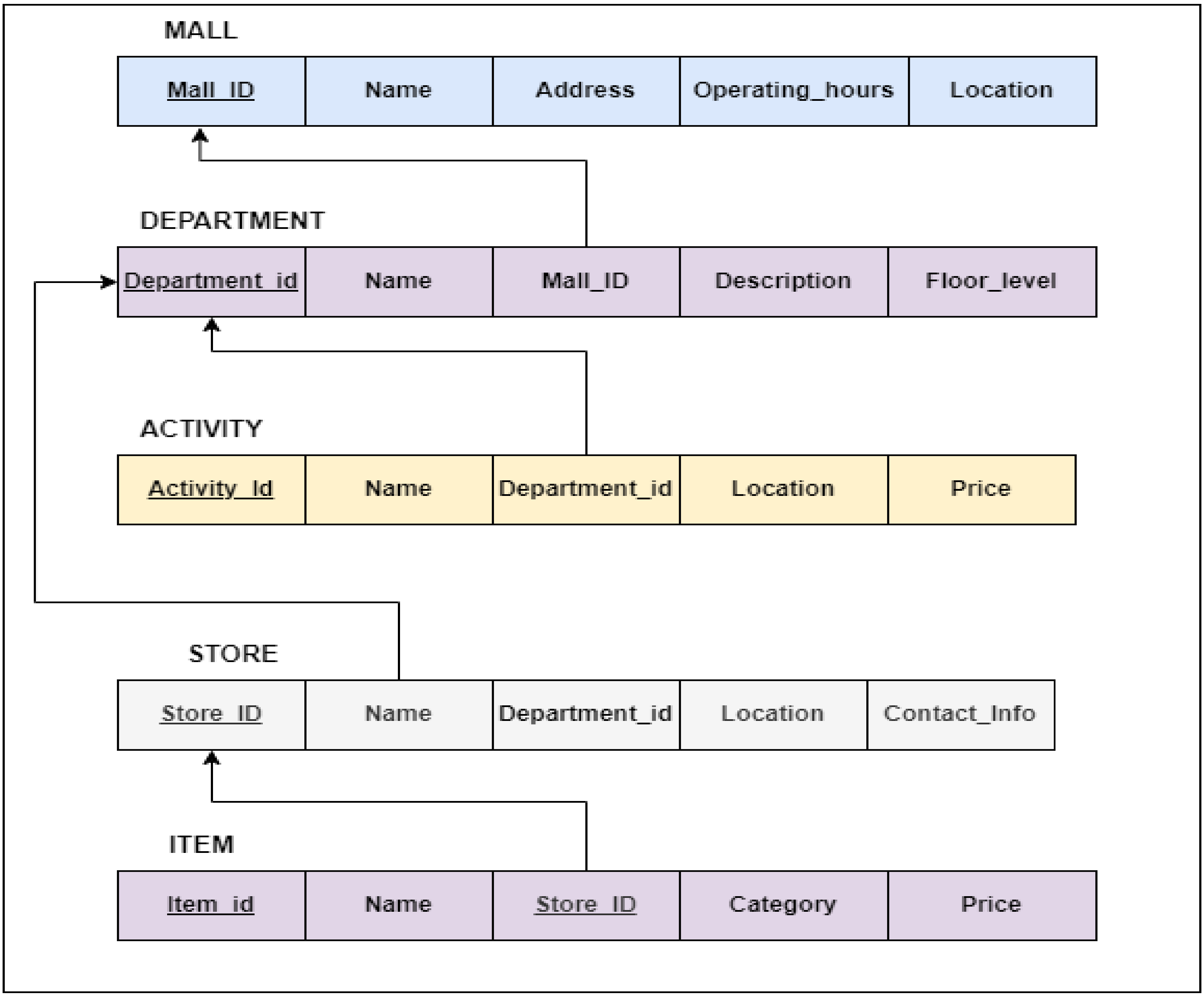
In this scenario, City Oasis Mall has multiple departments, such as the Entertainment Zone, Shopping Avenue, Culinary Delights, and Foodie Paradise. Each department offers a range of stores and activities. For example, the Entertainment Zone may have stores like Strikes & Laughs and a bowling activity, the Shopping Avenue may have Fashion Paradise and a shopping trip activity, and so on.

The Mall Management System ensures that every department, store, activity, and item is correctly associated with the respective mall and department. It allows mall administrators to efficiently manage and update information, store owners to showcase their offerings, and visitors to explore various departments, stores, activities, and items within the mall.

ER Diagram:


Mall_ID
Name
Address
Operating_hours
Location
MALL
1
Has
M
Floor_level
Description
Name
Department_id
DEPARTMENT
1
1
Offers
M
Activity_Id
Name
Location
Price
ACTIVITY
1
Associated with
M
STORE
1
M
Has
Item_id
Name
Price
Category
ITEM
M
Store_ID
Name
Location
Contact_Info

Schema:



MALL

Mall_ID	Name	Address	Operating_hours	Location

DEPARTMENT

Department_id	Name	Mall_ID	Description	Floor_level

ACTIVITY

Activity_Id	Name	Department_id	Location	Price

STORE

Store_ID	Name	Department_id	Location	Contact_Info

ITEM

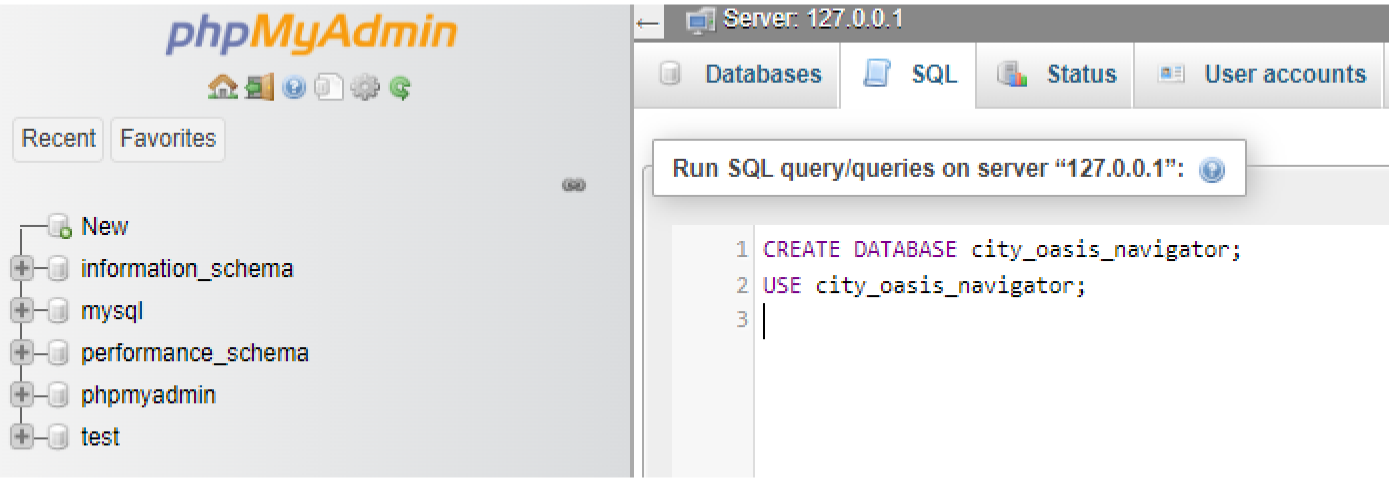
Item_id	Name	Store_ID	Category	Price

SQL definition commands:

1. Create the database:

CREATE DATABASE city_oasis_navigator;

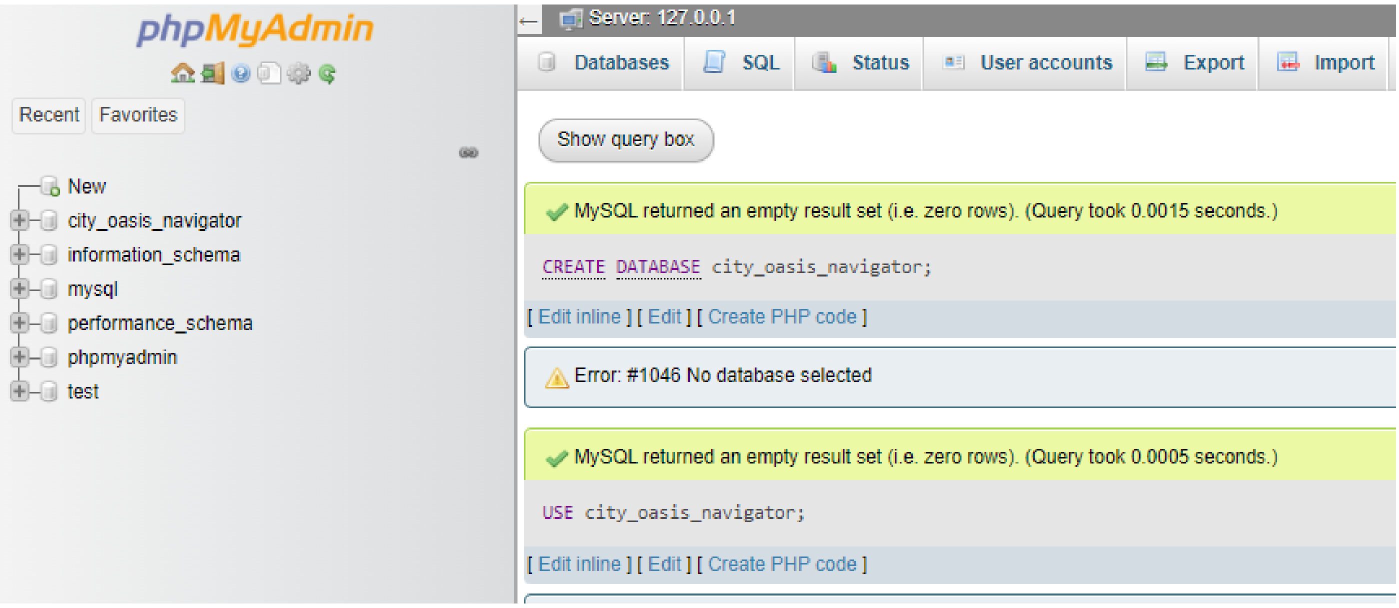
USE city_oasis_navigator;



Run SQL query/queries on server “127.0.0.1”:

```
CREATE DATABASE city_oasis_navigator;
USE city_oasis_navigator;
```

output:



✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0015 seconds.)

```
CREATE DATABASE city_oasis_navigator;
```

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

Error: #1046 No database selected

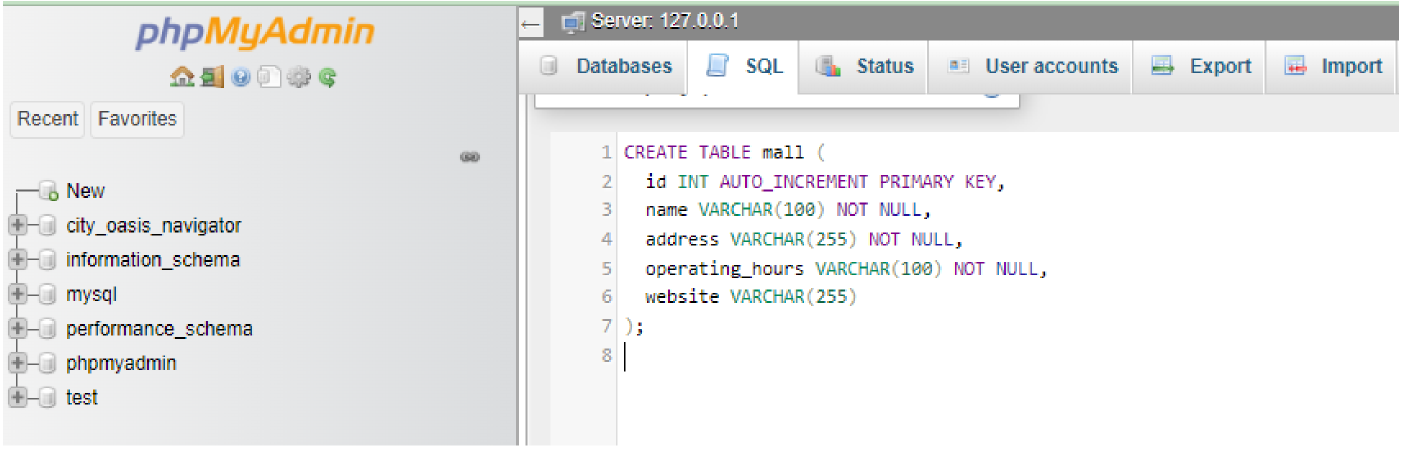
✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0005 seconds.)

```
USE city_oasis_navigator;
```

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

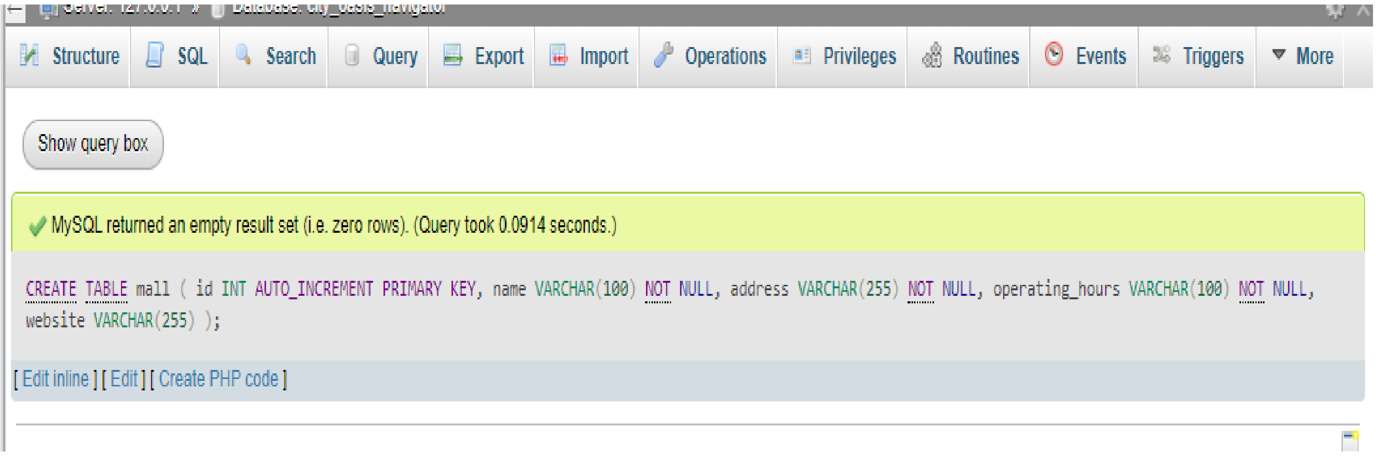
2. Create the tables:

```
CREATE TABLE mall (
  id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(100) NOT NULL,
  address VARCHAR(255) NOT NULL,
  operating_hours VARCHAR(100) NOT NULL,
  website VARCHAR(255)
);
```



```
CREATE TABLE mall (
  id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(100) NOT NULL,
  address VARCHAR(255) NOT NULL,
  operating_hours VARCHAR(100) NOT NULL,
  website VARCHAR(255)
);
```

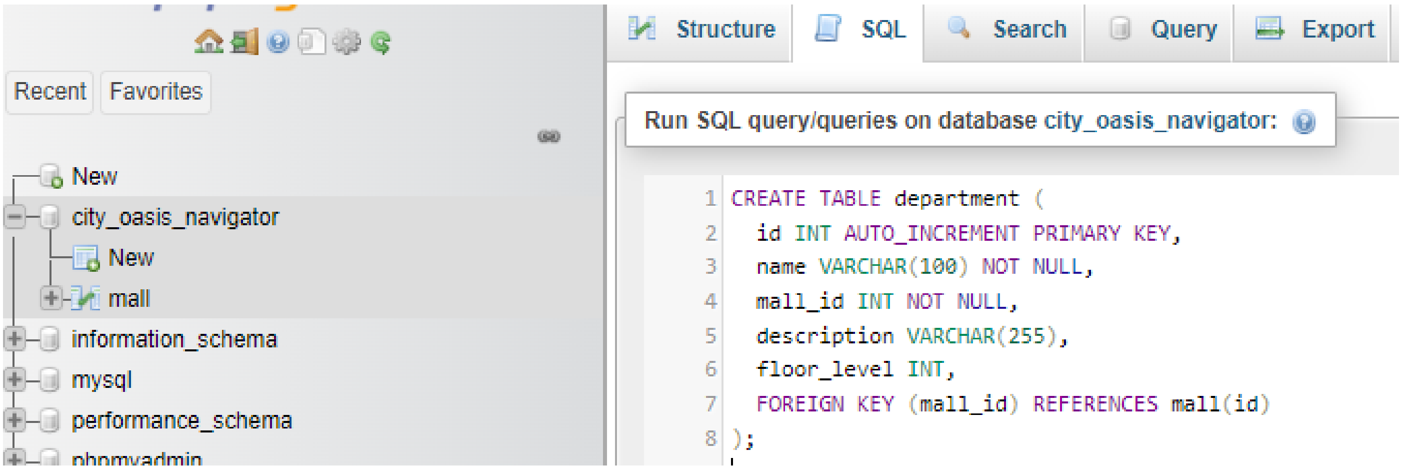
Outputs:



✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0914 seconds.)

```
CREATE TABLE mall ( id INT AUTO_INCREMENT PRIMARY KEY, name VARCHAR(100) NOT NULL, address VARCHAR(255) NOT NULL, operating_hours VARCHAR(100) NOT NULL,
website VARCHAR(255) );
```

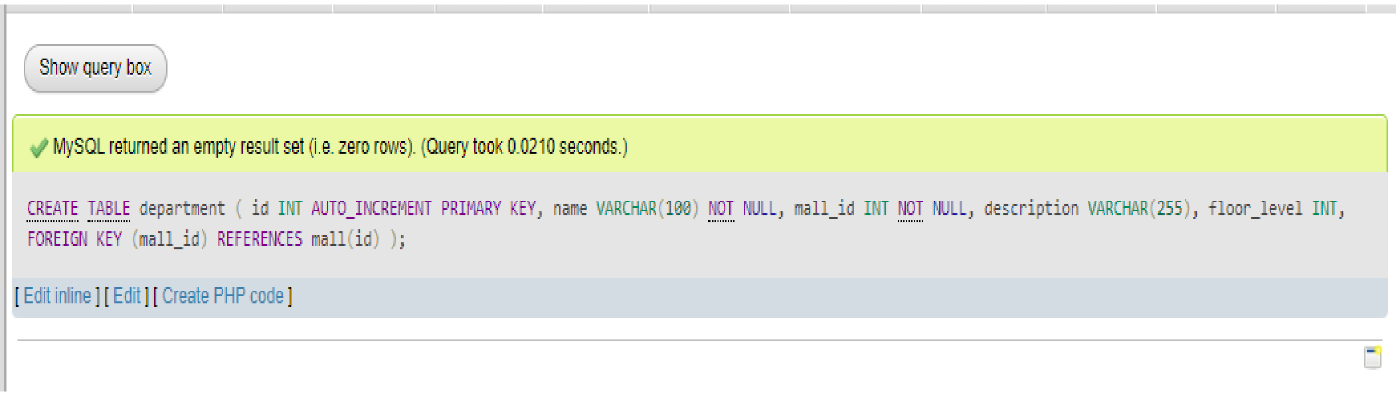
```
CREATE TABLE department (
  id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(100) NOT NULL,
  mall_id INT NOT NULL,
  description VARCHAR(255),
  floor_level INT,
  FOREIGN KEY (mall_id) REFERENCES mall(id)
);
```



Run SQL query/queries on database city_oasis_navigator:

```
CREATE TABLE department (
  id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(100) NOT NULL,
  mall_id INT NOT NULL,
  description VARCHAR(255),
  floor_level INT,
  FOREIGN KEY (mall_id) REFERENCES mall(id)
);
```

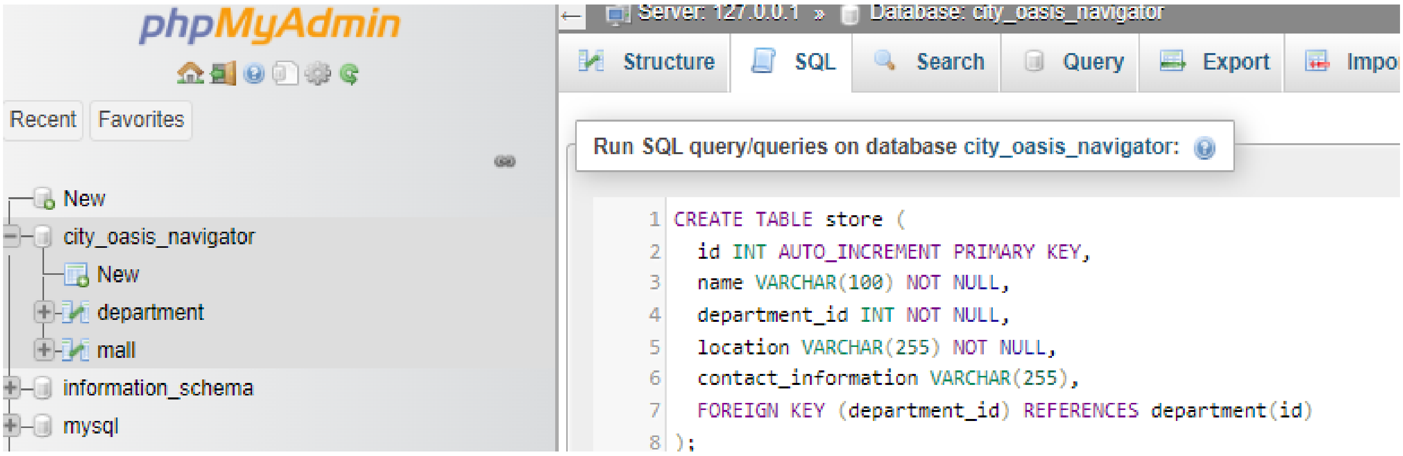
Output:



✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0210 seconds.)

```
CREATE TABLE department ( id INT AUTO_INCREMENT PRIMARY KEY, name VARCHAR(100) NOT NULL, mall_id INT NOT NULL, description VARCHAR(255), floor_level INT,
FOREIGN KEY (mall_id) REFERENCES mall(id) );
```

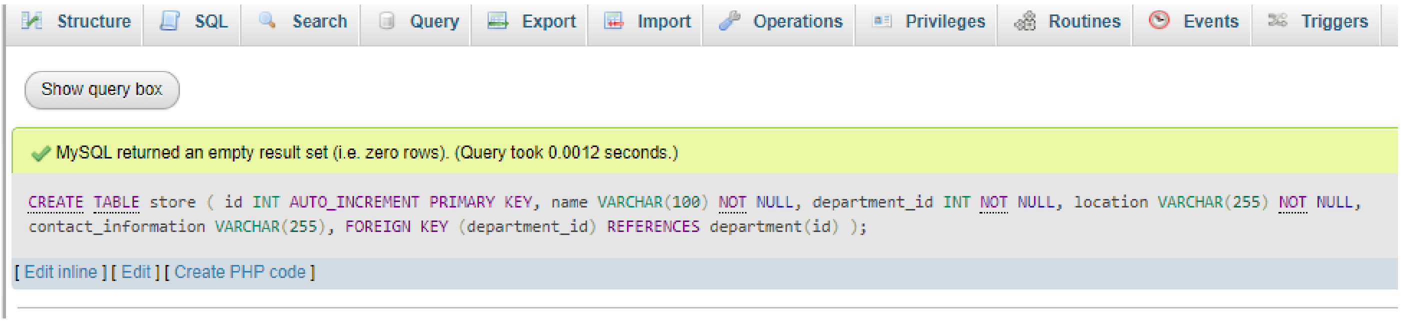
```
CREATE TABLE store (
  id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(100) NOT NULL,
  department_id INT NOT NULL,
  location VARCHAR(255) NOT NULL,
  contact_information VARCHAR(255),
```



Run SQL query/queries on database city_oasis_navigator:

```
CREATE TABLE store (
  id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(100) NOT NULL,
  department_id INT NOT NULL,
  location VARCHAR(255) NOT NULL,
  contact_information VARCHAR(255),
  FOREIGN KEY (department_id) REFERENCES department(id)
);
```

```
  FOREIGN KEY (department_id) REFERENCES department(id)
```



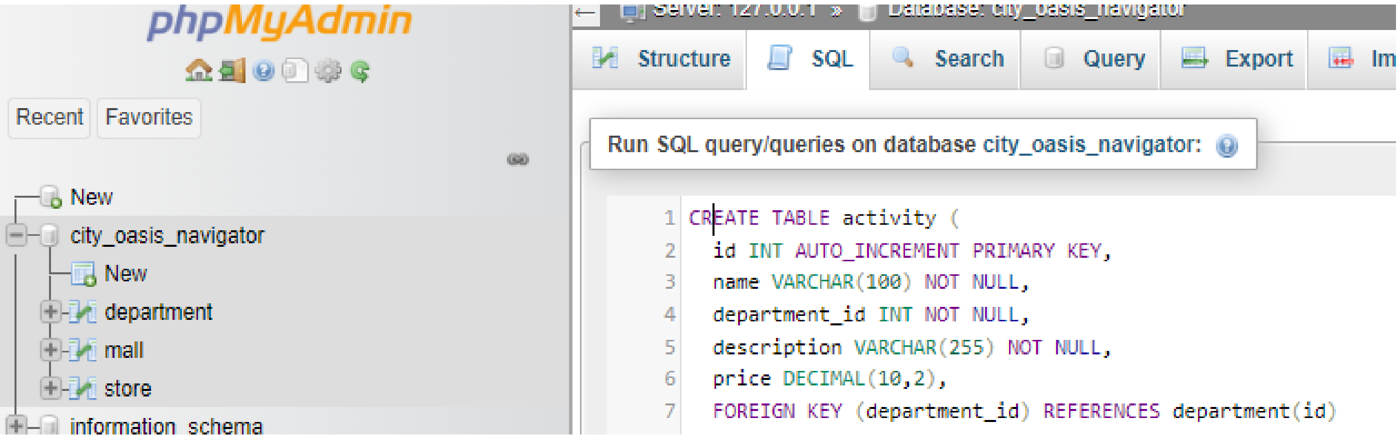
✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0012 seconds.)

```
CREATE TABLE store ( id INT AUTO_INCREMENT PRIMARY KEY, name VARCHAR(100) NOT NULL, department_id INT NOT NULL, location VARCHAR(255) NOT NULL,
contact_information VARCHAR(255), FOREIGN KEY (department_id) REFERENCES department(id) );
```

```
);
```

Output:

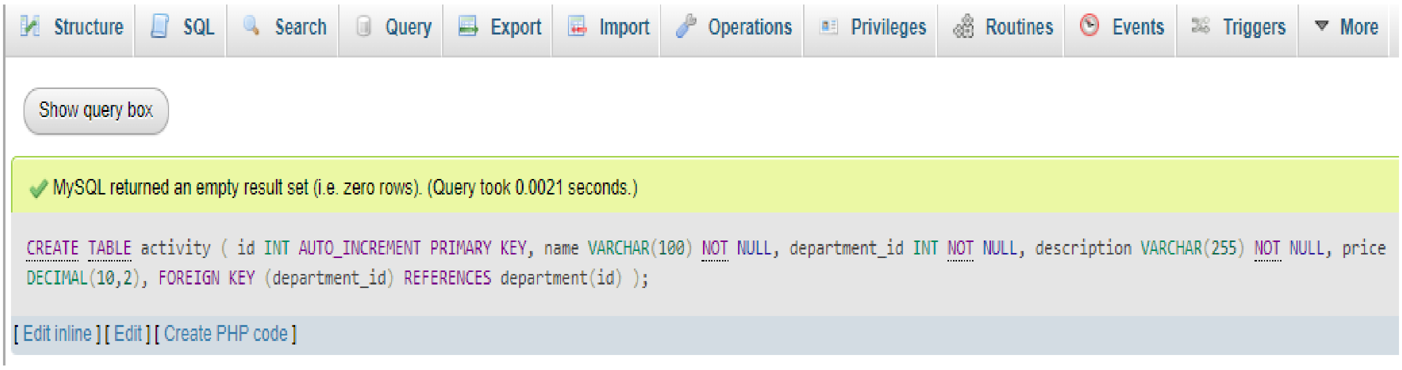
```
CREATE TABLE activity (
  id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(100) NOT NULL,
  department_id INT NOT NULL,
  description VARCHAR(255) NOT NULL,
  price DECIMAL(10,2),
  FOREIGN KEY (department_id) REFERENCES department(id)
);
```



Run SQL query/queries on database city_oasis_navigator:

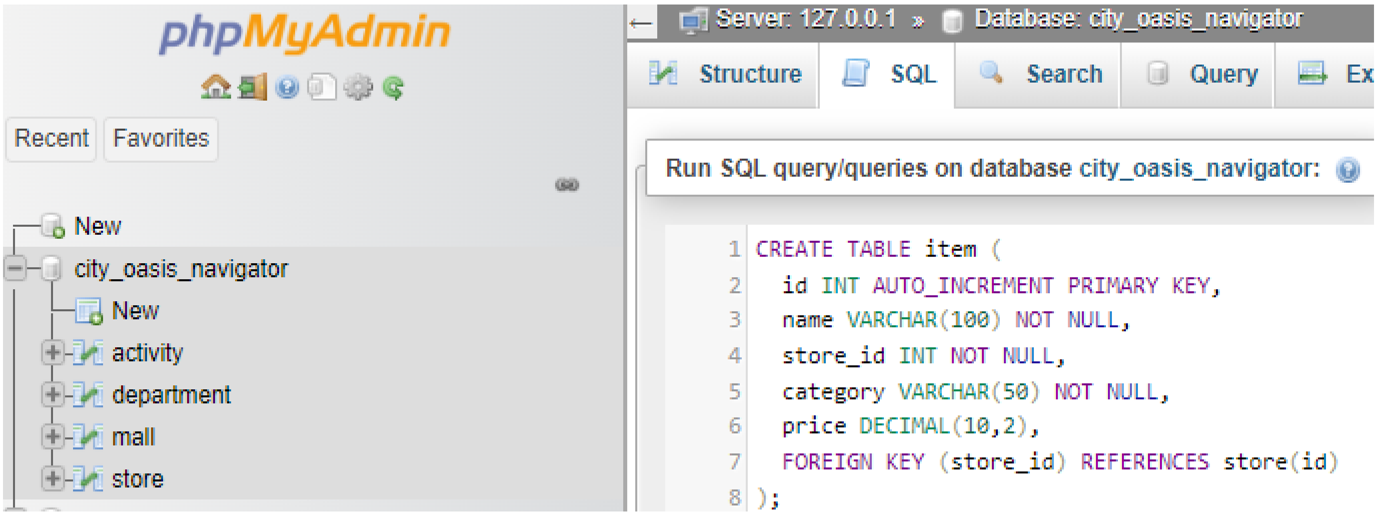
```
CREATE TABLE activity (
  id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(100) NOT NULL,
  department_id INT NOT NULL,
  description VARCHAR(255) NOT NULL,
  price DECIMAL(10,2),
  FOREIGN KEY (department_id) REFERENCES department(id)
```

Output:



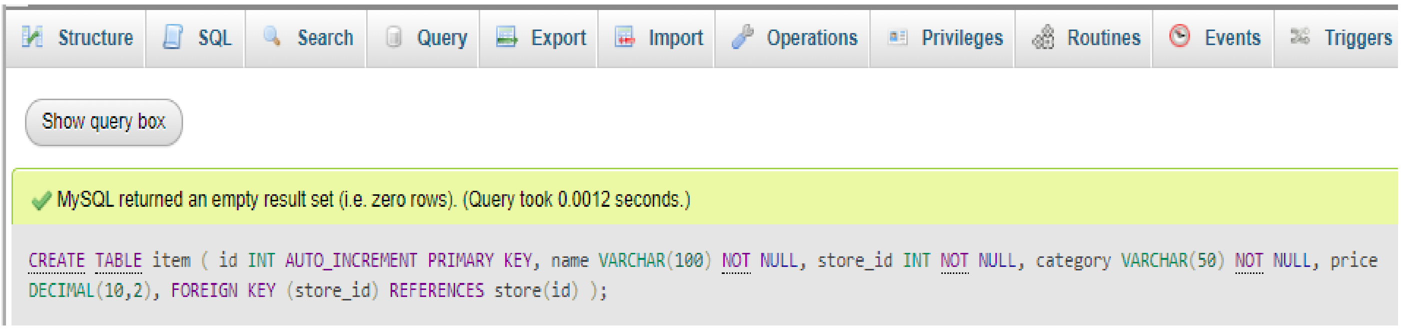
✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0021 seconds.)

```
CREATE TABLE activity ( id INT AUTO_INCREMENT PRIMARY KEY, name VARCHAR(100) NOT NULL, department_id INT NOT NULL, description VARCHAR(255) NOT NULL, price DECIMAL(10,2), FOREIGN KEY (department_id) REFERENCES department(id) );
CREATE TABLE item (
  id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(100) NOT NULL,
  store_id INT NOT NULL,
  category VARCHAR(50) NOT NULL,
  price DECIMAL(10,2),
  FOREIGN KEY (store_id) REFERENCES store(id)
);
```


phpMyAdmin
Recent
Favorites
New
city_oasis_navigator
New
activity
department
mall
store
Server: 127.0.0.1 » Database: city_oasis_navigator
Structure
SQL
Search
Query
Ex
Run SQL query/queries on database city_oasis_navigator:

```
CREATE TABLE item (
  id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(100) NOT NULL,
  store_id INT NOT NULL,
  category VARCHAR(50) NOT NULL,
  price DECIMAL(10,2),
  FOREIGN KEY (store_id) REFERENCES store(id)
);
```

Outputs:



✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0012 seconds.)

```
CREATE TABLE item ( id INT AUTO_INCREMENT PRIMARY KEY, name VARCHAR(100) NOT NULL, store_id INT NOT NULL, category VARCHAR(50) NOT NULL, price
DECIMAL(10,2), FOREIGN KEY (store_id) REFERENCES store(id) );
```

3. Verify the database structure:

SHOW TABLES;

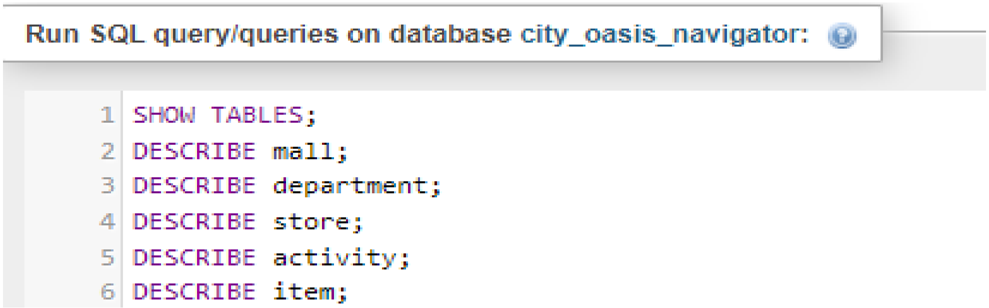
DESCRIBE mall;

DESCRIBE department;

DESCRIBE store;

DESCRIBE activity;

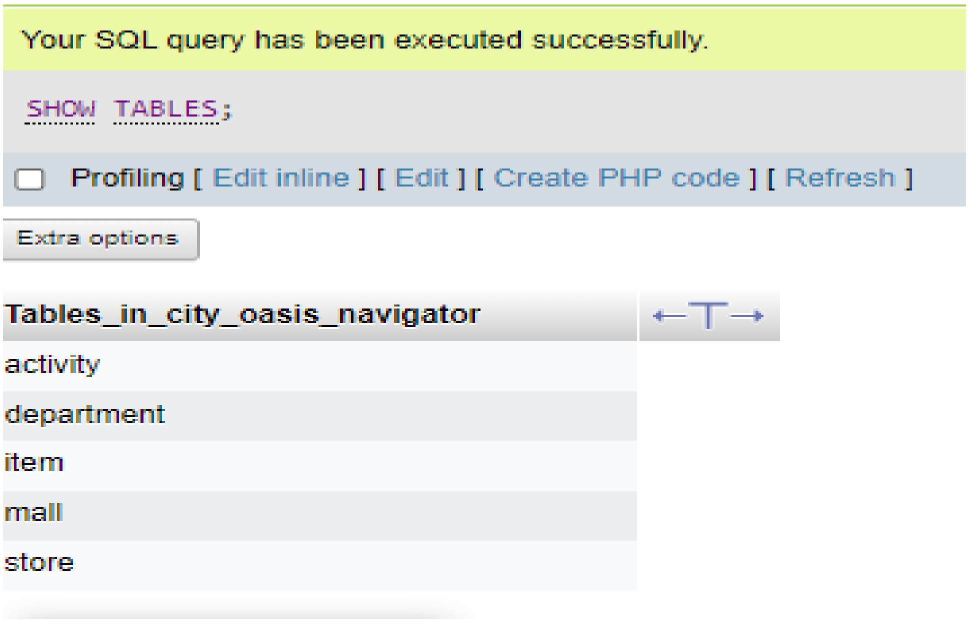
DESCRIBE item;



Run SQL query/queries on database city_oasis_navigator:

```
SHOW TABLES;
DESCRIBE mall;
DESCRIBE department;
DESCRIBE store;
DESCRIBE activity;
DESCRIBE item;
```

Outputs:

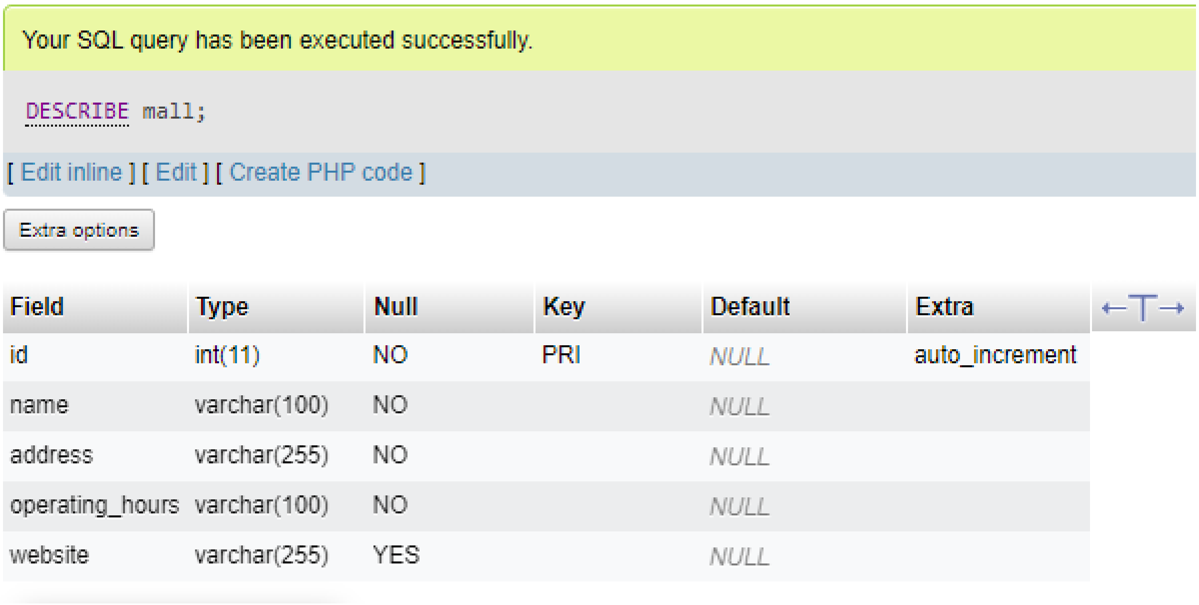


Your SQL query has been executed successfully.

```
SHOW TABLES;
```

□ Profiling [Edit inline] [Edit] [Create PHP code] [Refresh]
Extra options
←T→

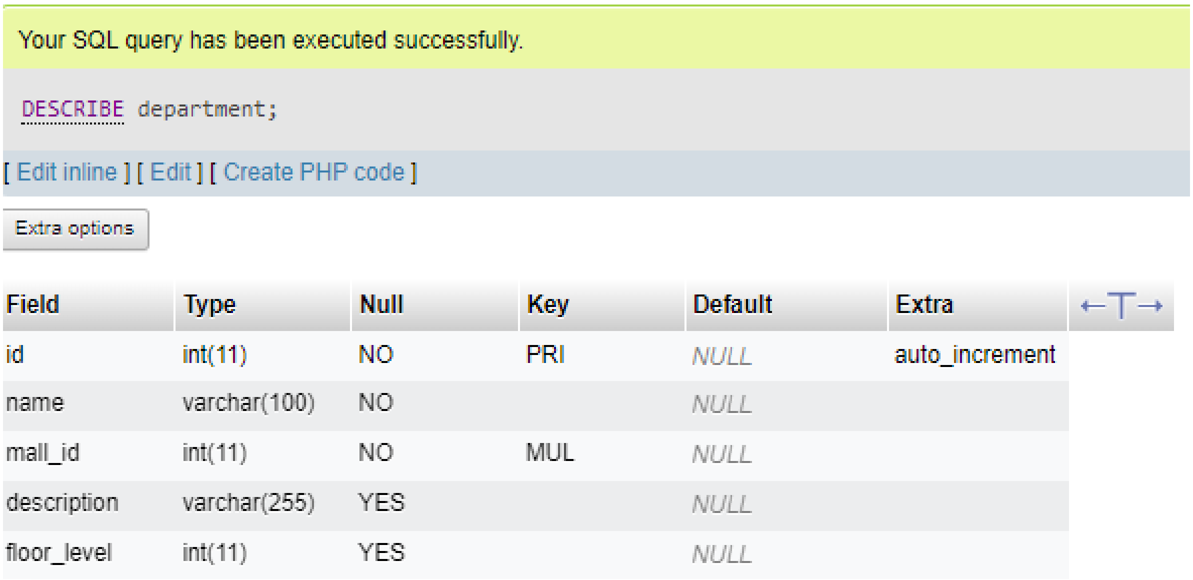
Tables_in_city_oasis_navigator
activity
department
item
mall
store



Your SQL query has been executed successfully.

```
DESCRIBE mall;
```

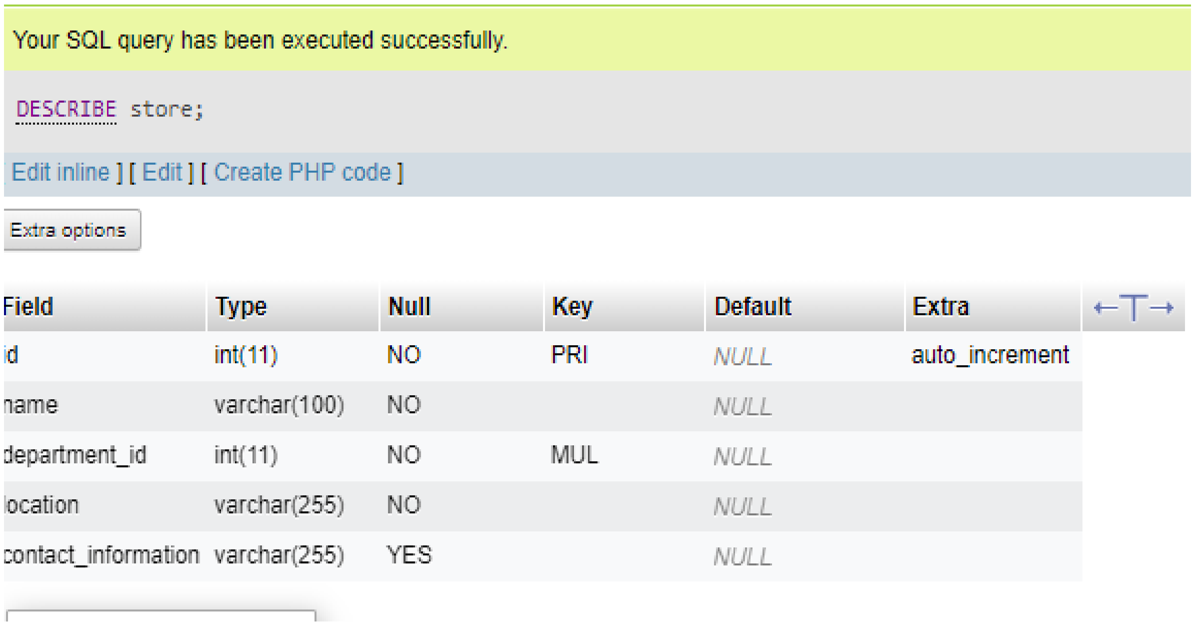
Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	*NULL*	auto_increment
name	varchar(100)	NO		*NULL*	
address	varchar(255)	NO		*NULL*	
operating_hours	varchar(100)	NO		*NULL*	
website	varchar(255)	YES		*NULL*	



Your SQL query has been executed successfully.

```
DESCRIBE department;
```

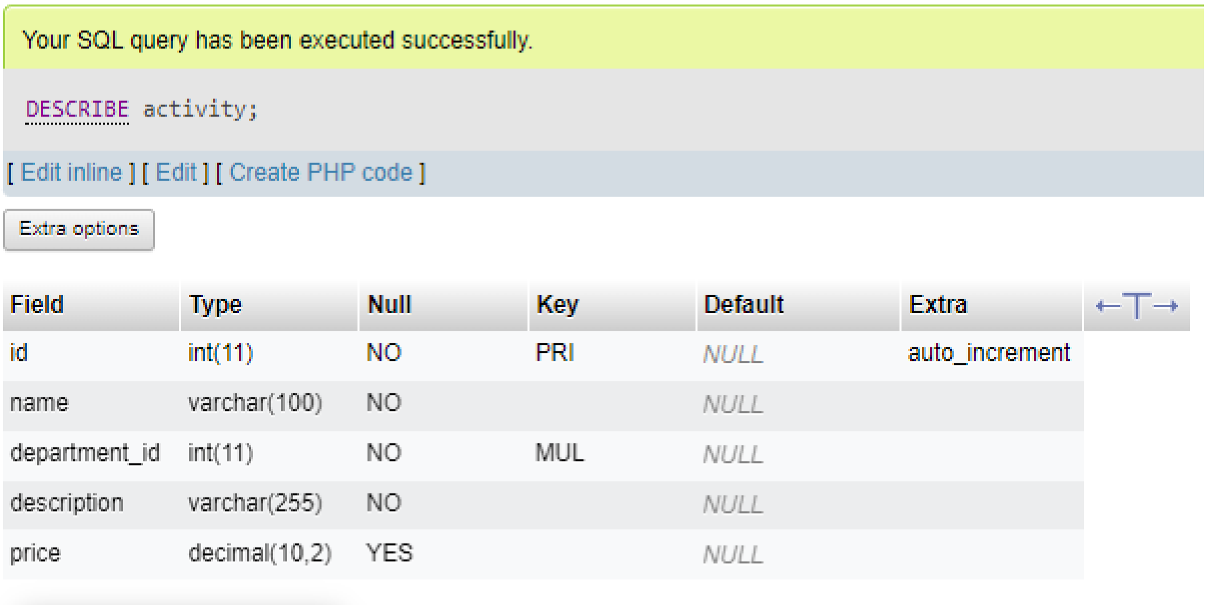
Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	*NULL*	auto_increment
name	varchar(100)	NO		*NULL*	
mall_id	int(11)	NO	MUL	*NULL*	
description	varchar(255)	YES		*NULL*	
floor_level	int(11)	YES		*NULL*	



Your SQL query has been executed successfully.

```
DESCRIBE store;
```

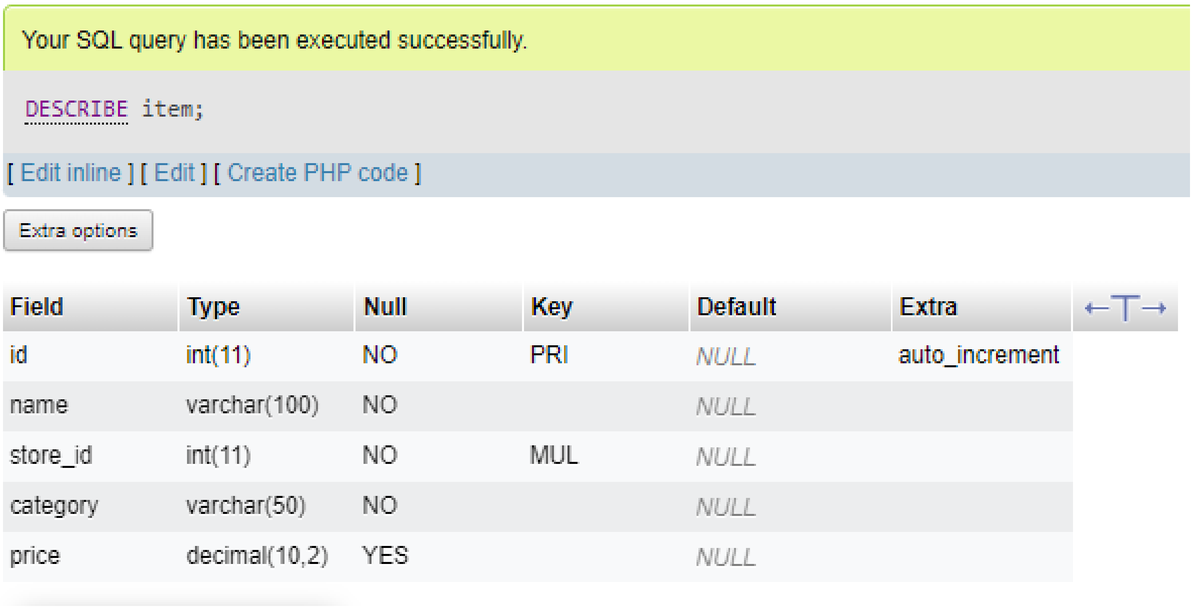
Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	*NULL*	auto_increment
name	varchar(100)	NO		*NULL*	
department_id	int(11)	NO	MUL	*NULL*	
location	varchar(255)	NO		*NULL*	
contact_information	varchar(255)	YES		*NULL*	



Your SQL query has been executed successfully.

```
DESCRIBE activity;
```

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	*NULL*	auto_increment
name	varchar(100)	NO		*NULL*	
department_id	int(11)	NO	MUL	*NULL*	
description	varchar(255)	NO		*NULL*	
price	decimal(10,2)	YES		*NULL*	



Your SQL query has been executed successfully.

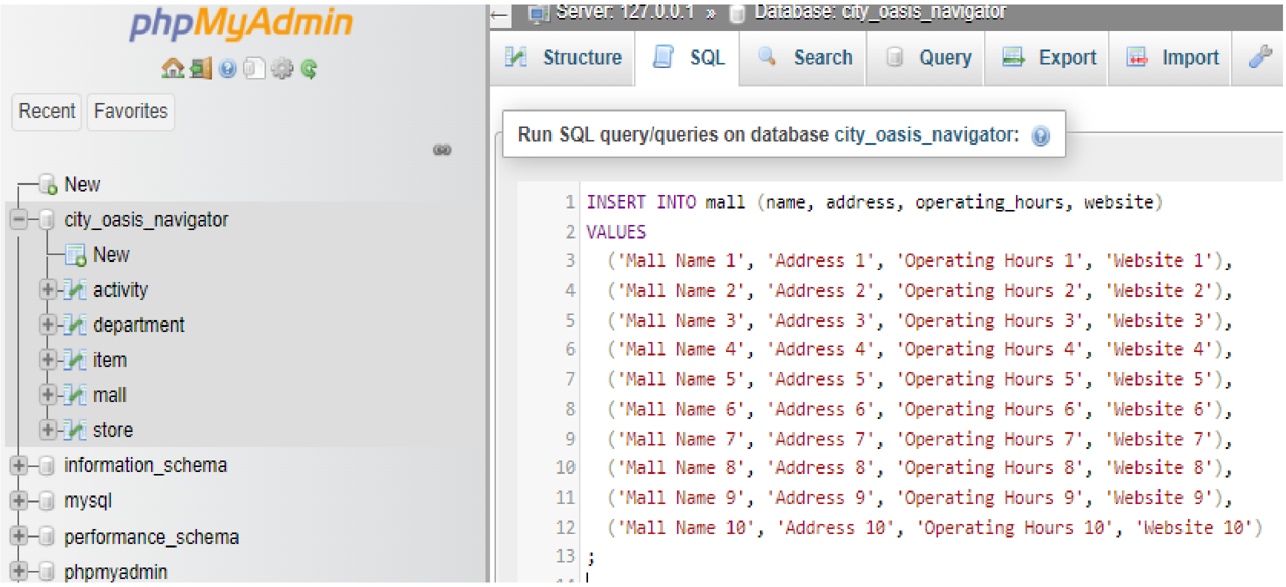
```
DESCRIBE item;
```

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	*NULL*	auto_increment
name	varchar(100)	NO		*NULL*	
store_id	int(11)	NO	MUL	*NULL*	
category	varchar(50)	NO		*NULL*	
price	decimal(10,2)	YES		*NULL*	

SQL manipulation commands:

1. Insert data into the mall table:

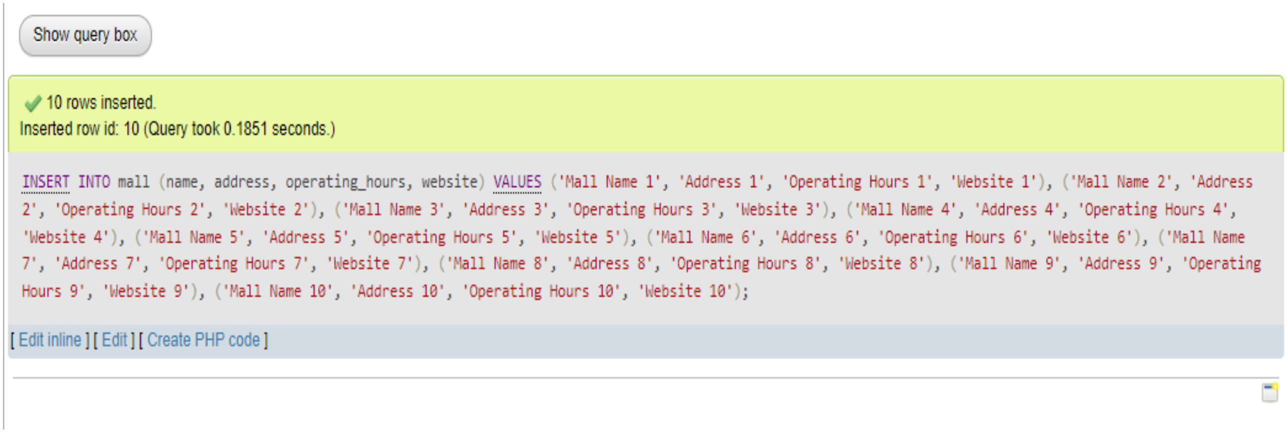
```
INSERT INTO mall (name, address, operating_hours, website)
VALUES
  ('Mall Name 1', 'Address 1', 'Operating Hours 1', 'Website 1'),
  ('Mall Name 2', 'Address 2', 'Operating Hours 2', 'Website 2'),
  ('Mall Name 3', 'Address 3', 'Operating Hours 3', 'Website 3'),
  ('Mall Name 4', 'Address 4', 'Operating Hours 4', 'Website 4'),
  ('Mall Name 5', 'Address 5', 'Operating Hours 5', 'Website 5'),
  ('Mall Name 6', 'Address 6', 'Operating Hours 6', 'Website 6'),
  ('Mall Name 7', 'Address 7', 'Operating Hours 7', 'Website 7'),
  ('Mall Name 8', 'Address 8', 'Operating Hours 8', 'Website 8'),
  ('Mall Name 9', 'Address 9', 'Operating Hours 9', 'Website 9'),
  ('Mall Name 10', 'Address 10', 'Operating Hours 10', 'Website 10')
;
```



Run SQL query/queries on database city_oasis_navigator:

```
INSERT INTO mall (name, address, operating_hours, website)
VALUES
  ('Mall Name 1', 'Address 1', 'Operating Hours 1', 'Website 1'),
  ('Mall Name 2', 'Address 2', 'Operating Hours 2', 'Website 2'),
  ('Mall Name 3', 'Address 3', 'Operating Hours 3', 'Website 3'),
  ('Mall Name 4', 'Address 4', 'Operating Hours 4', 'Website 4'),
  ('Mall Name 5', 'Address 5', 'Operating Hours 5', 'Website 5'),
  ('Mall Name 6', 'Address 6', 'Operating Hours 6', 'Website 6'),
  ('Mall Name 7', 'Address 7', 'Operating Hours 7', 'Website 7'),
  ('Mall Name 8', 'Address 8', 'Operating Hours 8', 'Website 8'),
  ('Mall Name 9', 'Address 9', 'Operating Hours 9', 'Website 9'),
  ('Mall Name 10', 'Address 10', 'Operating Hours 10', 'Website 10')
;
```

Output:

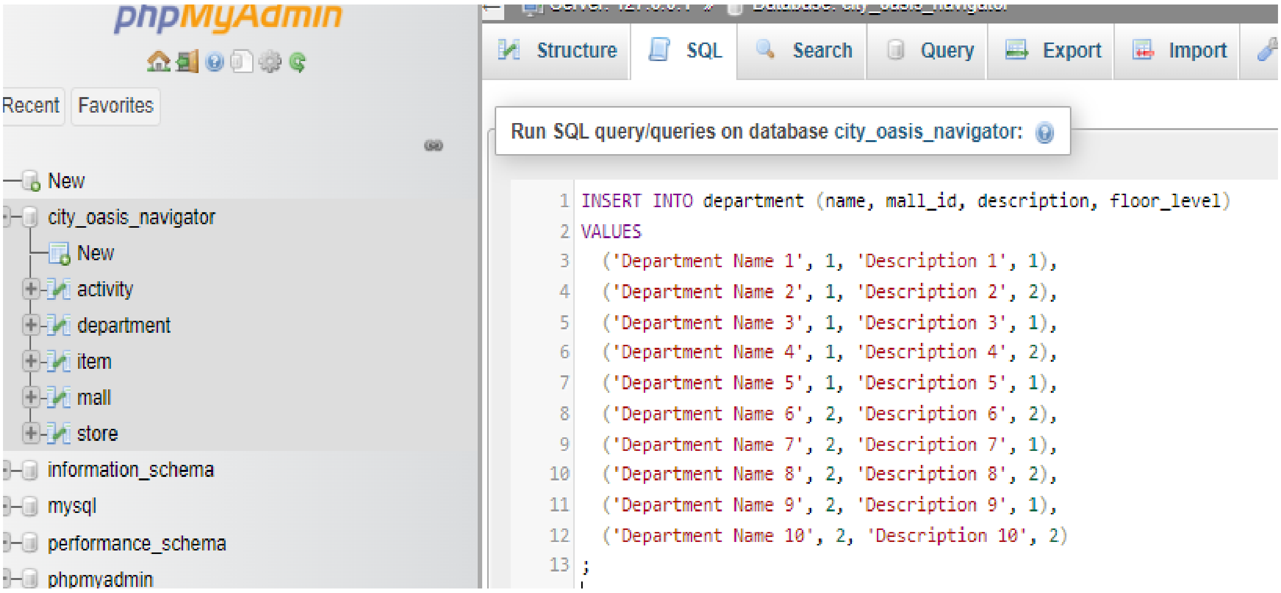


✓ 10 rows inserted.
Inserted row id: 10 (Query took 0.1851 seconds.)

```
INSERT INTO mall (name, address, operating_hours, website) VALUES ('Mall Name 1', 'Address 1', 'Operating Hours 1', 'Website 1'), ('Mall Name 2', 'Address 2', 'Operating Hours 2', 'Website 2'), ('Mall Name 3', 'Address 3', 'Operating Hours 3', 'Website 3'), ('Mall Name 4', 'Address 4', 'Operating Hours 4', 'Website 4'), ('Mall Name 5', 'Address 5', 'Operating Hours 5', 'Website 5'), ('Mall Name 6', 'Address 6', 'Operating Hours 6', 'Website 6'), ('Mall Name 7', 'Address 7', 'Operating Hours 7', 'Website 7'), ('Mall Name 8', 'Address 8', 'Operating Hours 8', 'Website 8'), ('Mall Name 9', 'Address 9', 'Operating Hours 9', 'Website 9'), ('Mall Name 10', 'Address 10', 'Operating Hours 10', 'Website 10');
```

2. department table:

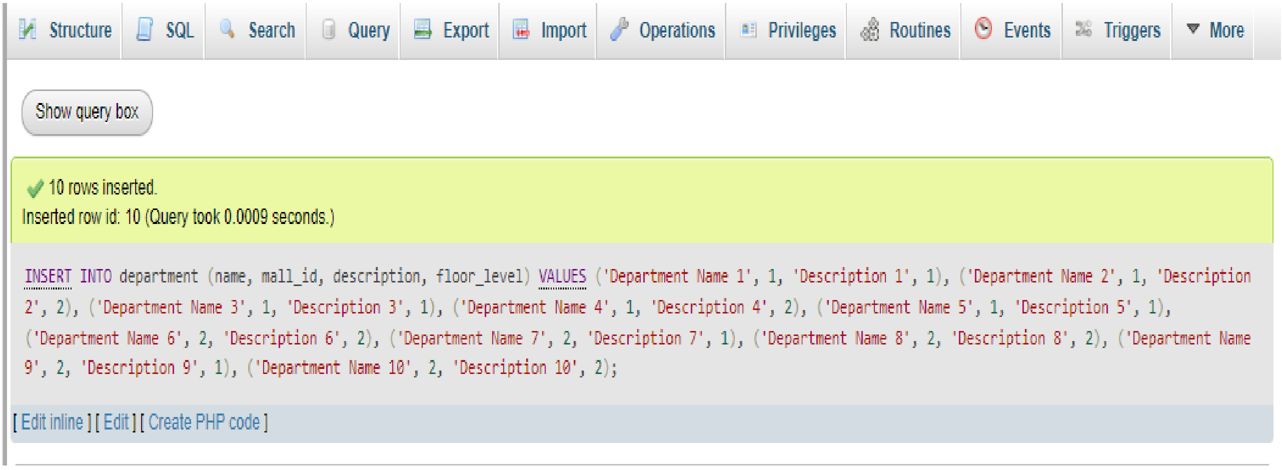
```
INSERT INTO department (name, mall_id, description, floor_level)
VALUES
  ('Department Name 1', 1, 'Description 1', 1),
  ('Department Name 2', 1, 'Description 2', 2),
  ('Department Name 3', 1, 'Description 3', 1),
  ('Department Name 4', 1, 'Description 4', 2),
  ('Department Name 5', 1, 'Description 5', 1),
  ('Department Name 6', 2, 'Description 6', 2),
  ('Department Name 7', 2, 'Description 7', 1),
  ('Department Name 8', 2, 'Description 8', 2),
  ('Department Name 9', 2, 'Description 9', 1),
  ('Department Name 10', 2, 'Description 10', 2)
;
```



Run SQL query/queries on database city_oasis_navigator:

```
INSERT INTO department (name, mall_id, description, floor_level)
VALUES
  ('Department Name 1', 1, 'Description 1', 1),
  ('Department Name 2', 1, 'Description 2', 2),
  ('Department Name 3', 1, 'Description 3', 1),
  ('Department Name 4', 1, 'Description 4', 2),
  ('Department Name 5', 1, 'Description 5', 1),
  ('Department Name 6', 2, 'Description 6', 2),
  ('Department Name 7', 2, 'Description 7', 1),
  ('Department Name 8', 2, 'Description 8', 2),
  ('Department Name 9', 2, 'Description 9', 1),
  ('Department Name 10', 2, 'Description 10', 2)
;
```

Output:

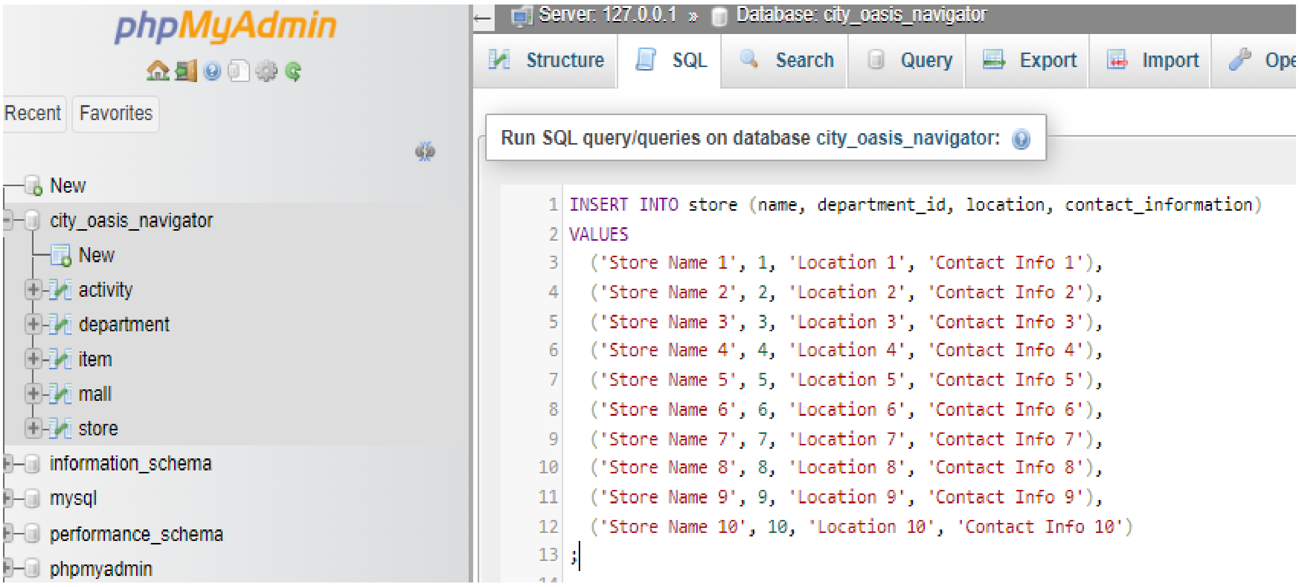


✓ 10 rows inserted.
Inserted row id: 10 (Query took 0.0009 seconds.)

```
INSERT INTO department (name, mall_id, description, floor_level) VALUES ('Department Name 1', 1, 'Description 1', 1), ('Department Name 2', 1, 'Description 2', 2), ('Department Name 3', 1, 'Description 3', 1), ('Department Name 4', 1, 'Description 4', 2), ('Department Name 5', 1, 'Description 5', 1), ('Department Name 6', 2, 'Description 6', 2), ('Department Name 7', 2, 'Description 7', 1), ('Department Name 8', 2, 'Description 8', 2), ('Department Name 9', 2, 'Description 9', 1), ('Department Name 10', 2, 'Description 10', 2);
```

3. store table:

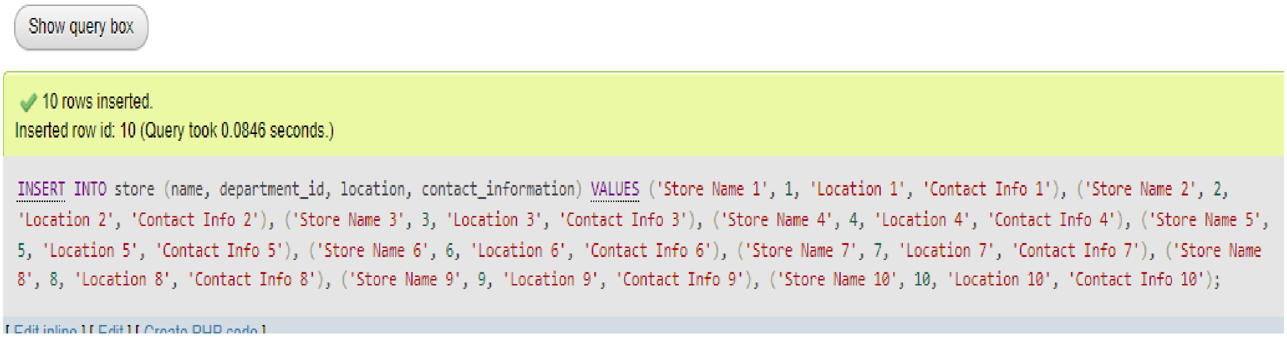
```
INSERT INTO store (name, department_id, location, contact_information)
VALUES
  ('Store Name 1', 1, 'Location 1', 'Contact Info 1'),
  ('Store Name 2', 2, 'Location 2', 'Contact Info 2'),
  ('Store Name 3', 3, 'Location 3', 'Contact Info 3'),
  ('Store Name 4', 4, 'Location 4', 'Contact Info 4'),
  ('Store Name 5', 5, 'Location 5', 'Contact Info 5'),
  ('Store Name 6', 6, 'Location 6', 'Contact Info 6'),
  ('Store Name 7', 7, 'Location 7', 'Contact Info 7'),
  ('Store Name 8', 8, 'Location 8', 'Contact Info 8'),
  ('Store Name 9', 9, 'Location 9', 'Contact Info 9'),
  ('Store Name 10', 10, 'Location 10', 'Contact Info 10'),
;
```



Run SQL query/queries on database city_oasis_navigator:

```
INSERT INTO store (name, department_id, location, contact_information)
VALUES
  ('Store Name 1', 1, 'Location 1', 'Contact Info 1'),
  ('Store Name 2', 2, 'Location 2', 'Contact Info 2'),
  ('Store Name 3', 3, 'Location 3', 'Contact Info 3'),
  ('Store Name 4', 4, 'Location 4', 'Contact Info 4'),
  ('Store Name 5', 5, 'Location 5', 'Contact Info 5'),
  ('Store Name 6', 6, 'Location 6', 'Contact Info 6'),
  ('Store Name 7', 7, 'Location 7', 'Contact Info 7'),
  ('Store Name 8', 8, 'Location 8', 'Contact Info 8'),
  ('Store Name 9', 9, 'Location 9', 'Contact Info 9'),
  ('Store Name 10', 10, 'Location 10', 'Contact Info 10')
;
```

Output:

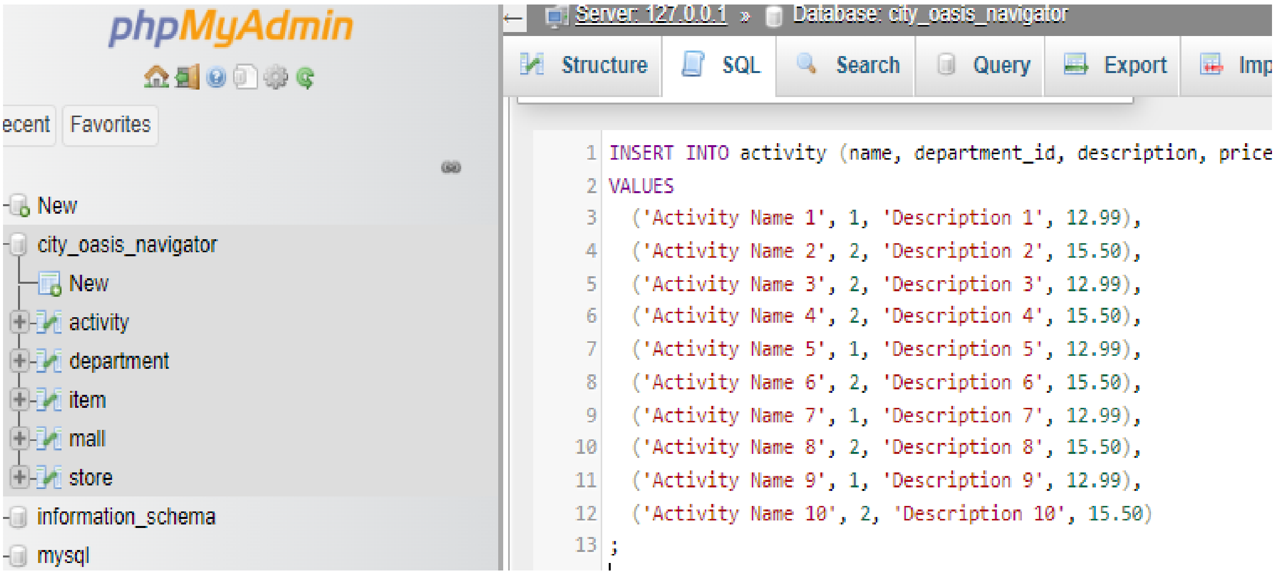


✓ 10 rows inserted.
Inserted row id: 10 (Query took 0.0846 seconds.)

```
INSERT INTO store (name, department_id, location, contact_information) VALUES ('Store Name 1', 1, 'Location 1', 'Contact Info 1'), ('Store Name 2', 2, 'Location 2', 'Contact Info 2'), ('Store Name 3', 3, 'Location 3', 'Contact Info 3'), ('Store Name 4', 4, 'Location 4', 'Contact Info 4'), ('Store Name 5', 5, 'Location 5', 'Contact Info 5'), ('Store Name 6', 6, 'Location 6', 'Contact Info 6'), ('Store Name 7', 7, 'Location 7', 'Contact Info 7'), ('Store Name 8', 8, 'Location 8', 'Contact Info 8'), ('Store Name 9', 9, 'Location 9', 'Contact Info 9'), ('Store Name 10', 10, 'Location 10', 'Contact Info 10');
```

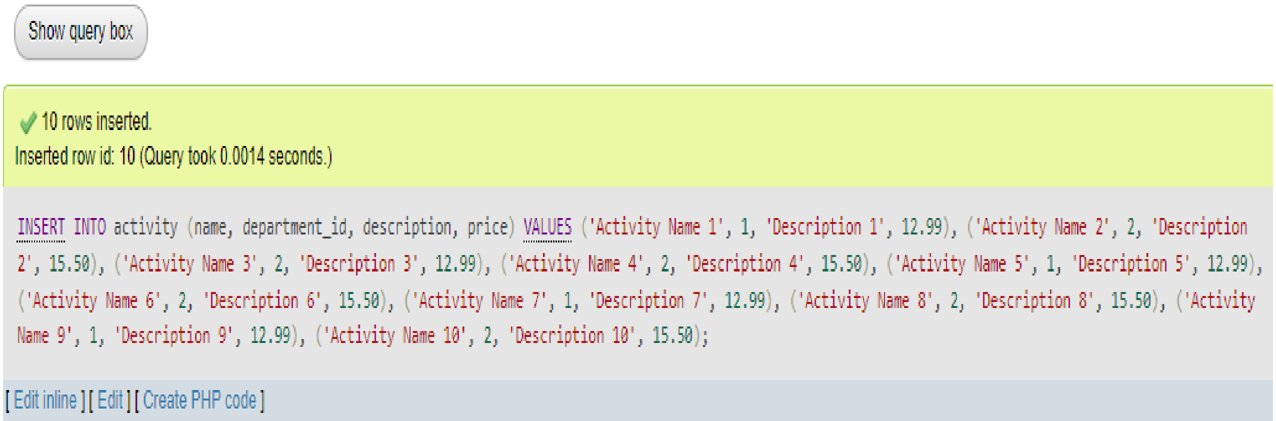
4. activity table:

```
INSERT INTO activity (name, department_id, description, price)
VALUES
  ('Activity Name 1', 1, 'Description 1', 12.99),
  ('Activity Name 2', 2, 'Description 2', 15.50),
  ('Activity Name 3', 2, 'Description 3', 12.99),
  ('Activity Name 4', 2, 'Description 4', 15.50),
  ('Activity Name 5', 1, 'Description 5', 12.99),
  ('Activity Name 6', 2, 'Description 6', 15.50),
  ('Activity Name 7', 1, 'Description 7', 12.99),
  ('Activity Name 8', 2, 'Description 8', 15.50),
  ('Activity Name 9', 1, 'Description 9', 12.99),
  ('Activity Name 10', 2, 'Description 10', 15.50)
;
```



```
INSERT INTO activity (name, department_id, description, price
VALUES
  ('Activity Name 1', 1, 'Description 1', 12.99),
  ('Activity Name 2', 2, 'Description 2', 15.50),
  ('Activity Name 3', 2, 'Description 3', 12.99),
  ('Activity Name 4', 2, 'Description 4', 15.50),
  ('Activity Name 5', 1, 'Description 5', 12.99),
  ('Activity Name 6', 2, 'Description 6', 15.50),
  ('Activity Name 7', 1, 'Description 7', 12.99),
  ('Activity Name 8', 2, 'Description 8', 15.50),
  ('Activity Name 9', 1, 'Description 9', 12.99),
  ('Activity Name 10', 2, 'Description 10', 15.50)
;
```

Output:

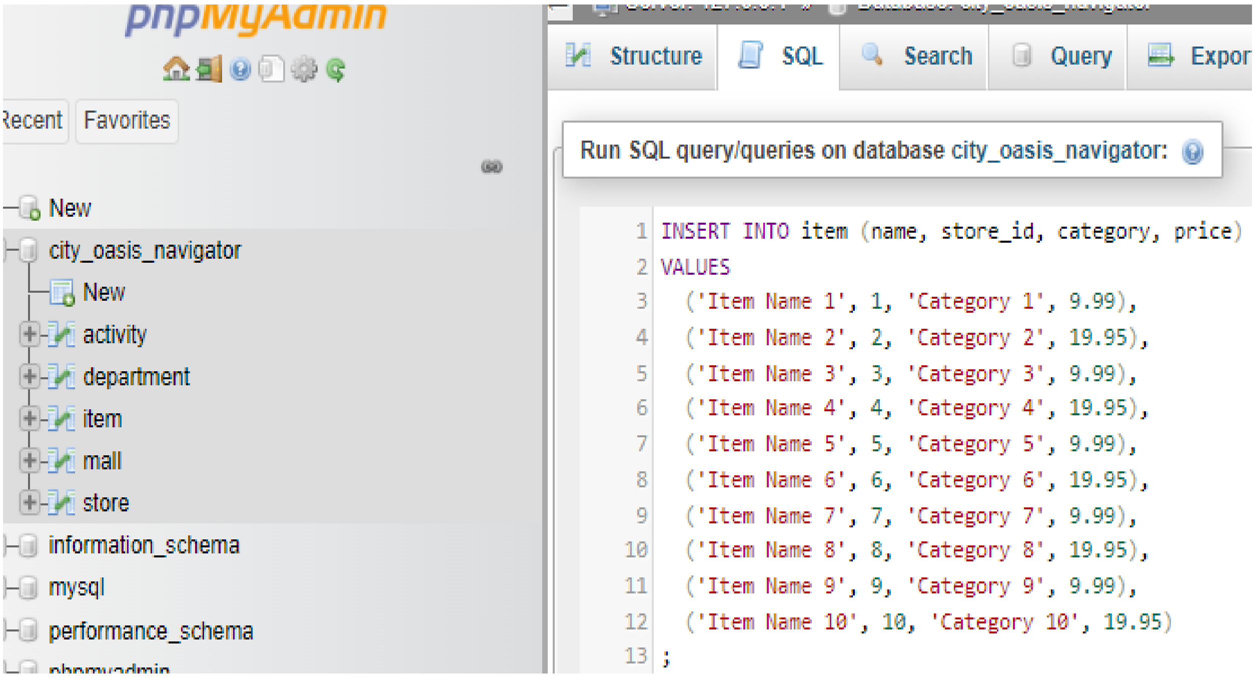


✓ 10 rows inserted.
Inserted row id: 10 (Query took 0.0014 seconds.)

```
INSERT INTO activity (name, department_id, description, price) VALUES ('Activity Name 1', 1, 'Description 1', 12.99), ('Activity Name 2', 2, 'Description 2', 15.50), ('Activity Name 3', 2, 'Description 3', 12.99), ('Activity Name 4', 2, 'Description 4', 15.50), ('Activity Name 5', 1, 'Description 5', 12.99), ('Activity Name 6', 2, 'Description 6', 15.50), ('Activity Name 7', 1, 'Description 7', 12.99), ('Activity Name 8', 2, 'Description 8', 15.50), ('Activity Name 9', 1, 'Description 9', 12.99), ('Activity Name 10', 2, 'Description 10', 15.50);
```

5. item table:

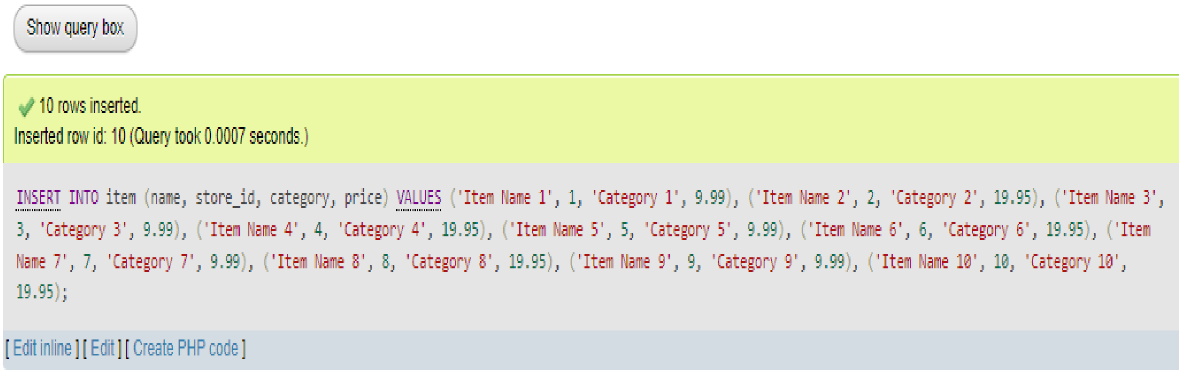
```
INSERT INTO item (name, store_id, category, price)
VALUES
  ('Item Name 1', 1, 'Category 1', 9.99),
  ('Item Name 2', 2, 'Category 2', 19.95),
  ('Item Name 3', 3, 'Category 3', 9.99),
  ('Item Name 4', 4, 'Category 4', 19.95),
  ('Item Name 5', 5, 'Category 5', 9.99),
  ('Item Name 6', 6, 'Category 6', 19.95),
  ('Item Name 7', 7, 'Category 7', 9.99),
  ('Item Name 8', 8, 'Category 8', 19.95),
  ('Item Name 9', 9, 'Category 9', 9.99),
  ('Item Name 10', 10, 'Category 10', 19.95)
;
```



Run SQL query/queries on database city_oasis_navigator:

```
INSERT INTO item (name, store_id, category, price)
VALUES
  ('Item Name 1', 1, 'Category 1', 9.99),
  ('Item Name 2', 2, 'Category 2', 19.95),
  ('Item Name 3', 3, 'Category 3', 9.99),
  ('Item Name 4', 4, 'Category 4', 19.95),
  ('Item Name 5', 5, 'Category 5', 9.99),
  ('Item Name 6', 6, 'Category 6', 19.95),
  ('Item Name 7', 7, 'Category 7', 9.99),
  ('Item Name 8', 8, 'Category 8', 19.95),
  ('Item Name 9', 9, 'Category 9', 9.99),
  ('Item Name 10', 10, 'Category 10', 19.95)
;
```

Output:



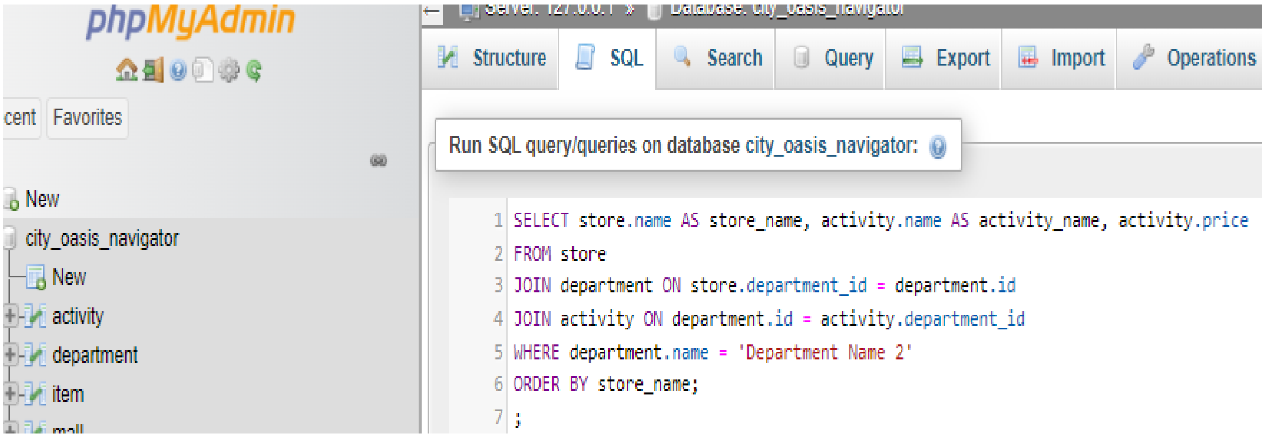
✓ 10 rows inserted.
Inserted row id: 10 (Query took 0.0007 seconds.)

```
INSERT INTO item (name, store_id, category, price) VALUES ('Item Name 1', 1, 'Category 1', 9.99), ('Item Name 2', 2, 'Category 2', 19.95), ('Item Name 3', 3, 'Category 3', 9.99), ('Item Name 4', 4, 'Category 4', 19.95), ('Item Name 5', 5, 'Category 5', 9.99), ('Item Name 6', 6, 'Category 6', 19.95), ('Item Name 7', 7, 'Category 7', 9.99), ('Item Name 8', 8, 'Category 8', 19.95), ('Item Name 9', 9, 'Category 9', 9.99), ('Item Name 10', 10, 'Category 10', 19.95);
```

SQL COMPLEX querying on project database

1. List all stores in the Department Name 2, along with their activities and prices:

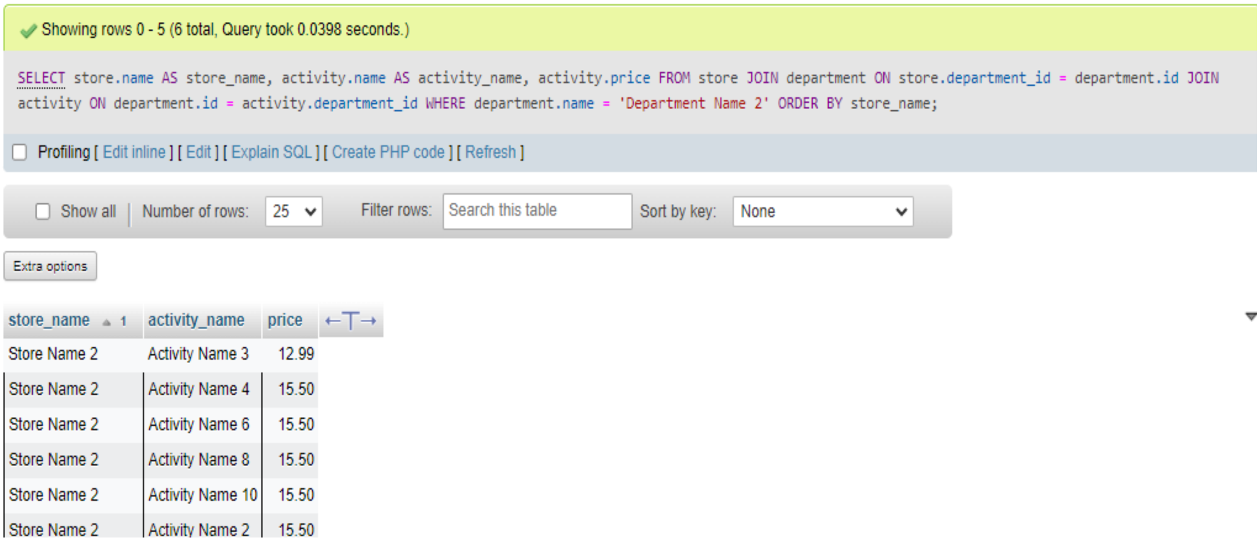
```
SELECT store.name AS store_name, activity.name AS activity_name, activity.price
FROM store
JOIN department ON store.department_id = department.id
JOIN activity ON department.id = activity.department_id
WHERE department.name = 'Department Name 2'
ORDER BY store_name;
```



Run SQL query/queries on database city_oasis_navigator:

```
SELECT store.name AS store_name, activity.name AS activity_name, activity.price
FROM store
JOIN department ON store.department_id = department.id
JOIN activity ON department.id = activity.department_id
WHERE department.name = 'Department Name 2'
ORDER BY store_name;
;
```

Output:


Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
Show all
Number of rows: 25
Filter rows: Search this table
Sort by key: None
Extra options

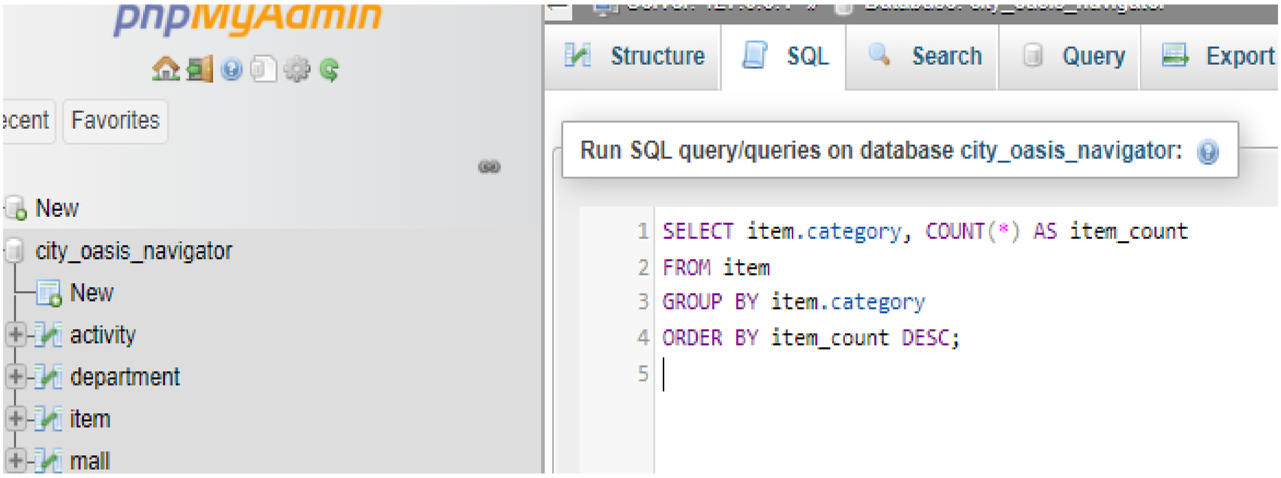
✓ Showing rows 0 - 5 (6 total, Query took 0.0398 seconds.)

```
SELECT store.name AS store_name, activity.name AS activity_name, activity.price FROM store JOIN department ON store.department_id = department.id JOIN activity ON department.id = activity.department_id WHERE department.name = 'Department Name 2' ORDER BY store_name;
```

store_name	activity_name	price
Store Name 2	Activity Name 3	12.99
Store Name 2	Activity Name 4	15.50
Store Name 2	Activity Name 6	15.50
Store Name 2	Activity Name 8	15.50
Store Name 2	Activity Name 10	15.50
Store Name 2	Activity Name 2	15.50

2. Find the total number of items in each category, sorted from most to least:

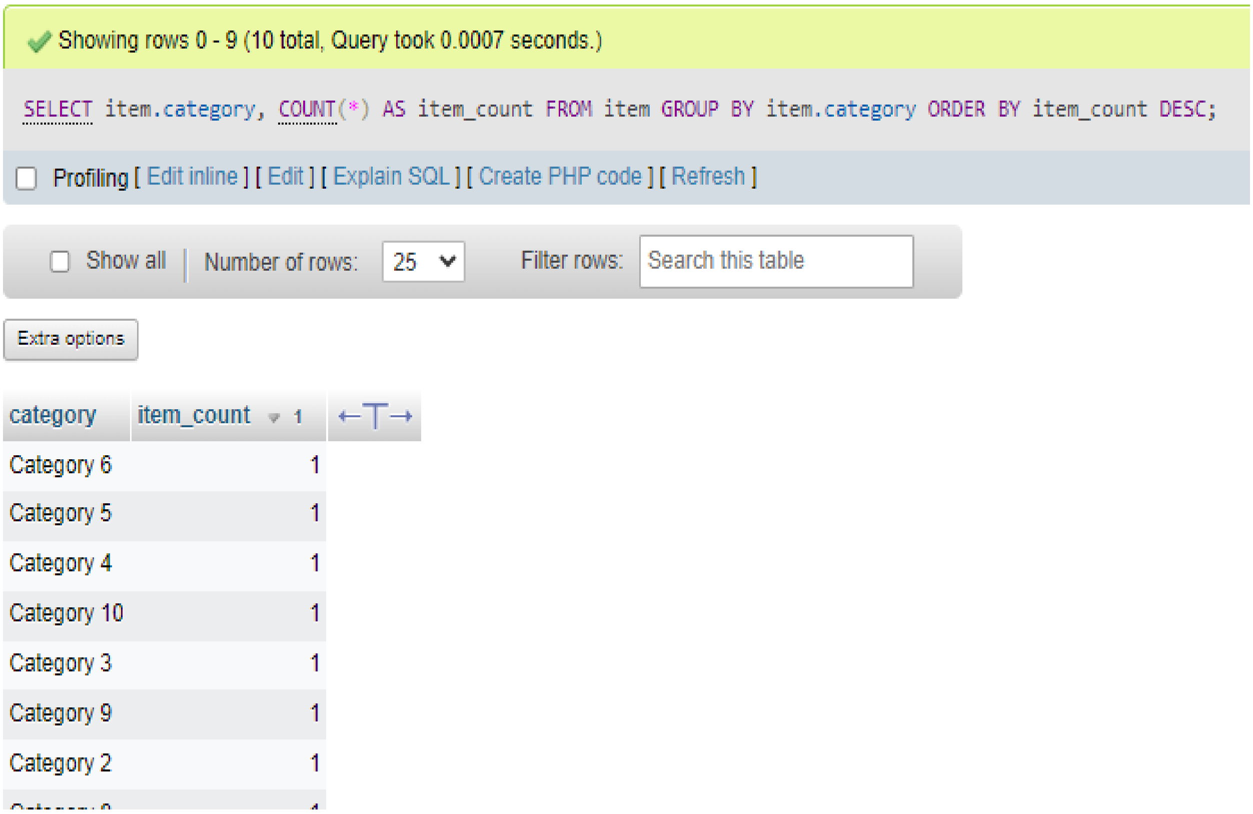
```
SELECT item.category, COUNT(*) AS item_count
FROM item
GROUP BY item.category
ORDER BY item_count DESC;
```



Run SQL query/queries on database city_oasis_navigator:

```
SELECT item.category, COUNT(*) AS item_count
FROM item
GROUP BY item.category
ORDER BY item_count DESC;
```

Output:



✓ Showing rows 0 - 9 (10 total, Query took 0.0007 seconds.)

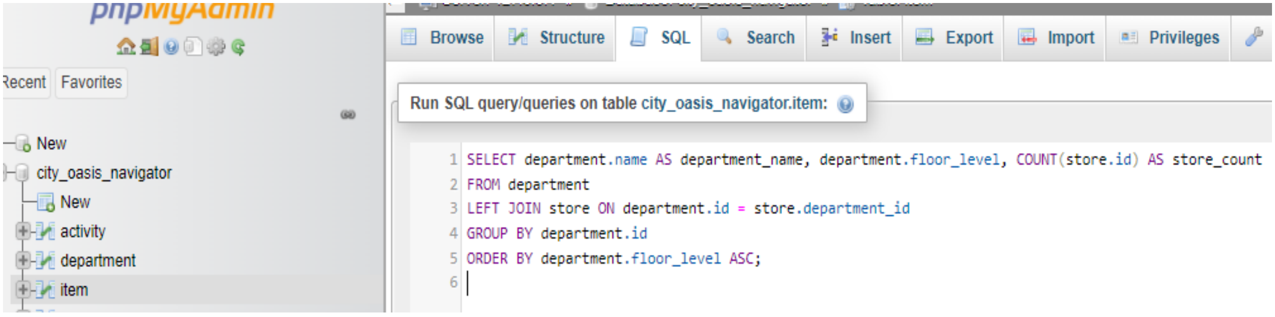
```
SELECT item.category, COUNT(*) AS item_count FROM item GROUP BY item.category ORDER BY item_count DESC;
```

□ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
□ Show all
Number of rows: 25
Filter rows: Search this table
Extra options

category	item_count
Category 6	1
Category 5	1
Category 4	1
Category 10	1
Category 3	1
Category 9	1
Category 2	1

3. Get a list of all departments with their respective floor levels and the number of stores within them:

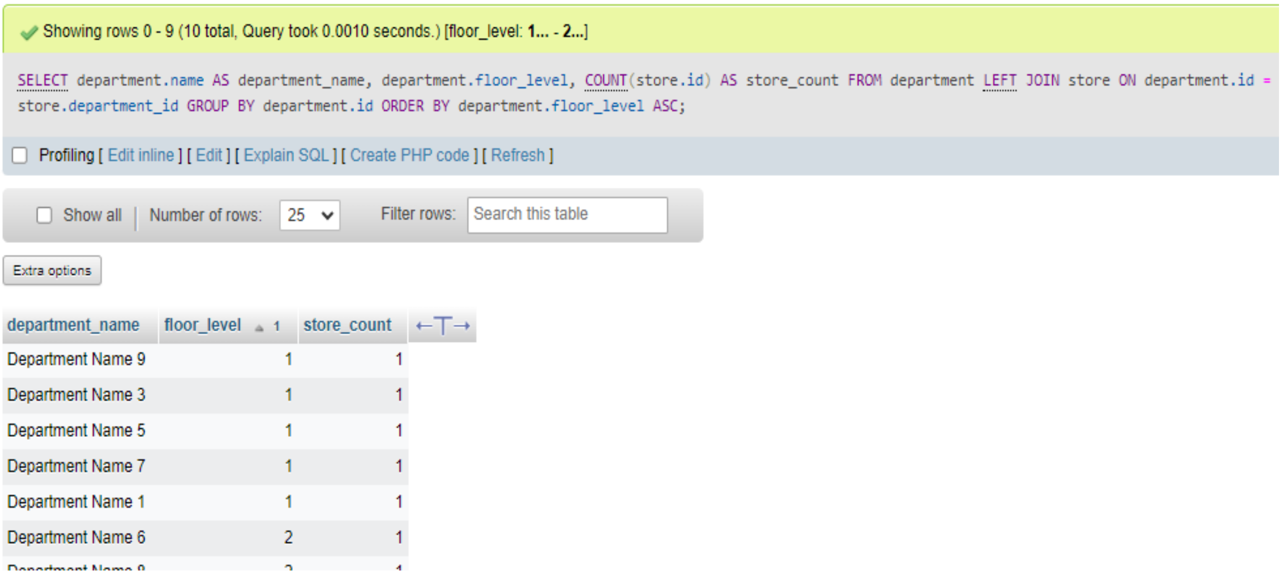
SELECT department.name AS department_name, department.floor_level, COUNT(store.id) AS store_count
FROM department
LEFT JOIN store ON department.id = store.department_id
GROUP BY department.id
ORDER BY department.floor_level ASC;



Run SQL query/queries on table city_oasis_navigator.item:

```sql
SELECT department.name AS department_name, department.floor_level, COUNT(store.id) AS store_count
FROM department
LEFT JOIN store ON department.id = store.department_id
GROUP BY department.id
ORDER BY department.floor_level ASC;
```

Output:



✓ Showing rows 0 - 9 (10 total, Query took 0.0010 seconds.) [floor_level: 1... - 2...]

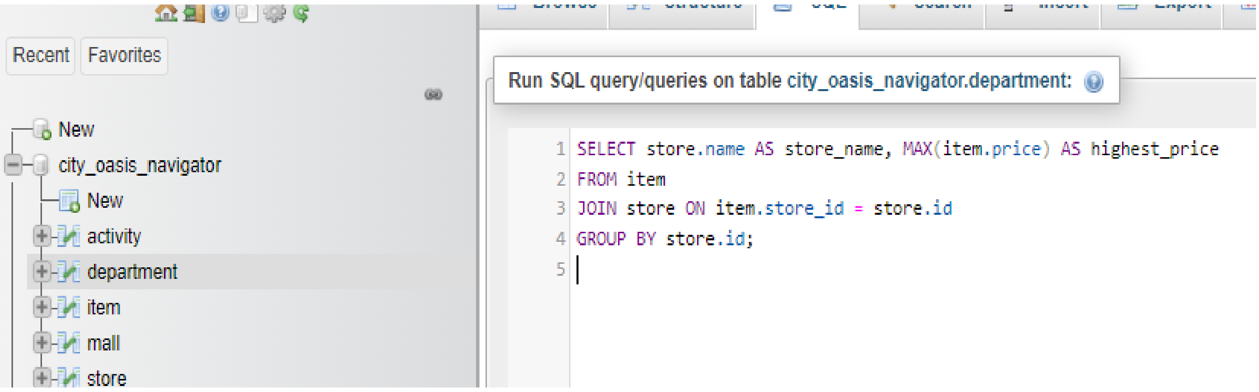
```
SELECT department.name AS department_name, department.floor_level, COUNT(store.id) AS store_count FROM department LEFT JOIN store ON department.id =
store.department_id GROUP BY department.id ORDER BY department.floor_level ASC;
```

□ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
□ Show all
Number of rows: 25
Filter rows: Search this table
Extra options

department_name	floor_level ▲ 1	store_count
Department Name 9	1	1
Department Name 3	1	1
Department Name 5	1	1
Department Name 7	1	1
Department Name 1	1	1
Department Name 6	2	1
Department Name 8	2	1

4. Identify the most expensive item in each store:

SELECT store.name AS store_name, MAX(item.price) AS highest_price
FROM item
JOIN store ON item.store_id = store.id
GROUP BY store.id;

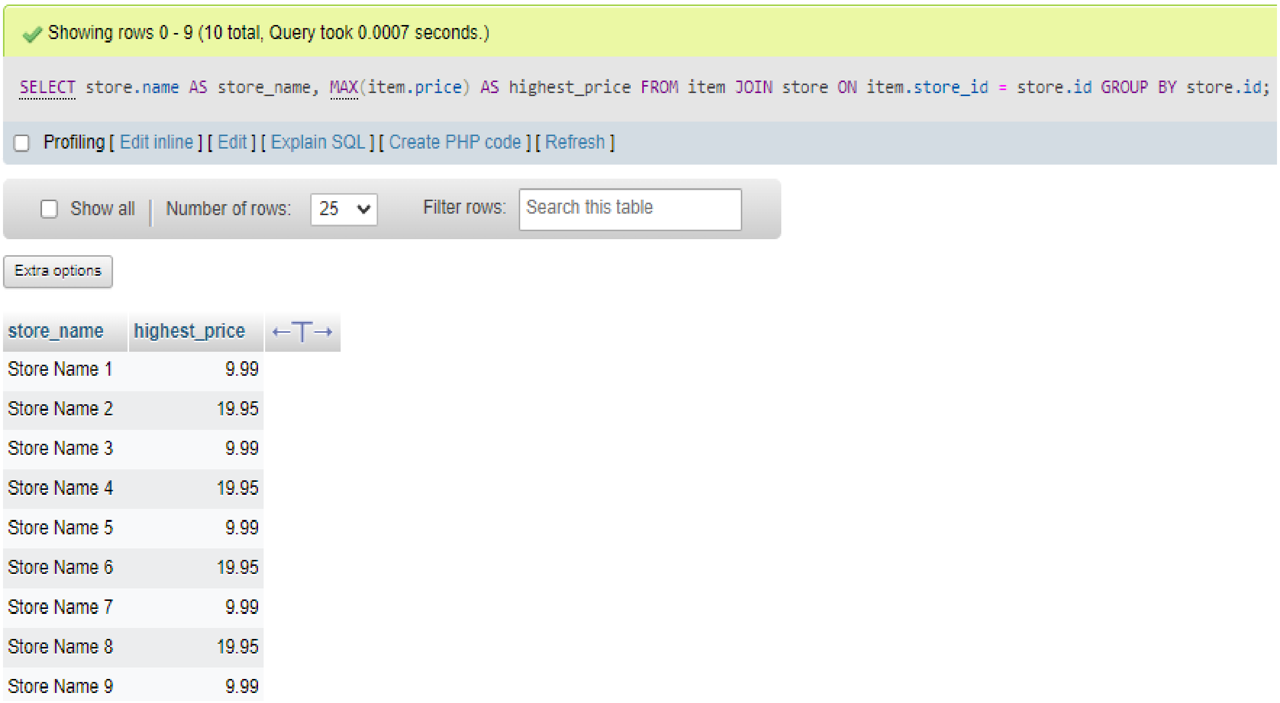


Run SQL query/queries on table city_oasis_navigator.department:

```
SELECT store.name AS store_name, MAX(item.price) AS highest_price
FROM item
JOIN store ON item.store_id = store.id
GROUP BY store.id;

```

Output:


✓ Showing rows 0 - 9 (10 total, Query took 0.0007 seconds.)

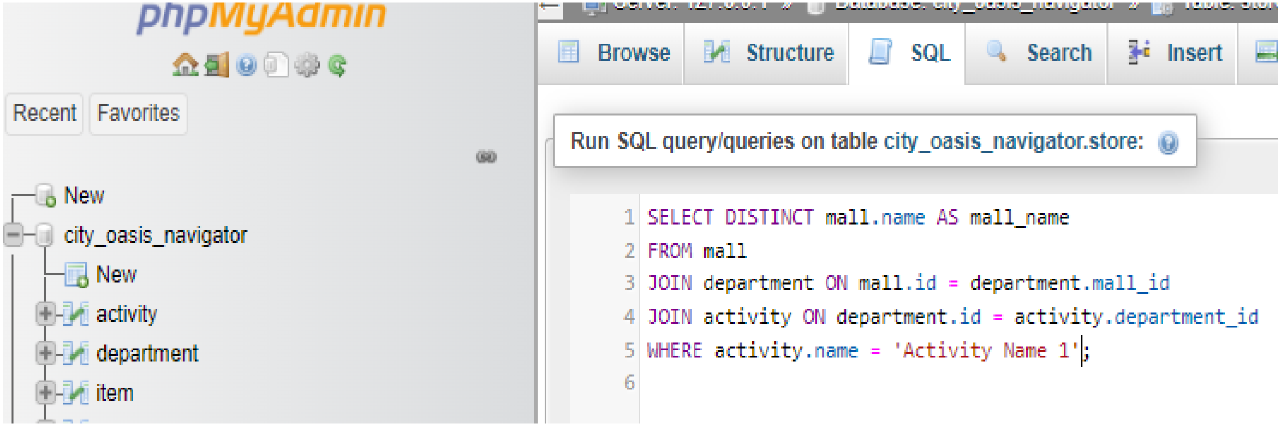
```
SELECT store.name AS store_name, MAX(item.price) AS highest_price FROM item JOIN store ON item.store_id = store.id GROUP BY store.id;
```

□ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
□ Show all
Number of rows: 25
Filter rows: Search this table
Extra options

store_name	highest_price
Store Name 1	9.99
Store Name 2	19.95
Store Name 3	9.99
Store Name 4	19.95
Store Name 5	9.99
Store Name 6	19.95
Store Name 7	9.99
Store Name 8	19.95
Store Name 9	9.99

5. Display the names of malls that have a department offering bowling as an activity:

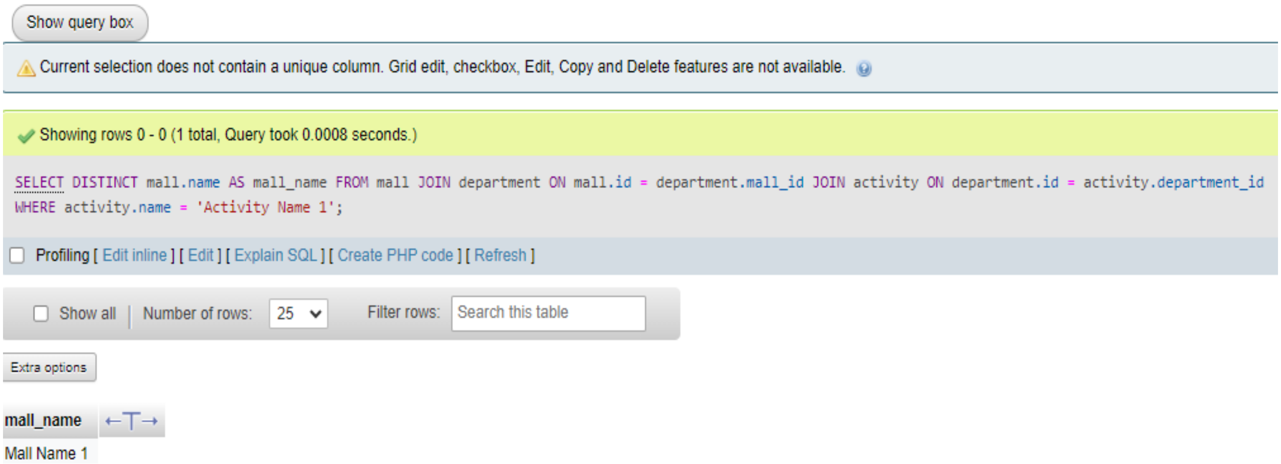
```
SELECT DISTINCT mall.name AS mall_name
FROM mall
JOIN department ON mall.id = department.mall_id
JOIN activity ON department.id = activity.department_id
WHERE activity.name = 'Bowling';
```



Run SQL query/queries on table city_oasis_navigator.store:

```
SELECT DISTINCT mall.name AS mall_name
FROM mall
JOIN department ON mall.id = department.mall_id
JOIN activity ON department.id = activity.department_id
WHERE activity.name = 'Activity Name 1';
```

Output:



Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Showing rows 0 - 0 (1 total, Query took 0.0008 seconds.)

```
SELECT DISTINCT mall.name AS mall_name FROM mall JOIN department ON mall.id = department.mall_id JOIN activity ON department.id = activity.department_id
WHERE activity.name = 'Activity Name 1';
```

□ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

□ Show all | Number of rows: 25 Filter rows: Search this table

mall_name
Mall Name 1

Output:

Show query box

Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Showing rows 0 - 0 (1 total, Query took 0.0008 seconds.)

SELECT DISTINCT mall.name AS mall_name FROM mall JOIN department ON mall.id = department.mall_id JOIN activity ON department.id = activity.department_id
WHERE activity.name = 'Activity Name 1';

□ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

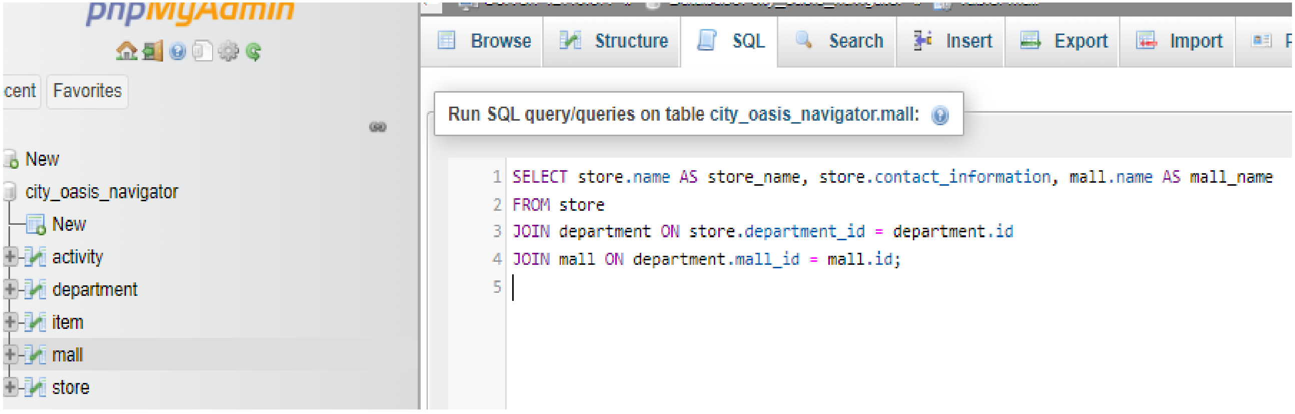
□ Show all | Number of rows: 25 Filter rows: Search this table

Extra options

mall_name
Mall Name 1

6. Retrieve a list of all stores with their contact information, along with the name of the mall they belong to:

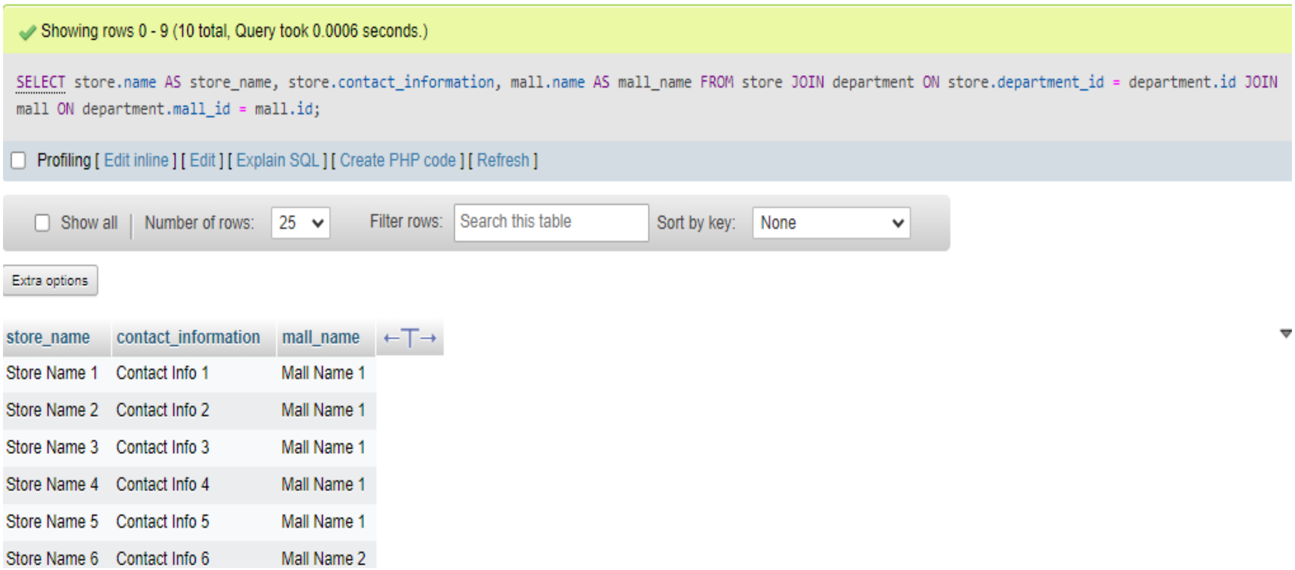
```
SELECT store.name AS store_name, store.contact_information, mall.name AS mall_name
FROM store
JOIN department ON store.department_id = department.id
JOIN mall ON department.mall_id = mall.id;
```



Run SQL query/queries on table city_oasis_navigator.mall:

```
SELECT store.name AS store_name, store.contact_information, mall.name AS mall_name
FROM store
JOIN department ON store.department_id = department.id
JOIN mall ON department.mall_id = mall.id;
```

Output:


Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
Show all
Number of rows: 25
Filter rows: Search this table
Sort by key: None
Extra options

Showing rows 0 - 9 (10 total, Query took 0.0006 seconds.)

```
SELECT store.name AS store_name, store.contact_information, mall.name AS mall_name FROM store JOIN department ON store.department_id = department.id JOIN mall ON department.mall_id = mall.id;
```

store_name	contact_information	mall_name
Store Name 1	Contact Info 1	Mall Name 1
Store Name 2	Contact Info 2	Mall Name 1
Store Name 3	Contact Info 3	Mall Name 1
Store Name 4	Contact Info 4	Mall Name 1
Store Name 5	Contact Info 5	Mall Name 1
Store Name 6	Contact Info 6	Mall Name 2