

Exercise18-1

Part1:

SELECT * FROM products;

The screenshot shows the phpMyAdmin interface. On the left is a sidebar with a tree view of databases and tables. The main panel on the right displays the results of a SQL query. The query executed is `SELECT * FROM products;`. The results show 10 rows of product data. Each row includes a checkbox for selection, and links for Edit, Copy, and Delete. The columns are productID, categoryID, productCode, and productName.

	productID	categoryID	productCode	productName
<input type="checkbox"/>	1	1	strat	Fender Stratocaster
<input type="checkbox"/>	2	1	les_paul	Gibson Les Paul
<input type="checkbox"/>	3	1	sg	Gibson SG
<input type="checkbox"/>	4	1	fg700s	Yamaha FG700S
<input type="checkbox"/>	5	1	washburn	Washburn D10S
<input type="checkbox"/>	6	1	rodriguez	Rodriguez Caballero 11
<input type="checkbox"/>	7	2	precision	Fender Precision
<input type="checkbox"/>	8	2	hofner	Hofner Icon
<input type="checkbox"/>	9	3	ludwig	Ludwig 5-piece Drum Set with Cyr
<input type="checkbox"/>	10	3	tama	Tama 5-Piece Drum Set with Cym

SELECT productID, productName, listPrice

FROM products

ORDER BY listPrice;

phpMyAdmin

Recent Favorites

Server: 127.0.0.1:3306 » Database: my_guitar_shop2 » Table: products

Browse Structure SQL Search Insert Export Import Privileges Operations

Show query box

Showing rows 0 - 9 (10 total, Query took 0.0003 seconds.) [listPrice: 299.00... - 2517.00...]

SELECT productID, productName, listPrice FROM products ORDER BY listPrice;

☐ 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

	productID	productName	listPrice
<input type="checkbox"/> Edit Copy Delete	5	Washburn D10S	299.00
<input type="checkbox"/> Edit Copy Delete	6	Rodriguez Caballero 11	415.00
<input type="checkbox"/> Edit Copy Delete	4	Yamaha FG700S	489.99
<input type="checkbox"/> Edit Copy Delete	8	Hofner Icon	499.99
<input type="checkbox"/> Edit Copy Delete	1	Fender Stratocaster	699.00
<input type="checkbox"/> Edit Copy Delete	9	Ludwig 5-piece Drum Set with Cymbals	699.99
<input type="checkbox"/> Edit Copy Delete	7	Fender Precision	799.99
<input type="checkbox"/> Edit Copy Delete	10	Tama 5-Piece Drum Set with Cymbals	799.99
<input type="checkbox"/> Edit Copy Delete	2	Gibson Les Paul	1199.00
<input type="checkbox"/> Edit Copy Delete	3	Gibson SG	2517.00

☐ Check all | With selected: Edit Copy Delete Export

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Query results operations

SELECT productID, productName, listPrice

FROM products

WHERE listPrice < 450

ORDER BY listPrice;

The screenshot shows the phpMyAdmin web interface. On the left is a sidebar with a database tree. The main panel on the right displays a SQL query and its results for the 'products' table in the 'my_guitar_shop2' database.

Database Tree (Left Sidebar):

- New
- ap
- grade_book
- information_schema
- mydb
- mysql
- my_guitar
 - my_guitar_shop1
 - my_guitar_shop2
 - New
 - addresses
 - administrators
 - categories
 - customers
 - orderitems
 - orders
 - products
- performance_schema
- phpmyadmin
- student_gradebook
- test

Main Panel (Right):

Server: 127.0.0.1:3306 » Database: my_guitar_shop2 » Table: products

Buttons: Browse, Structure, SQL, Search, Insert, Export, Import, Privileges

Show query box

Showing rows 0 - 1 (2 total, Query took 0.0002 seconds.) [listPrice: 299.00... - 415.00...]

SELECT productID, productName, listPrice FROM products WHERE listPrice < 450 ORDER BY listPrice;

☐ 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

	productID	productName	listPrice
<input type="checkbox"/> Edit Copy Delete	5	Washburn D10S	299.00
<input type="checkbox"/> Edit Copy Delete	6	Rodriguez Caballero 11	415.00

☐ Check all | With selected: Edit Copy Delete Export

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Label: ☐ Let every user access this bookmark

SELECT productID, productName, listPrice

FROM products

WHERE listPrice < 10;

The screenshot shows the phpMyAdmin web interface. On the left is a sidebar with a tree view of databases and tables. The main panel on the right is titled 'Server: 127.0.0.1:3306 » Database: my_guitar_shop2 » Table: products'. It contains a 'Show query box' button, a status message 'MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)', and the SQL query: `SELECT productID, productName, listPrice FROM products WHERE listPrice < 10;`. Below the query are links for 'Profiling', 'Edit inline', 'Edit', 'Explain SQL', 'Create PHP code', and 'Refresh'. A table header shows columns 'productID', 'productName', and 'listPrice'. Below this is a 'Query results operations' section with a 'Create view' button. Further down is a 'Bookmark this SQL query' section with a 'Label' input field, a checkbox 'Let every user access this bookmark', and a 'Bookmark this SQL query' button.

phpMyAdmin

Recent Favorites

New

- ap
- grade_book
- information_schema
- mydb
- mysql
- my_guitar
 - my_guitar_shop1
 - my_guitar_shop2
 - New
 - addresses
 - administrators
 - categories
 - customers
 - orderitems
 - orders
 - products
- performance_schema
- phpmyadmin
- student_gradebook
- test

Server: 127.0.0.1:3306 » Database: my_guitar_shop2 » Table: products

Browse Structure SQL Search Insert Export Import

Show query box

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

SELECT productID, productName, listPrice FROM products WHERE listPrice < 10;

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

productID productName listPrice

Query results operations

Create view

Bookmark this SQL query

Label: ☐ Let every user access this bookmark

Bookmark this SQL query

SELECT firstName, lastName, orderDate

FROM customers c

INNER JOIN orders o

ON c.customerID = o.customerID

ORDER BY orderDate;

The screenshot shows the phpMyAdmin web interface. The left sidebar displays a database structure tree with 'my_guitar_shop2' selected. The main panel shows a SQL query: `SELECT firstName, lastName, orderDate FROM customers c INNER JOIN orders o ON c.customerID = o.customerID ORDER BY orderDate;`. The query results are displayed in a table with 3 rows. The table has columns: firstName, lastName, and orderDate. The results are: Allan Sherwood 2022-01-31 09:40:28, Barry Zimmer 2022-02-01 11:23:20, and Allan Sherwood 2022-02-03 09:44:58. The interface includes various navigation and tool buttons at the top and bottom.

Server: 127.0.0.1:3306 » Database: my_guitar_shop2 » Table: customers

Browse Structure SQL Search Insert Export Import Privileges Operations Tracking

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 - 2 (3 total, Query took 0.0003 seconds.)

SELECT firstName, lastName, orderDate FROM customers c INNER JOIN orders o ON c.customerID = o.customerID ORDER BY orderDate;

☐ 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

firstName	lastName	orderDate
Allan	Sherwood	2022-01-31 09:40:28
Barry	Zimmer	2022-02-01 11:23:20
Allan	Sherwood	2022-02-03 09:44:58

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Query results operations

```

SELECT firstName, lastName, o.orderID, productName, itemPrice, quantity
FROM customers c
    INNER JOIN orders o
        ON c.customerID = o.customerID
    INNER JOIN orderItems oi
        ON o.orderID = oi.orderID
    INNER JOIN products p
        ON oi.productID = p.productID
ORDER BY o.orderID;

```

The screenshot shows the phpMyAdmin web interface. On the left is a sidebar with a database tree structure. The main panel displays a SQL query and its results. The query is a JOIN query that retrieves customer information, order details, and product information. The results table shows 4 rows of data.

Database: my_guitar_shop2

Showing rows 0 - 3 (4 total. Query took 0.0004 seconds) [orderID: 1... - 3...]

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

SELECT firstName, lastName, o.orderID, productName, itemPrice, quantity FROM customers c INNER JOIN orders o ON c.customerID = o.customerID INNER JOIN orderItems oi ON o.orderID = oi.orderID INNER JOIN products p ON oi.productID = p.productID ORDER BY o.orderID;

Extra options

firstName	lastName	orderID	productName	itemPrice	quantity
Allan	Sherwood	1	Gibson Les Paul	399.00	1
Barry	Zimmer	2	Yamaha FG700S	699.00	1
Allan	Sherwood	3	Rodriguez Caballero 11	549.99	1
Allan	Sherwood	3	Gibson SG	499.00	1

Part2

SELECT productName, description, listPrice

FROM products

WHERE description LIKE '%electric%'

ORDER BY listPrice ASC;

The screenshot shows the phpMyAdmin interface. On the left is a sidebar with a database tree. The main panel displays the results of a SQL query. The query is: `SELECT productName, description, listPrice FROM products; WHERE description LIKE '%electric%'; ORDER BY listPrice ASC;`. The results are shown in a table with 10 rows. The table has columns: `productName`, `description`, and `listPrice`. The results are sorted by `listPrice` in ascending order. The table contains 10 rows of data, including products like Fender Stratocaster, Gibson Les Paul, Gibson SG, Yamaha FG700S, Washburn D10S, Rodriguez Caballero 11, Fender Precision, Hofner Icon, Ludwig 5-piece Drum Set with Cymbals, and Tama 5-piece Drum Set with Cymbals.

Server: 127.0.0.1:3306 » Database: my_guitar_shop2 » Table: products

Showing rows 0 - 9 (10 total. Query took 0.0002 seconds.)

SELECT productName, description, listPrice FROM products;

Number of rows: 25 Filter rows: Search this table Sort by key: None

	productName	description	listPrice
<input type="checkbox"/>	Fender Stratocaster	The Fender Stratocaster is the electric guitar des...	699.00
<input type="checkbox"/>	Gibson Les Paul	This Les Paul guitar offers a carved top and humbu...	1199.00
<input type="checkbox"/>	Gibson SG	This Gibson SG electric guitar takes the best of t...	2517.00
<input type="checkbox"/>	Yamaha FG700S	The Yamaha FG700S solid top acoustic guitar has th...	489.99
<input type="checkbox"/>	Washburn D10S	The Washburn D10S acoustic guitar is superbly craf...	299.00
<input type="checkbox"/>	Rodriguez Caballero 11	Featuring a carefully chosen, solid Canadian cedar...	415.00
<input type="checkbox"/>	Fender Precision	The Fender Precision bass guitar delivers the soun...	799.99
<input type="checkbox"/>	Hofner Icon	With authentic details inspired by the original, t...	499.99
<input type="checkbox"/>	Ludwig 5-piece Drum Set with Cymbals	This product includes a Ludwig 5-piece drum set an...	699.99
<input type="checkbox"/>	Tama 5-Piece Drum Set with Cymbals	The Tama 5-piece Drum Set is the most affordable T...	799.99

Query results operations

phpMyAdmin

Recent Favorites

- New
- ap
- grade_book
- information_schema
- mydb
- mysql
- my_guitar
 - my_guitar_shop1
 - my_guitar_shop2
 - New
 - addresses
 - administrators
 - categories
 - customers
 - orderitems
 - orders
 - products
- performance_schema
- phpmyadmin
- student_gradebook
- test

Server: 127.0.0.1:3306 » Database: my_guitar_shop2 » Table: products

Browse Structure SQL Search Insert Export Import Privileges Operations

Show query box

Showing rows 0 - 9 (10 total, Query took 0.0002 seconds.) [listPrice: 299.00... - 2517.00...]

```
SELECT productName, description, listPrice FROM products ORDER BY listPrice;
```

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

	productName	description	listPrice
<input type="checkbox"/> Edit Copy Delete	Washburn D10S	The Washburn D10S acoustic guitar is superbly craf...	299.00
<input type="checkbox"/> Edit Copy Delete	Rodriguez Caballero 11	Featuring a carefully chosen, solid Canadian cedar...	415.00
<input type="checkbox"/> Edit Copy Delete	Yamaha FG700S	The Yamaha FG700S solid top acoustic guitar has th...	489.99
<input type="checkbox"/> Edit Copy Delete	Hofner Icon	With authentic details inspired by the original, t...	499.99
<input type="checkbox"/> Edit Copy Delete	Fender Stratocaster	The Fender Stratocaster is the electric guitar des...	699.00
<input type="checkbox"/> Edit Copy Delete	Ludwig 5-piece Drum Set with Cymbals	This product includes a Ludwig 5-piece drum set an...	699.99
<input type="checkbox"/> Edit Copy Delete	Fender Precision	The Fender Precision bass guitar delivers the soun...	799.99
<input type="checkbox"/> Edit Copy Delete	Tama 5-Piece Drum Set with Cymbals	The Tama 5-piece Drum Set is the most affordable T...	799.99
<input type="checkbox"/> Edit Copy Delete	Gibson Les Paul	This Les Paul guitar offers a carved top and humbu...	1199.00
<input type="checkbox"/> Edit Copy Delete	Gibson SG	This Gibson SG electric guitar takes the best of t...	2517.00

phpMyAdmin

Recent Favorites

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- ap
- grade_book
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- mydb
- mysql
- my_guitar
 - my_guitar_shop1
 - my_guitar_shop2
 - New
 - addresses
 - administrators
 - categories
 - customers
 - orderitems
 - orders
 - products
- performance_schema
- phpmyadmin
- student_gradebook
- test

Server: 127.0.0.1:3306 » Database: my_guitar_shop2 » Table: products

Browse Structure SQL Search Insert Export Import Privileges Operations

Show query box

Showing rows 0 - 2 (3 total, Query took 0.0003 seconds.) [listPrice: 699.00... - 2517.00...]

```
SELECT productName, description, listPrice FROM products WHERE description LIKE '%electric%' ORDER BY listPrice;
```

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

	productName	description	listPrice
<input type="checkbox"/> Edit Copy Delete	Fender Stratocaster	The Fender Stratocaster is the electric guitar des...	699.00
<input type="checkbox"/> Edit Copy Delete	Fender Precision	The Fender Precision bass guitar delivers the soun...	799.99
<input type="checkbox"/> Edit Copy Delete	Gibson SG	This Gibson SG electric guitar takes the best of t...	2517.00

Check all With selected: Edit Copy Delete Export

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Query results operations

Print Copy to clipboard Export Display chart Create view


```
SELECT firstName, lastName, line1, line2, city, state, zipCode
FROM customers
JOIN addresses ON billingAddressID = addressID
WHERE lastName = 'Sherwood';
```

The screenshot shows the phpMyAdmin interface. On the left is a sidebar with a tree view of databases and tables. The main area displays the results of a SQL query. The query is: `SELECT firstName, lastName, line1, line2, city, state, zipCode FROM customers JOIN addresses ON billingAddressID = addressID WHERE lastName = 'Sherwood';`. The result shows one row for a customer named Allan Sherwood. The interface includes a top navigation bar, a left sidebar, and a main content area with various controls and options.

Server: 127.0.0.1:3306 » Database: my_guitar_shop2 » Table: customers

Browse Structure SQL Search Insert Export Import Privileges Operations Tracking Triggers

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 0.0003 seconds.)

`SELECT firstName, lastName, line1, line2, city, state, zipCode FROM customers JOIN addresses ON billingAddressID = addressID WHERE lastName = 'Sherwood';`

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

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

Extra options

firstName	lastName	line1	line2	city	state	zipCode
Allan	Sherwood	21 Rosewood Rd.		Woodcliff Lake	NJ	07677

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

Query results operations

[Print](#) [Copy to clipboard](#) [Export](#) [Display chart](#) [Create view](#)

[Bookmark this SQL query](#)

SELECT COUNT(*) AS NumberOfProducts

FROM products

WHERE categoryID = (SELECT categoryID

FROM categories

WHERE categoryName = 'Guitars');

The screenshot shows the phpMyAdmin web interface. On the left is a sidebar with a database tree structure. The main panel on the right displays the results of a SQL query. At the top, a message states: "Your SQL query has been executed successfully." Below this, the executed query is shown: `SELECT COUNT(*) AS NumberOfProducts FROM products WHERE categoryID = (SELECT categoryID FROM categories WHERE categoryName = 'Guitars');`. The query results are displayed in a table with one column, "NumberOfProducts", and one row containing the value "6". Below the results table, there are buttons for "Query results operations" including "Print", "Copy to clipboard", "Export", "Display chart", and "Create view". At the bottom, there is a section for "Bookmark this SQL query" with a label input field and a checkbox labeled "Let every user access this bookmark".

Server: 127.0.0.1:3306 » Database: my_guitar_shop2 » Table: products

Recent Favorites

New

- ap
- grade_book
- information_schema
- mydb
- mysql
- my_guitar
 - my_guitar_shop1
 - my_guitar_shop2
 - New
 - addresses
 - administrators
 - categories
 - customers
 - orderitems
 - orders
 - products
- performance_schema
- phpmyadmin
- student_gradebook
- test

Show query box

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

Your SQL query has been executed successfully.

`SELECT COUNT(*) AS NumberOfProducts FROM products WHERE categoryID = (SELECT categoryID FROM categories WHERE categoryName = 'Guitars');`

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

Extra options

NumberOfProducts
6

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Label: ☐ Let every user access this bookmark

Bookmark this SQL query

Part3

INSERT INTO customers (firstName, lastName, emailAddress, password)

VALUES ('John', 'Smith', 'johnsmith@example.com', 'sesame');

The screenshot displays the phpMyAdmin web interface. On the left, a sidebar shows a tree view of databases, including 'my_guitar' and its sub-databases 'my_guitar_shop1' and 'my_guitar_shop2'. The 'my_guitar_shop2' database is selected, showing a list of tables: 'addresses', 'administrators', 'categories', 'customers', 'orderitems', 'orders', and 'products'. The main panel on the right shows the 'SQL' tab selected. A yellow message box indicates a successful query: '1 row inserted. Inserted row id: 4 (Query took 0.0004 seconds.)'. Below this, the executed SQL query is displayed: `INSERT INTO customers (firstName, lastName, emailAddress, password) VALUES ('John', 'Smith', 'johnsmith@example.com', 'sesame');`. At the bottom of the query box, there are links for '[Edit inline]', '[Edit]', and '[Create PHP code]'.

UPDATE customers

SET password = '<hashed_5e5ame_here>'

WHERE emailAddress = 'johnsmith@example.com';

The screenshot shows the phpMyAdmin web interface. On the left is a sidebar with a database tree. The 'my_guitar' database is expanded, showing 'my_guitar_shop2' as the selected database. The main panel on the right has tabs for 'Structure', 'SQL', 'Search', 'Query', 'Export', and 'Import'. The 'Query' tab is active, displaying a message: '1 row deleted. (Query took 0.0320 seconds.)' and the executed SQL query: `DELETE FROM customers WHERE firstName = 'John' AND lastName = 'Smith';`. Below the query are links for '[Edit inline]', '[Edit]', and '[Create PHP code]'.

File Explorer view of the directory: This PC > New Volume (D:) > xampp > htdocs > ex_starts > ch18_ex1

Name	Date modified	Type	Size
count_products_by_category	2/10/2024 6:46 PM	SQL Source File	1 KB
delete_customer	2/10/2024 9:25 PM	SQL Source File	1 KB
insert_customer	2/10/2024 9:08 PM	SQL Source File	1 KB
select_billing_addresses	2/10/2024 5:18 PM	SQL Source File	1 KB
select_products	2/10/2024 3:44 PM	SQL Source File	1 KB
update_customer	2/10/2024 9:21 PM	SQL Source File	1 KB

To restore the database to initially

The screenshot shows the phpMyAdmin interface with the 'my_guitar_shop2' database selected. The left sidebar displays a tree view of databases, including 'my_guitar_shop1' and 'my_guitar_shop2'. The main panel shows the 'SQL' tab with a list of executed queries and their results. The queries include an import statement, a 'DROP DATABASE IF EXISTS' statement, a 'CREATE DATABASE' statement, a 'USE' statement, and a 'CREATE TABLE' statement for the 'customers' table. The results show that the database was successfully created and the table was created. An error message is also visible: 'Error: #1049 Unknown database 'my_guitar_shop2''.

Server: 127.0.0.1:3306 » Database: my_guitar_shop2

Structure SQL Search Query Export Import Operations

Import has been successfully finished, 19 queries executed. (my_guitar_shop2.sql)

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

```
-- create and select the database DROP DATABASE IF EXISTS my_guitar_shop2;
```

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

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

```
CREATE DATABASE my_guitar_shop2;
```

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

Error: #1049 Unknown database 'my_guitar_shop2'

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0002 seconds.)

```
USE my_guitar_shop2;
```

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

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

```
-- create the tables for the database CREATE TABLE customers ( customerID INT NOT NULL AUTO_INCREMENT, billingAddressID INT DEFAULT NULL, PRIMARY KEY (customerID), UNIQUE INDEX email ON customers (email))
```