

Aaron Ekdahl

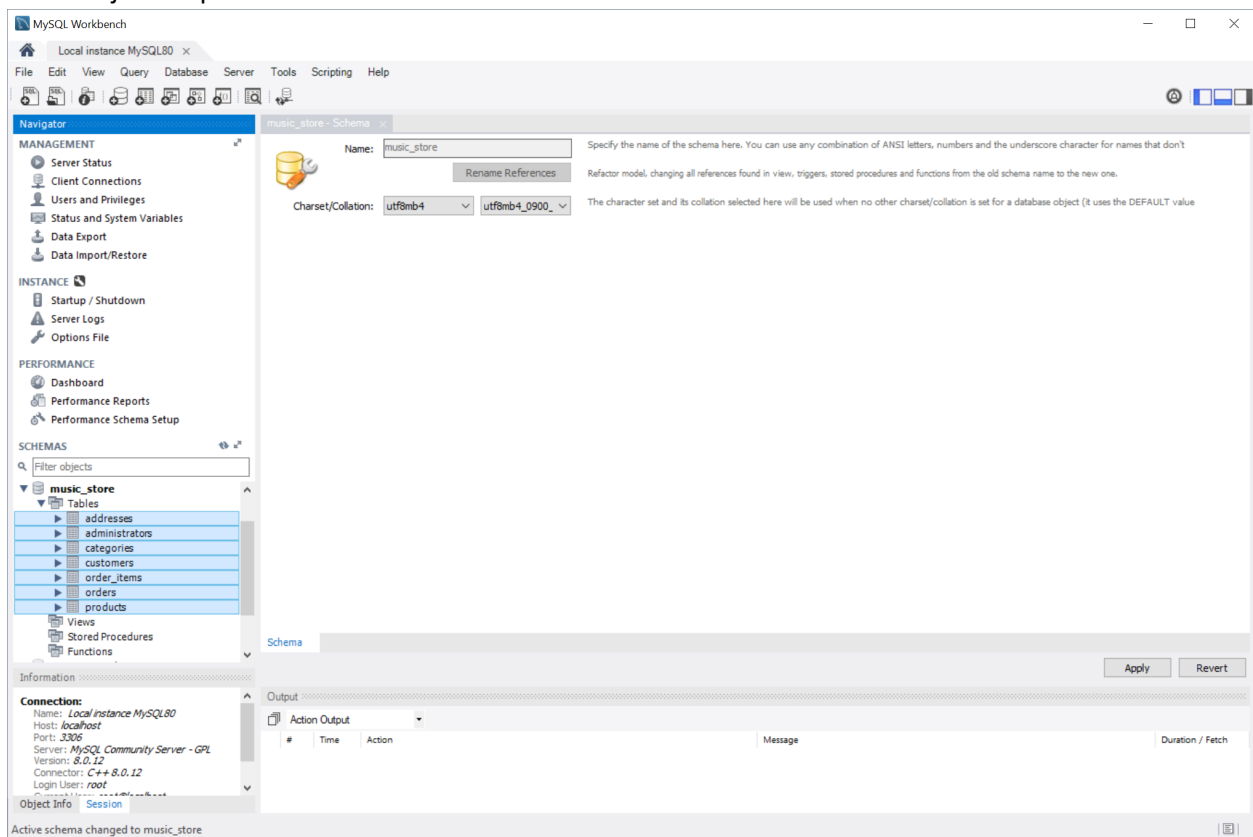
Louis Ho

CIS251

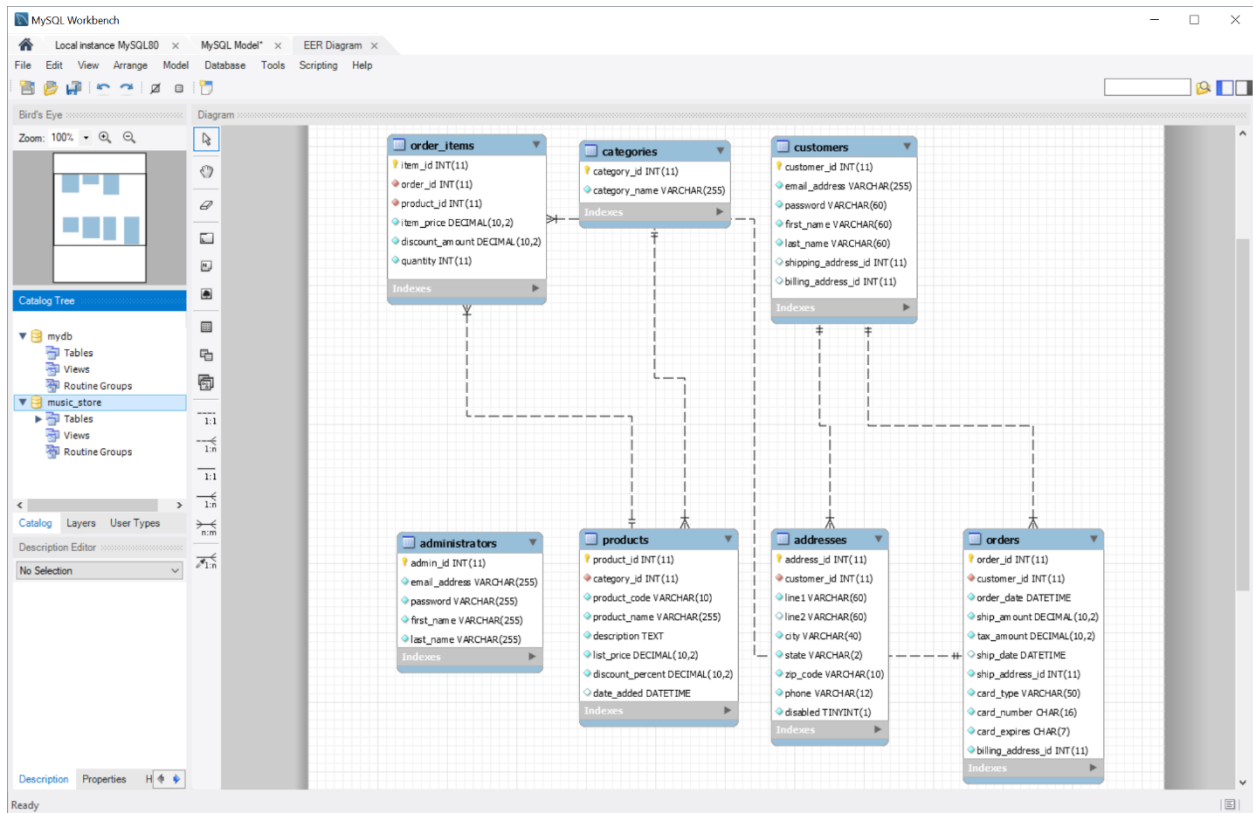
12/5/2018

CIS251 2018 Fall – Final Project: Music Store Database

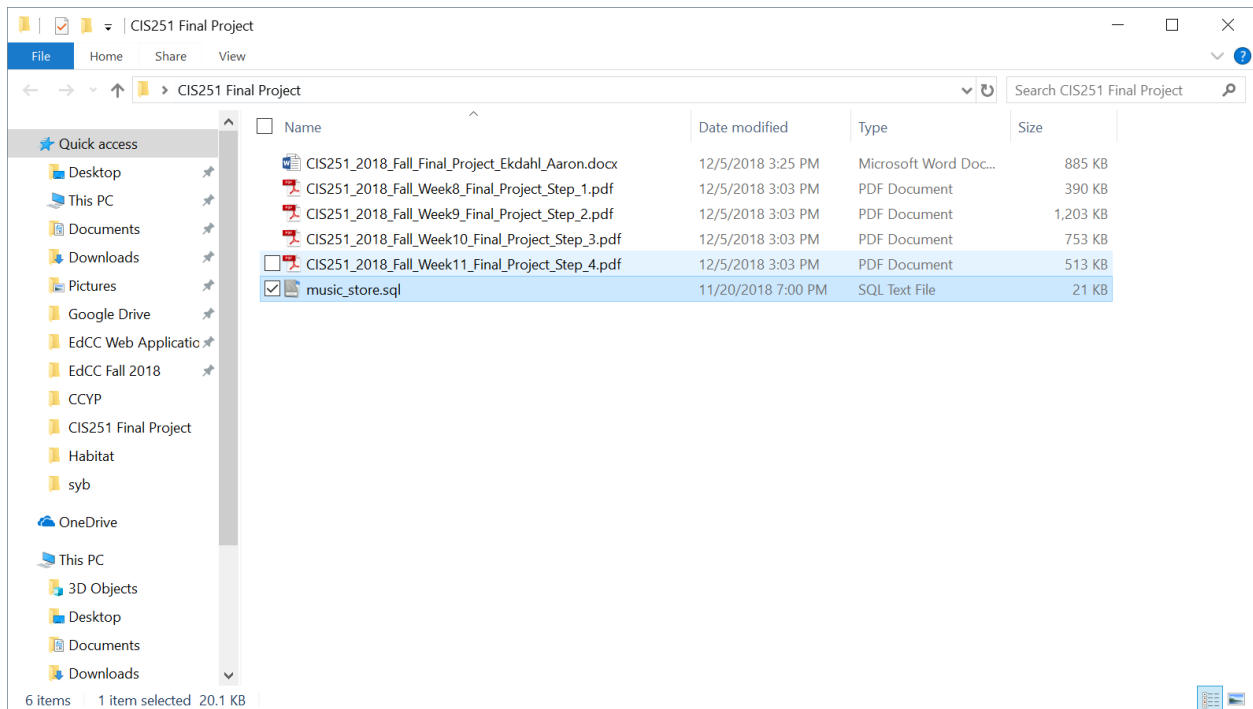
Final Project Step 1 - Screenshot #1



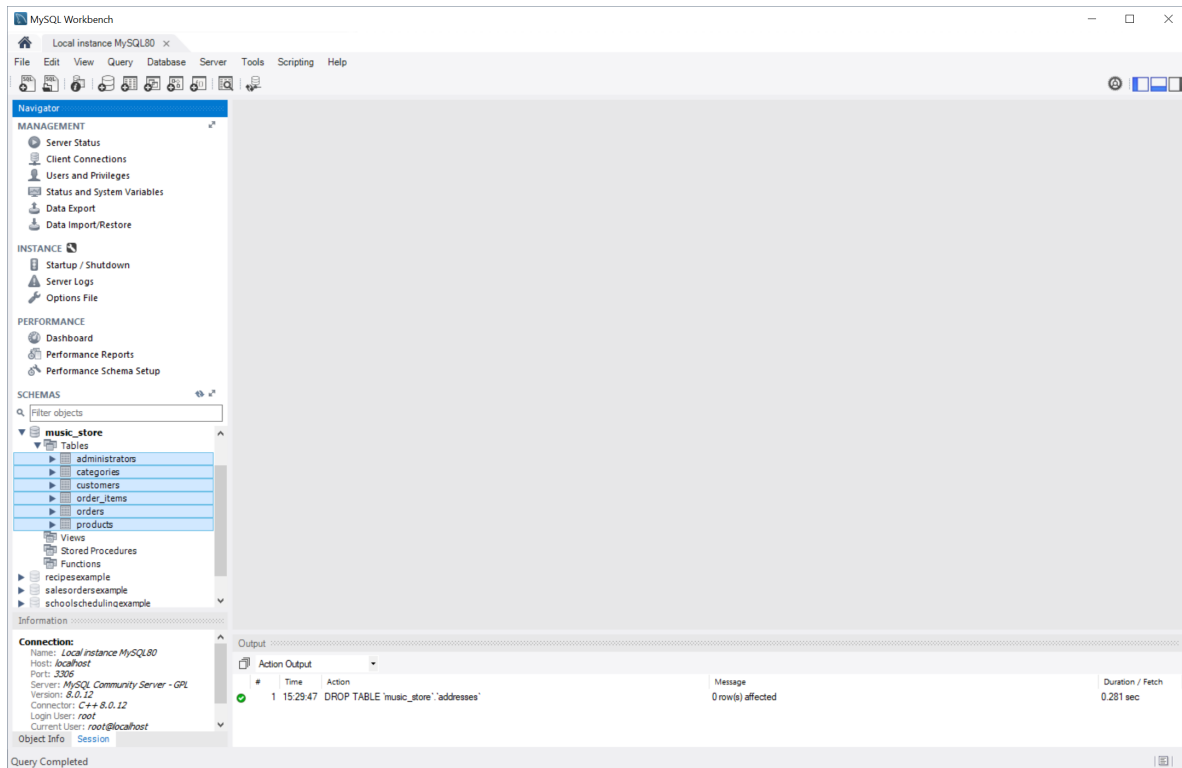
Final Project Step 1 - Screenshot #2



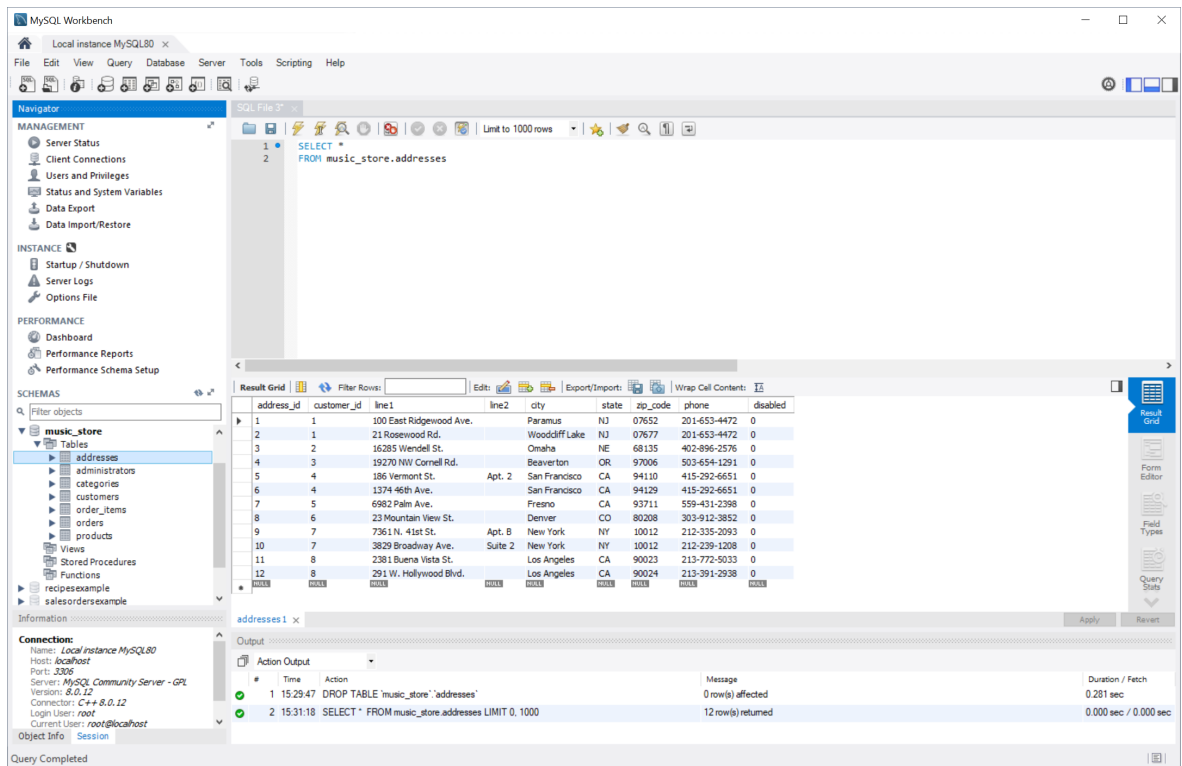
Final Project Step 2 - Screenshot #1



Final Project Step 2 - Screenshot #2



Final Project Step 2 - Screenshot #3



The screenshot shows the MySQL Workbench interface. The left sidebar has tabs for Navigator, Instance, Performance, and Schemas. The main window displays a SQL query in the 'SQL File 3' editor:

```
1 SELECT *
2 FROM music_store_aaronekdahl.addresses
```

Below the query, the 'Result Grid' shows the execution results. The table has the following columns: address_id, customer_id, line1, line2, city, state, zip_code, phone, and disabled. The data is as follows:

address_id	customer_id	line1	line2	city	state	zip_code	phone	disabled
1	1	100 East Ridgewood Ave.		Paramus	NJ	07652	201-653-4472	0
2	1	21 Rosewood Rd.		Woodcliff Lake	NJ	07677	201-653-4472	0
3	2	16285 Wendell St.		Onalwa	NE	68135	402-896-2576	0
4	3	19270 NW Cornell Rd.		Beaverton	OR	97006	503-654-1291	0
5	4	186 Vermont St.	Apt. 2	San Francisco	CA	94110	415-292-6651	0
6	4	1374 46th Ave.		San Francisco	CA	94129	415-292-6651	0
7	5	6982 Palm Ave.		Fresno	CA	93711	559-431-2398	0
8	6	23 Mountain View St.		Denver	CO	80208	303-915-3852	0
9	7	7361 N. 41st St.	Apt. B	New York	NY	10012	212-335-2093	0
10	7	3829 Broadway Ave.	Suite 2	New York	NY	10012	212-239-1208	0
11	8	2381 Buena Vista St.		Los Angeles	CA	90023	213-772-5033	0
12	8	291 W. Hollywood Blvd.		Los Angeles	CA	90024	213-391-2938	0

The bottom status bar shows the message: 'Active schema changed to music_store_aaronekdahl'.

[illegible]

The screenshot displays the MySQL Workbench interface. The top toolbar includes icons for File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. The left sidebar contains a 'Navigator' pane with sections for MANAGEMENT (Server Status, Client Connections, Users and Privileges, Status and System Variables, Data Export, Data Import/Restore), INSTANCE (Startup / Shutdown, Server Logs, Options File), PERFORMANCE (Dashboard, Performance Reports, Performance Schema Setup), and SCHEMAS (Filter objects, databases like bp, bowlingleagueexample, entertainmentagencyexample, and the selected music_store database with its tables and views).

The main window shows a SQL File editor with a query named 'SQL File 4*' containing the following SQL code:

```
SELECT *
FROM music_store.customers;
```

Below the editor, the 'Result Grid' displays the query results. The table has 7 columns: customer_id, email_address, password, first_name, last_name, shipping_address_id, and billing_address_id. The results show 13 rows of customer data, with the last row (customer_id 13) highlighted in blue.

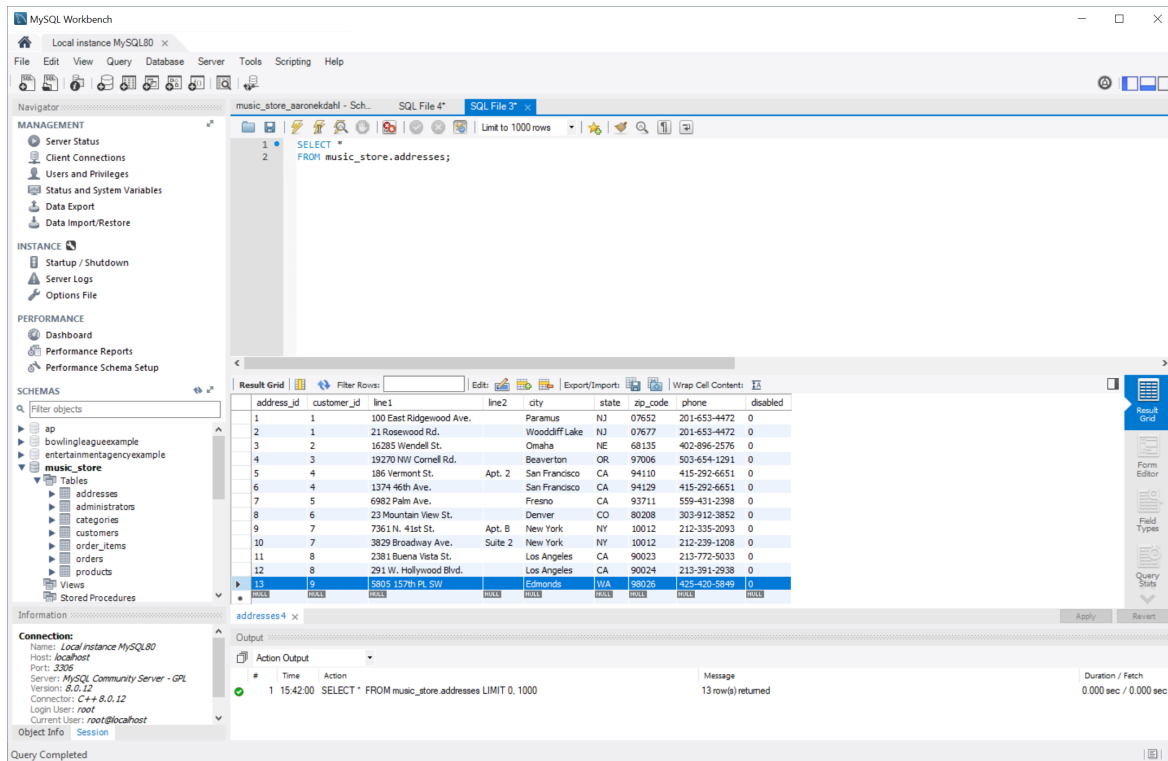
At the bottom, the 'Connection' pane shows the current connection details: Local instance MySQL80, Host: localhost, Port: 3306, Server: MySQL Community Server - GPL, Version: 8.0.12, Connector: C++ 8.0.12, Login User: root, Current User: root@localhost. The 'Query History' pane shows the executed query: 'SELECT * FROM music_store.customers LIMIT 0, 1000' at 15:39:52, with a message '9 row(s) returned' and a duration of 0.000 sec / 0.000 sec.

The screenshot displays the MySQL Workbench environment. The main window shows a SQL query being executed in the 'SQL File 4' tab. The query is:

```
use music_store;
INSERT INTO addresses (address_id, customer_id, line1, line2, city, state, zip_code, phone, disabled) VALUES
(13, 9, '5885 157th PL SW', '', 'Edmonds', 'WA', '98826', '425-420-5849', 0);
```

The left sidebar shows the 'Schemas' tree with 'music_store' selected. The bottom status bar indicates 'Query Completed'.

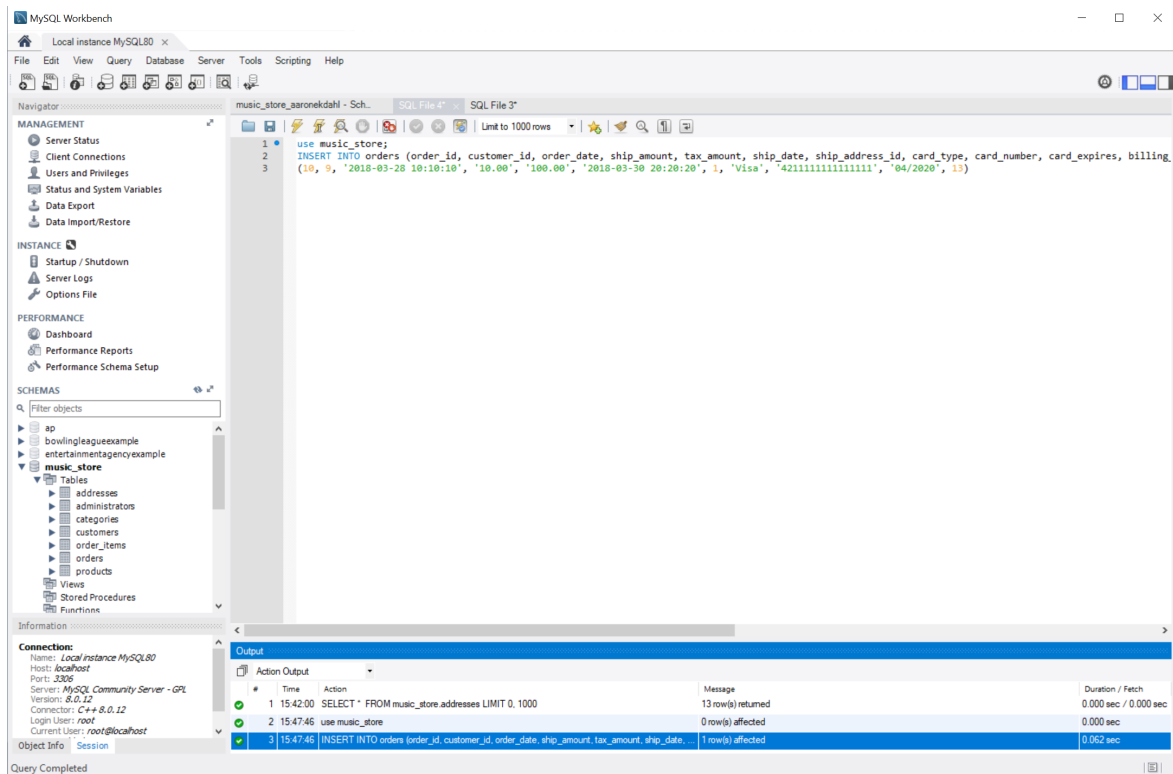
Final Project Step 3 - Screenshot #4



This screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with the 'music_store' database selected. The main editor window shows a SQL query: `SELECT * FROM music_store.addresses;`. The 'Result Grid' at the bottom displays a table with columns: address_id, customer_id, line1, line2, city, state, zip_code, phone, and disabled. The table contains 13 rows of data. The 'Output' pane at the bottom shows the execution of the query, indicating that 13 rows were returned.

address_id	customer_id	line1	line2	city	state	zip_code	phone	disabled
1	1	100 East Ridgewood Ave.		Paramus	NJ	07652	201-653-4472	0
2	1	21 Rosewood Rd.		Woodcliff Lake	NJ	07677	201-653-4472	0
3	2	16285 Wendell St.		Omaha	NE	68135	402-896-2576	0
4	3	19270 NW Cornell Rd.		Seaverton	OR	97006	503-654-1291	0
5	4	186 Vermont St.		San Francisco	CA	94110	415-292-6651	0
6	4	1374 46th Ave.	Apt. 2	San Francisco	CA	94129	415-292-6651	0
7	5	6982 Palm Ave.		Fresno	CA	93711	559-431-2398	0
8	6	23 Mountain View St.		Denver	CO	80208	303-912-3852	0
9	7	7361 N. 41st St.	Apt. B	New York	NY	10012	212-335-2093	0
10	7	3829 Broadway Ave.	Suite 2	New York	NY	10012	212-239-1208	0
11	8	2381 Buena Vista St.		Los Angeles	CA	90023	213-772-5033	0
12	8	291 W. Hollywood Blvd.		Los Angeles	CA	90024	213-393-2938	0
13	9	2805 157th Pl. SW		Edmonds	WA	98026	425-430-5849	0

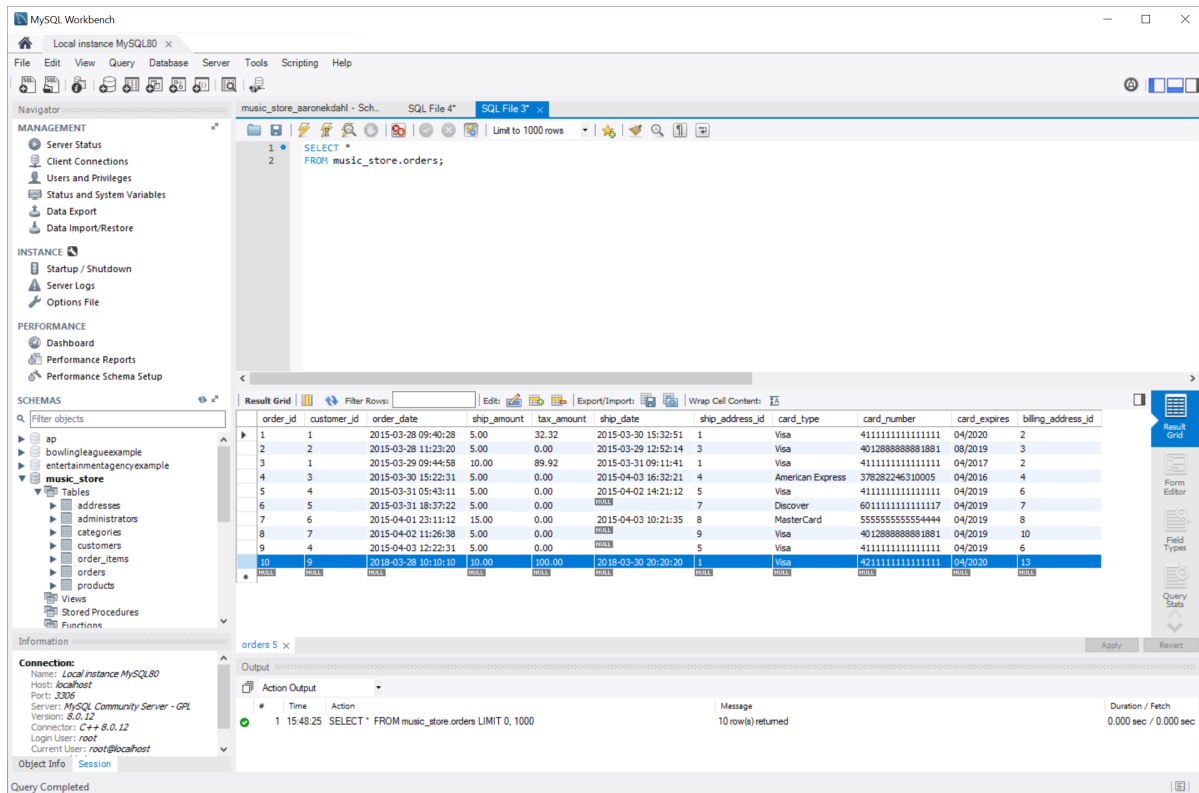
Final Project Step 3 - Screenshot #5



This screenshot shows the MySQL Workbench interface with a multi-statement SQL query. The query is: `use music_store; INSERT INTO orders (order_id, customer_id, order_date, ship_amount, tax_amount, ship_date, ship_address_id, card_type, card_number, card_expires, billing) (10, 9, '2018-03-28 10:10:10', '10.00', '100.00', '2018-03-30 20:20:20', 1, 'Visa', '4211111111111111', '04/2020', 13)`. The 'Output' pane at the bottom shows the execution of the query, indicating that 1 row was affected.

#	Time	Action	Message	Duration / Fetch
1	15:42:00	SELECT * FROM music_store.addresses LIMIT 0. 1000	13 row(s) returned	0.000 sec / 0.000 sec
2	15:47:46	use music_store	0 row(s) affected	0.000 sec
3	15:47:46	INSERT INTO orders (order_id, customer_id, order_date, ship_amount, tax_amount, ship_date, ship_address_id, card_type, card_number, card_expires, billing) (10, 9, '2018-03-28 10:10:10', '10.00', '100.00', '2018-03-30 20:20:20', 1, 'Visa', '4211111111111111', '04/2020', 13)	1 row(s) affected	0.062 sec

Final Project Step 3 - Screenshot #6

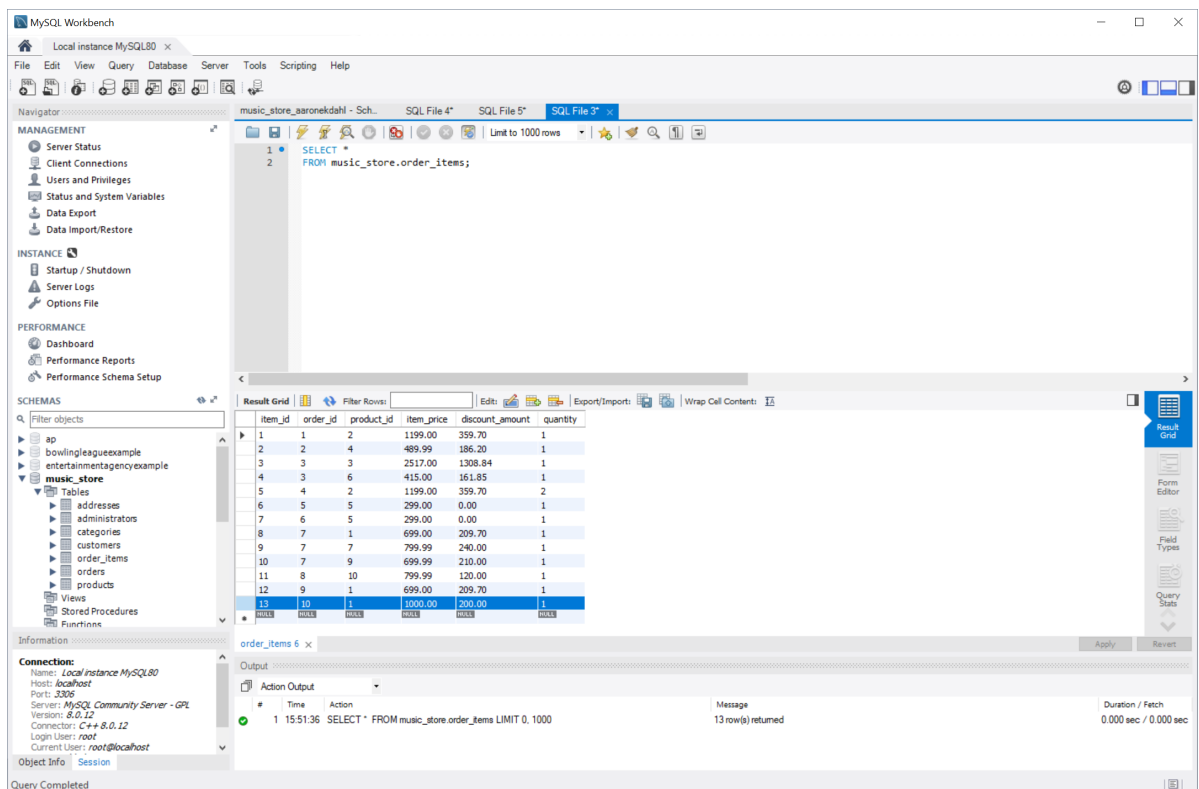


MySQL Workbench interface showing a query executed on the 'music_store' database. The query is: `SELECT * FROM music_store.orders;` The results are displayed in a table with 10 columns: `order_id`, `customer_id`, `order_date`, `ship_amount`, `tax_amount`, `ship_date`, `ship_address_id`, `card_type`, `card_number`, `card_expires`, and `billing_address_id`. The results show 10 rows of data, with the last row highlighted in blue.

order_id	customer_id	order_date	ship_amount	tax_amount	ship_date	ship_address_id	card_type	card_number	card_expires	billing_address_id
1	1	2015-03-28 09:40:28	5.00	32.32	2015-03-30 15:32:51	1	Visa	4111111111111111	04/2020	2
2	2	2015-03-28 11:23:20	5.00	0.00	2015-03-29 12:52:14	3	Visa	4012888888881881	08/2019	3
3	1	2015-03-29 09:44:58	10.00	89.92	2015-03-31 09:11:41	1	Visa	4111111111111111	04/2017	2
4	3	2015-03-30 15:22:31	5.00	0.00	2015-04-03 16:32:21	4	American Express	378282246310005	04/2016	4
5	4	2015-03-31 05:40:11	5.00	0.00	2015-04-02 14:21:12	5	Visa	4111111111111111	04/2019	6
6	5	2015-03-31 18:37:22	5.00	0.00	NULL	7	Discover	6011111111111117	04/2019	7
7	6	2015-04-01 23:11:12	15.00	0.00	2015-04-03 10:21:35	8	MasterCard	5555555555554444	04/2019	8
8	7	2015-04-02 11:26:38	5.00	0.00	NULL	9	Visa	4012888888881881	04/2019	10
9	4	2015-04-03 12:22:31	5.00	0.00	NULL	5	Visa	4111111111111111	04/2019	6
10	9	2018-03-28 10:10:10	10.00	100.00	2018-03-30 20:20:20	1	Visa	4211111111111111	04/2020	13

The bottom panel shows the output of the query: `SELECT * FROM music_store.orders LIMIT 0, 1000`. The message indicates that 10 row(s) were returned.

Final Project Step 3 - Screenshot #7



MySQL Workbench interface showing a query executed on the 'music_store' database. The query is: `SELECT * FROM music_store.order_items;` The results are displayed in a table with 6 columns: `item_id`, `order_id`, `product_id`, `item_price`, `discount_amount`, and `quantity`. The results show 13 rows of data, with the last row highlighted in blue.

item_id	order_id	product_id	item_price	discount_amount	quantity
1	1	2	1199.00	359.70	1
2	2	4	489.99	186.20	1
3	3	3	2517.00	1308.84	1
4	3	6	415.00	161.85	1
5	4	2	1199.00	359.70	2
6	5	5	299.00	0.00	1
7	6	5	299.00	0.00	1
8	7	1	699.00	209.70	1
9	7	7	799.99	240.00	1
10	7	9	699.99	210.00	1
11	8	10	799.99	120.00	1
12	9	1	699.00	209.70	1
13	10	1	1000.00	200.00	1

The bottom panel shows the output of the query: `SELECT * FROM music_store.order_items LIMIT 0, 1000`. The message indicates that 13 row(s) were returned.

Final Project Step 3 - Screenshot #8

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 use music_store;
2 SELECT CONCAT(last_name, ' ', first_name) AS full_name
3 FROM customers
4 WHERE last_name = 'Ekdahl'
5 ORDER BY last_name
```

The Schemas pane on the left shows the 'music_store' database selected. The 'Result Grid' shows one row of results:

full_name
Ekdahl, Aaron

The 'Output' pane at the bottom shows the execution log:

#	Time	Action	Message	Duration / Fetch
1	15:52:50	use music_store	0 row(s) affected	0.000 sec
2	15:52:50	SELECT CONCAT(last_name, ' ', first_name) AS full_name FROM customers WHERE last_name = 'Ekdahl'	1 row(s) returned	0.000 sec / 0.000 sec

Final Project Step 3 - Screenshot #9

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 use music_store;
2 SELECT c.first_name, c.last_name, a.line1, a.city, a.state, a.zip_code
3 FROM customers c
4 INNER JOIN addresses a ON
5 c.customer_id = a.customer_id
6 WHERE last_name = 'Ekdahl'
```

The Schemas pane on the left shows the 'music_store' database selected. The 'Result Grid' shows one row of results:

first_name	last_name	line1	city	state	zip_code
Aaron	Ekdahl	5805 157th PL SW	Edmonds	WA	98026

The 'Output' pane at the bottom shows the execution log:

#	Time	Action	Message	Duration / Fetch
2	15:52:50	SELECT CONCAT(last_name, ' ', first_name) AS full_name FROM customers WHERE last_name = 'Ekdahl'	1 row(s) returned	0.000 sec / 0.000 sec
3	15:56:42	use music_store	0 row(s) affected	0.000 sec
4	15:56:42	SELECT c.first_name, c.last_name, a.line1, a.city, a.state, a.zip_code FROM customers c INNER JOIN addresses a ON c.customer_id = a.customer_id WHERE last_name = 'Ekdahl'	1 row(s) returned	0.000 sec / 0.000 sec

Final Project Step 3 - Screenshot #10

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with 'addresses' selected. The main query editor shows a SQL query that uses the 'music_store' database and performs a JOIN between 'customers' and 'addresses' on 'customer_id'. The 'Result Grid' shows 13 rows of data with columns: first_name, last_name, line1, city, state, zip_code. The 'Output' pane at the bottom shows the execution log with three successful actions.

Query:

```

1 use music_store;
2 SELECT c.first_name, c.last_name, a.line1, a.city, a.state, a.zip_code
3 FROM customers c
4 JOIN addresses a ON
5 c.customer_id = a.customer_id
6

```

Result Grid:

first_name	last_name	line1	city	state	zip_code
Alan	Sherwood	100 East Ridgewood Ave.	Paramus	NY	07652
Alan	Sherwood	21 Rosewood Rd.	Woodcliff Lake	NJ	07677
Barry	Zimmer	16285 Wendell St.	Omaha	NE	68135
Christine	Brown	19270 NW Cornell Rd.	Beaverton	OR	97006
David	Goldstein	186 Vermont St.	San Francisco	CA	94110
David	Goldstein	1374 46th Ave.	San Francisco	CA	94129
Erin	Valentino	6982 Palm Ave.	Fresno	CA	93711
Frank Lee	Wilson	23 Mountain View St.	Denver	CO	80208
Gary	Hernandez	7361 N. 41st St.	New York	NY	10012
Gary	Hernandez	3829 Broadway Ave.	New York	NY	10012
Heather	Essay	2381 Buena Vista St.	Los Angeles	CA	90023
Heather	Essay	291 W. Hollywood Blvd.	Los Angeles	CA	90024
Aaron	Budani	5805 157th Pl SW	Edmonds	WA	98026

Output:

#	Time	Action	Message	Duration / Fetch
2	15:59:04	SELECT c.first_name, c.last_name, a.line1, a.city, a.state, a.zip_code FROM customers c IN...	13 row(s) returned	0.000 sec / 0.000 sec
3	15:59:24	use music_store	0 row(s) affected	0.000 sec
4	15:59:24	SELECT c.first_name, c.last_name, a.line1, a.city, a.state, a.zip_code FROM customers c JOI...	13 row(s) returned	0.000 sec / 0.000 sec

Final Project Step 3 - Screenshot #11

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with 'customers' selected. The main query editor shows a complex SQL query that joins 'customers', 'orders', 'order_items', and 'products'. The 'Result Grid' shows 13 rows of data with columns: last_name, first_name, order_date, product_name, item_price, discount_amount, quantity. The 'Output' pane at the bottom shows the execution log with two successful actions.

Query:

```

1 use music_store;
2 SELECT c.last_name, c.first_name, o.order_date, p.product_name, oi.item_price, oi.discount_amount, oi.quantity
3 FROM customers c
4 INNER JOIN orders o ON
5 c.customer_id = o.customer_id
6 INNER JOIN order_items oi ON
7 o.order_id = oi.order_id
8 INNER JOIN products p ON
9 oi.product_id = p.product_id
10 ORDER BY first_name ASC
11

```

Result Grid:

last_name	first_name	order_date	product_name	item_price	discount_amount	quantity
Eldahl	Aaron	2018-03-28 10:10:10	Fender Stratocaster	1000.00	200.00	1
Sherwood	Allan	2015-03-28 09:40:28	Gibson Les Paul	1199.00	359.70	1
Sherwood	Allan	2015-03-29 09:44:58	Gibson SG	2517.00	1308.84	1
Sherwood	Allan	2015-03-29 09:44:58	Rodriguez Caballero 11	415.00	161.85	1
Zimmer	Barry	2015-03-28 11:23:20	Yamaha FG700S	489.99	186.20	1
Brown	Christine	2015-03-30 15:22:31	Gibson Les Paul	1199.00	359.70	2
Goldstein	David	2015-03-31 05:43:11	Washburn D10S	299.00	0.00	1
Goldstein	David	2015-04-03 12:22:31	Fender Stratocaster	699.00	209.70	1
Valentino	Erin	2015-03-31 18:27:22	Washburn D10S	299.00	0.00	1
Wilson	Frank Lee	2015-04-01 23:11:12	Fender Stratocaster	699.00	209.70	1
Wilson	Frank Lee	2015-04-01 23:11:12	Fender Precision	799.99	240.00	1
Wilson	Frank Lee	2015-04-01 23:11:12	Ludwig 5-piece Drum S...	699.99	210.00	1
Hernandez	Gary	2015-04-02 11:26:38	Tama 5-Piece Drum S...	799.99	120.00	1

Table: order_items

Columns:	
item_id	int(11) PK
order_id	int(11)
product_id	int(11)
item_price	decimal(10,2)
discount_amount	decimal(10,2)
quantity	int(11)

Output:

#	Time	Action	Message	Duration / Fetch
1	16:08:55	use music_store	0 row(s) affected	0.000 sec
2	16:08:55	SELECT c.last_name, c.first_name, o.order_date, p.product_name, oi.item_price, oi.discount_a...	13 row(s) returned	0.000 sec / 0.000 sec

Final Project Step 4 – Screenshot #1

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 use music_store;
2 SELECT c.email_address, SUM(o.item_price * oi.quantity) AS item_price_total
3 FROM customers c
4 INNER JOIN orders o ON
5 c.customer_id = o.customer_id
6 INNER JOIN order_items oi ON
7 o.order_id = oi.order_id
8 INNER JOIN products p ON
9 oi.product_id = p.product_id
10 GROUP BY email_address;
```

The Result Grid shows the following data:

email_address	item_price_total
allan.sherwood@yahoo.com	4131.00
barryz@gmail.com	489.99
christneb@solarone.com	2398.00
david.goldstein@hotmail.com	998.00
erinv@gmail.com	299.00
frankwilson@bcbglobal.net	2198.98
gary_hernandez@yahoo.com	799.99
a.eldorh599@edmail.edcc.edu	1000.00

The Action Output pane shows the following messages:

#	Time	Action	Message	Duration / Fetch
1	16:27:13	use music_store	0 row(s) affected	0.000 sec
2	16:27:13	SELECT c.email_address, SUM(o.item_price * oi.quantity) AS item_price_total FROM customer...	8 row(s) returned	0.000 sec / 0.000 sec

Final Project Step 4 – Screenshot #2

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 use music_store;
2 SELECT c.email_address, COUNT(o.customer_id) AS order_count
3 FROM customers c
4 INNER JOIN orders o ON
5 c.customer_id = o.customer_id
6 GROUP BY email_address AS;
```

The Result Grid shows the following data:

email_address	order_count
a.eldorh599@edmail.edcc.edu	1
allan.sherwood@yahoo.com	2
barryz@gmail.com	1
christneb@solarone.com	1
david.goldstein@hotmail.com	2
erinv@gmail.com	1
frankwilson@bcbglobal.net	1
gary_hernandez@yahoo.com	1

The Action Output pane shows the following messages:

#	Time	Action	Message	Duration / Fetch
1	16:32:35	use music_store	0 row(s) affected	0.000 sec
2	16:32:35	SELECT c.email_address, COUNT(o.customer_id) AS order_count FROM customers c INNER ...	8 row(s) returned	0.000 sec / 0.000 sec

Final Project Step 4 – Screenshot #3

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 use music_store;
2 SELECT c.email_address, COUNT(*) AS order_count
3 FROM customers c
4 JOIN orders o ON
5 c.customer_id = o.customer_id
6 GROUP BY email_address ASC
7 HAVING COUNT(o.customer_id) = 1
```

The Results window displays the following data:

email_address	order_count
a.ekelab@pedmail.educ.edu	1
barryz@gmail.com	1
christineb@solarone.com	1
erinv@gmail.com	1
frankwilson@sbcbglobal.net	1
gary_hernandez@yahoo.com	1

The Action Output window shows the following messages:

#	Time	Action	Message	Duration / Fetch
16	16:38:46	SELECT c.email_address, COUNT(*) AS order_count FROM customers c JOIN orders o ON c...	6 row(s) returned	0.000 sec / 0.000 sec
17	16:38:59	use music_store	0 row(s) affected	0.000 sec
18	16:38:59	SELECT c.email_address, COUNT(*) AS order_count FROM customers c JOIN orders o ON c...	6 row(s) returned	0.000 sec / 0.000 sec

Final Project Step 4 – Screenshot #4

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 use music_store;
2 SELECT c.email_address, COUNT(DISTINCT p.product_id) AS number_of_products
3 FROM customers c
4 INNER JOIN orders o ON
5 c.customer_id = o.customer_id
6 INNER JOIN order_items oi ON
7 o.order_id = oi.order_id
8 INNER JOIN products p ON
9 oi.product_id = p.product_id
10 GROUP BY email_address ASC
```

The Results window displays the following data:

email_address	number_of_products
a.ekelab@pedmail.educ.edu	1
allan.sherwood@yahoo.com	3
barryz@gmail.com	1
christineb@solarone.com	1
david.goldstein@hotmail.com	2
erinv@gmail.com	1
frankwilson@sbcbglobal.net	3
gary_hernandez@yahoo.com	1

The Action Output window shows the following messages:

#	Time	Action	Message	Duration / Fetch
1	16:42:34	use music_store	0 row(s) affected	0.000 sec
2	16:42:34	SELECT c.email_address, COUNT(DISTINCT p.product_id) AS number_of_products FROM cu...	8 row(s) returned	0.000 sec / 0.000 sec

Final Project Step 4 – Screenshot #5

This screenshot shows the MySQL Workbench interface. The SQL editor contains the following SQL code:

```
1 CREATE OR REPLACE VIEW customer_shipping_address_view AS
2 SELECT c.customer_id, c.email_address, c.last_name, c.first_name, a.line1 AS ship_line1, a.line2 AS ship_line2, a.city AS ship_city, a.state AS ship_s
3 FROM customers c
4 JOIN addresses a ON c.shipping_address_id = a.address_id
5
```

The output pane at the bottom shows the execution results:

#	Time	Action	Message	Duration / Fetch
1	16:53:45	CREATE VIEW customer_shipping_address AS SELECT c.customer_id, c.email_address, ...	0 row(s) affected	0.046 sec
2	16:54:24	SELECT * FROM music_store.customer_shipping_address LIMIT 0, 1000	9 row(s) returned	0.016 sec / 0.000 sec
3	16:54:55	CREATE OR REPLACE VIEW customer_shipping_address_view AS SELECT c.customer_...	0 row(s) affected	0.031 sec

Final Project Step 4 – Screenshot #6

This screenshot shows the MySQL Workbench interface with the same SQL code as in Screenshot #5. The output pane now displays the results of the query in a grid format:

customer_id	email_address	last_name	first_name	ship_line1	ship_line2	ship_city	ship_state	ship_zip
1	allan.sherwood@yahoo.com	Sherwood	Allan	100 East Ridgewood Ave.		Paramus	NJ	07652
2	barryz@gmail.com	Zimmer	Barry	16285 Wendell St.		Omaha	NE	68135
3	christineb@solarone.com	Brown	Christine	19270 NW Cornell Rd.		Beaverton	OR	97006
4	david.goldstein@hotmail.com	Goldstein	David	186 Vermont St.	Apt. 2	San Francisco	CA	94110
5	ernv@gmail.com	Valentino	Erin	6902 Palm Ave.		Pasadena	CA	93711
6	frankwilson@ebglobal.net	Wilson	Frank Lee	23 Mountain View St.		Denver	CO	80208
7	gary_hernandez@yahoo.com	Hernandez	Gary	7361 N. 41st St.	Apt. B	New York	NY	10012
8	heatheresway@mac.com	Esway	Heather	2381 Buena Vista St.		Los Angeles	CA	90023
9	a.elidahl@599@edmail.educ.edu	Elidahl	Aaron	5805 157th PL SW		Edmonds	WA	98026