Image source: https://freebiesupply.com/logos/mysql-logo/

ASSIGNMENT 1

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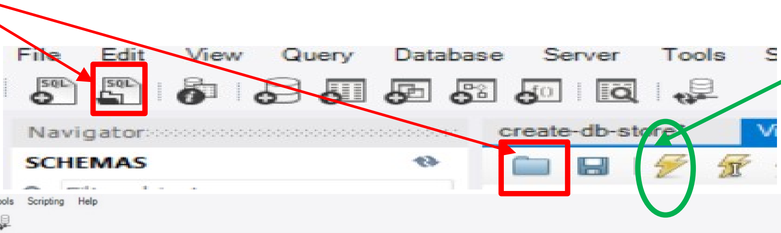
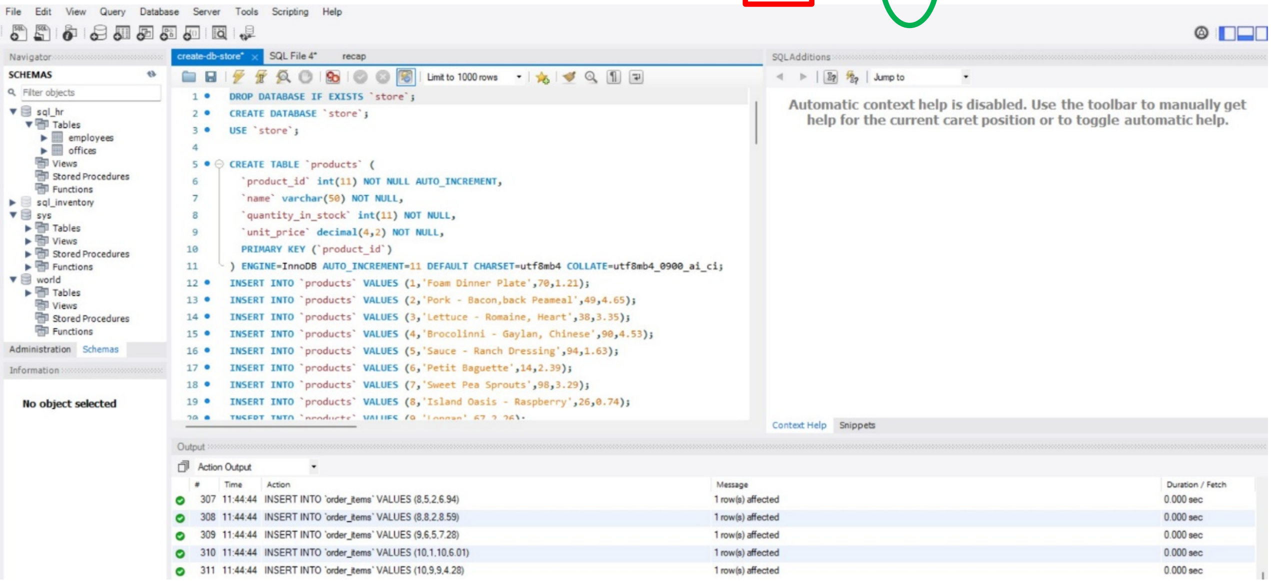
CONTENTS

Query 1 :

Connecting to the database:

We were given the store database to work on this assignment. I first opened the MYSQL workbench. Using the open script icon, I loaded the store database. To run the database script, I then clicked on the lightning bolt button.





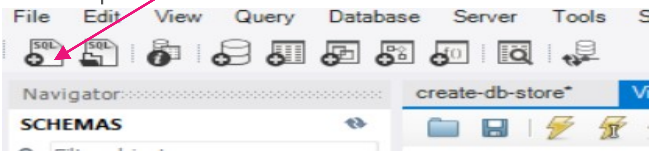
No object selected

```
DROP DATABASE IF EXISTS `store`;
CREATE DATABASE `store`;
USE `store`;

CREATE TABLE `products` (
  `product_id` int(11) NOT NULL AUTO_INCREMENT,
  `name` varchar(50) NOT NULL,
  `quantity_in_stock` int(11) NOT NULL,
  `unit_price` decimal(4,2) NOT NULL,
  PRIMARY KEY (`product_id`)
) ENGINE=InnoDB AUTO_INCREMENT=11 DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
INSERT INTO `products` VALUES (1,'Foam Dinner Plate',70,1.21);
INSERT INTO `products` VALUES (2,'Pork - Bacon,back Peameal',49,4.65);
INSERT INTO `products` VALUES (3,'Lettuce - Romaine, Heart',38,3.35);
INSERT INTO `products` VALUES (4,'Brocolinni - Gaylan, Chinese',90,4.53);
INSERT INTO `products` VALUES (5,'Sauce - Ranch Dressing',94,1.63);
INSERT INTO `products` VALUES (6,'Petit Baguette',14,2.39);
INSERT INTO `products` VALUES (7,'Sweet Pea Sprouts',98,3.29);
INSERT INTO `products` VALUES (8,'Island Oasis - Raspberry',26,0.74);
INSERT INTO `products` VALUES (9,'Longan',67,2.26);
```

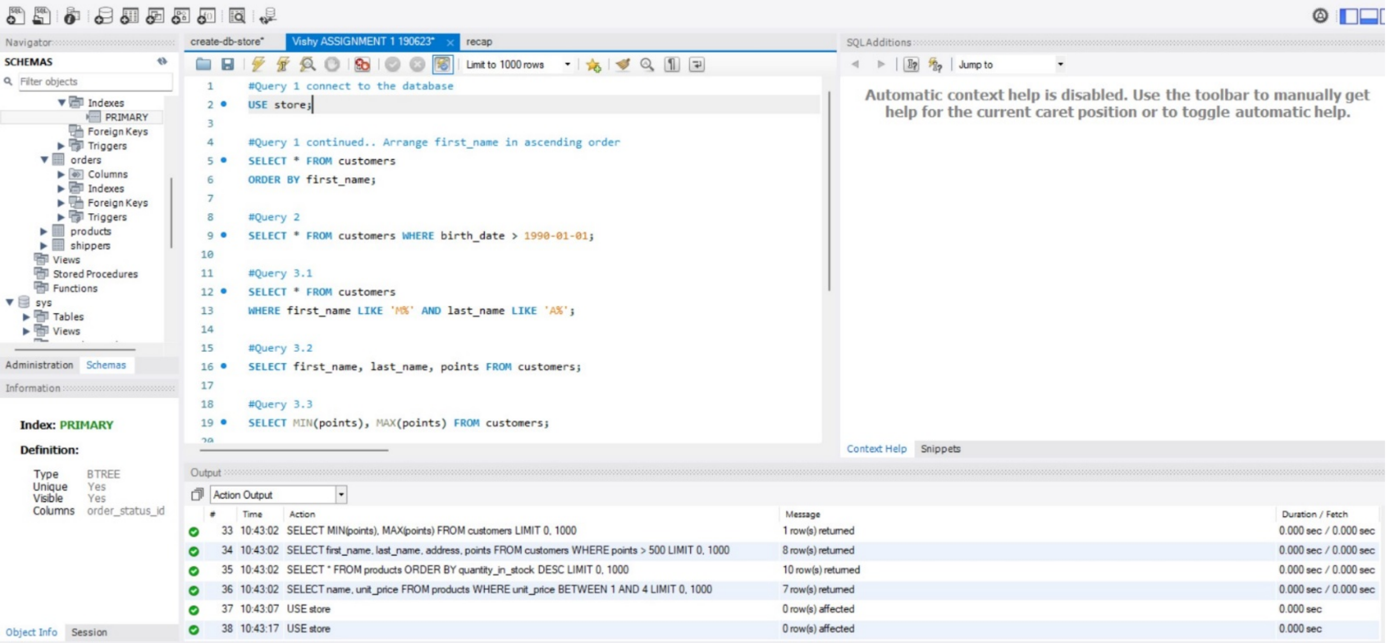
Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

#	Time	Action	Message	Duration / Fetch
307	11:44:44	INSERT INTO 'order_items' VALUES (8,5,2,6.94)	1 row(s) affected	0.000 sec
308	11:44:44	INSERT INTO 'order_items' VALUES (8,8,2,8.59)	1 row(s) affected	0.000 sec
309	11:44:44	INSERT INTO 'order_items' VALUES (9,6,5,7.28)	1 row(s) affected	0.000 sec
310	11:44:44	INSERT INTO 'order_items' VALUES (10,1,10,6.01)	1 row(s) affected	0.000 sec
311	11:44:44	INSERT INTO 'order_items' VALUES (10,9,9,4.28)	1 row(s) affected	0.000 sec

I then opened a new script file to write my queries. The first command I wrote was USE store; This helped the new script to connect to the store database and use its tables for my queries.



In MYSQL function/ main commands- SELECT, FROM, ORDER BY, WHERE, LIKE, LIMIT etc. are written in uppercase, whereas the table names are written in lower case. I have followed this rule to do my assignment.



Index: PRIMARY

Definition:

Type BTREE
Unique Yes
Visible Yes
Columns order_status_id

```
#Query 1 connect to the database
USE store;

#Query 1 continued.. Arrange first_name in ascending order
SELECT * FROM customers
ORDER BY first_name;

#Query 2
SELECT * FROM customers WHERE birth_date > 1990-01-01;

#Query 3.1
SELECT * FROM customers
WHERE first_name LIKE 'M%' AND last_name LIKE 'A%';

#Query 3.2
SELECT first_name, last_name, points FROM customers;

#Query 3.3
SELECT MIN(points), MAX(points) FROM customers;
```

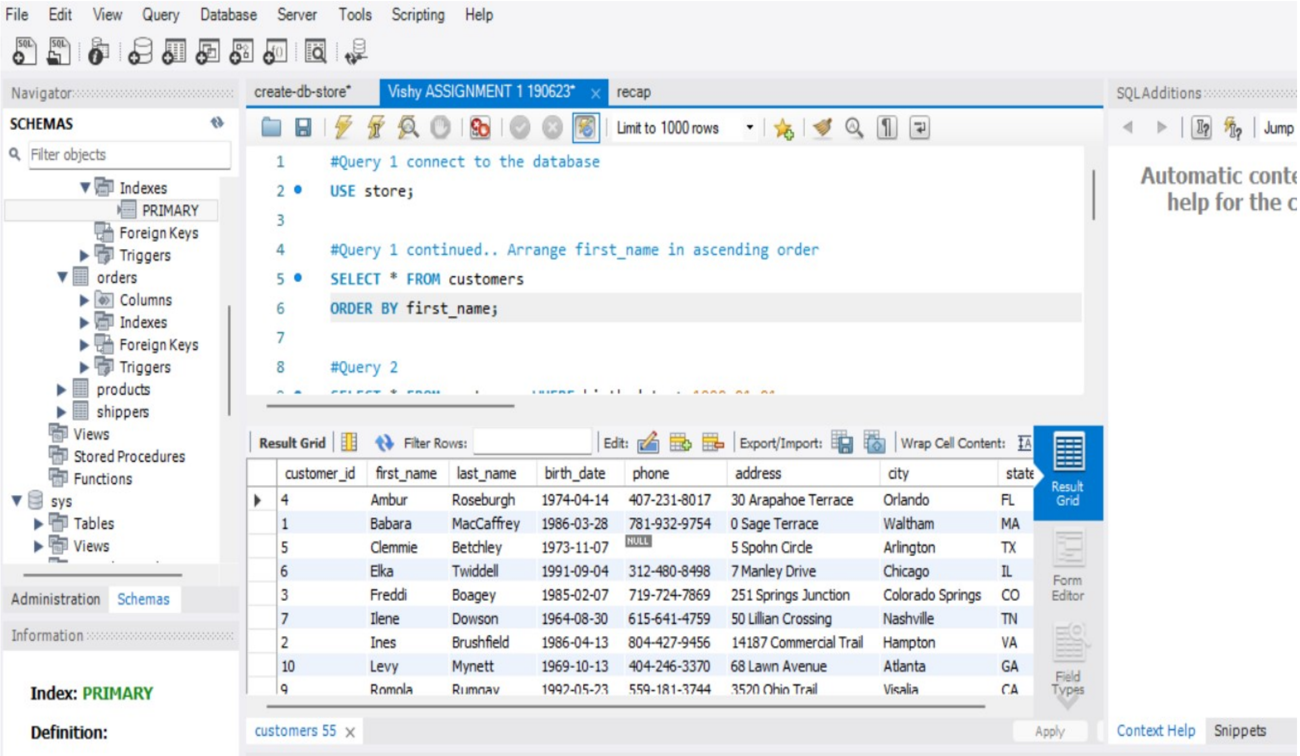
Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

#	Time	Action	Message	Duration / Fetch
33	10:43:02	SELECT MIN(points), MAX(points) FROM customers LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
34	10:43:02	SELECT first_name, last_name, address, points FROM customers WHERE points > 500 LIMIT 0, 1000	8 row(s) returned	0.000 sec / 0.000 sec
35	10:43:02	SELECT * FROM products ORDER BY quantity_in_stock DESC LIMIT 0, 1000	10 row(s) returned	0.000 sec / 0.000 sec
36	10:43:02	SELECT name, unit_price FROM products WHERE unit_price BETWEEN 1 AND 4 LIMIT 0, 1000	7 row(s) returned	0.000 sec / 0.000 sec
37	10:43:07	USE store	0 row(s) affected	0.000 sec
38	10:43:17	USE store	0 row(s) affected	0.000 sec

Query 1 continued :

Arrange first_name in ascending order

I put in the syntax SELECT * FROM customers ORDER BY first_name; This command helped me in listing all the customers from the store tables- customers by their first names in ascending order which is the MYSQL default.



Index: PRIMARY

Definition:

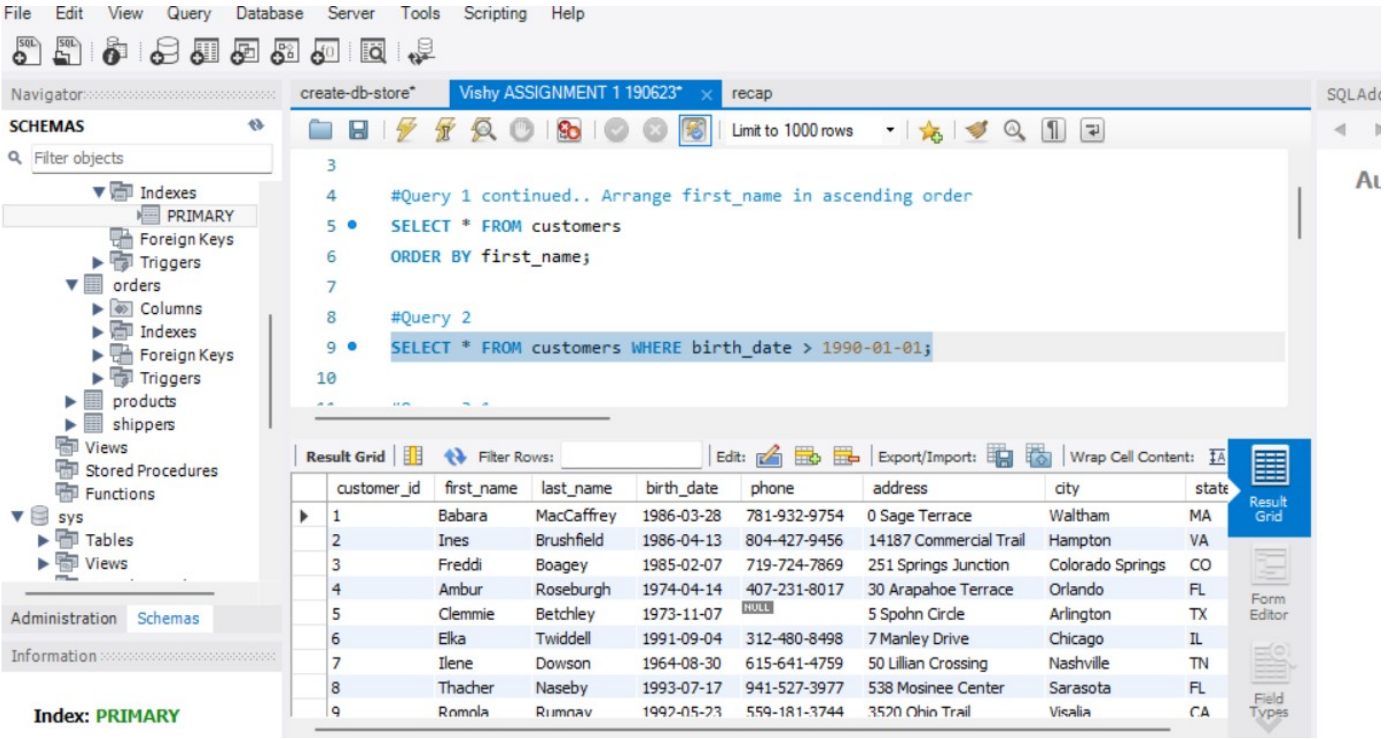
```
#Query 1 connect to the database
USE store;

#Query 1 continued.. Arrange first_name in ascending order
SELECT * FROM customers
ORDER BY first_name;

#Query 2
```

customer_id	first_name	last_name	birth_date	phone	address	city	state
4	Ambur	Roseburgh	1974-04-14	407-231-8017	30 Arapahoe Terrace	Orlando	FL
1	Babara	MacCaffrey	1986-03-28	781-932-9754	0 Sage Terrace	Waltham	MA
5	Clemmie	Betchley	1973-11-07	NULL	5 Spohn Circle	Arlington	TX
6	Elka	Twiddell	1991-09-04	312-480-8498	7 Manley Drive	Chicago	IL
3	Freddi	Boagey	1985-02-07	719-724-7869	251 Springs Junction	Colorado Springs	CO
7	Ilene	Dowson	1964-08-30	615-641-4759	50 Lillian Crossing	Nashville	TN
2	Ines	Brushfield	1986-04-13	804-427-9456	14187 Commercial Trail	Hampton	VA
10	Levy	Mynett	1969-10-13	404-246-3370	68 Lawn Avenue	Atlanta	GA
9	Romola	Rumgay	1992-05-23	559-181-3744	3520 Ohio Trail	Visalia	CA

Query 2:

Create a new query to find all the customers with a birth date of > '1990-01-01'

I used the syntax SELECT * (*this helps in selecting all) FROM the table customers putting the condition WHERE their date of birth is > 1990-01-01 to list the information.



Index: PRIMARY

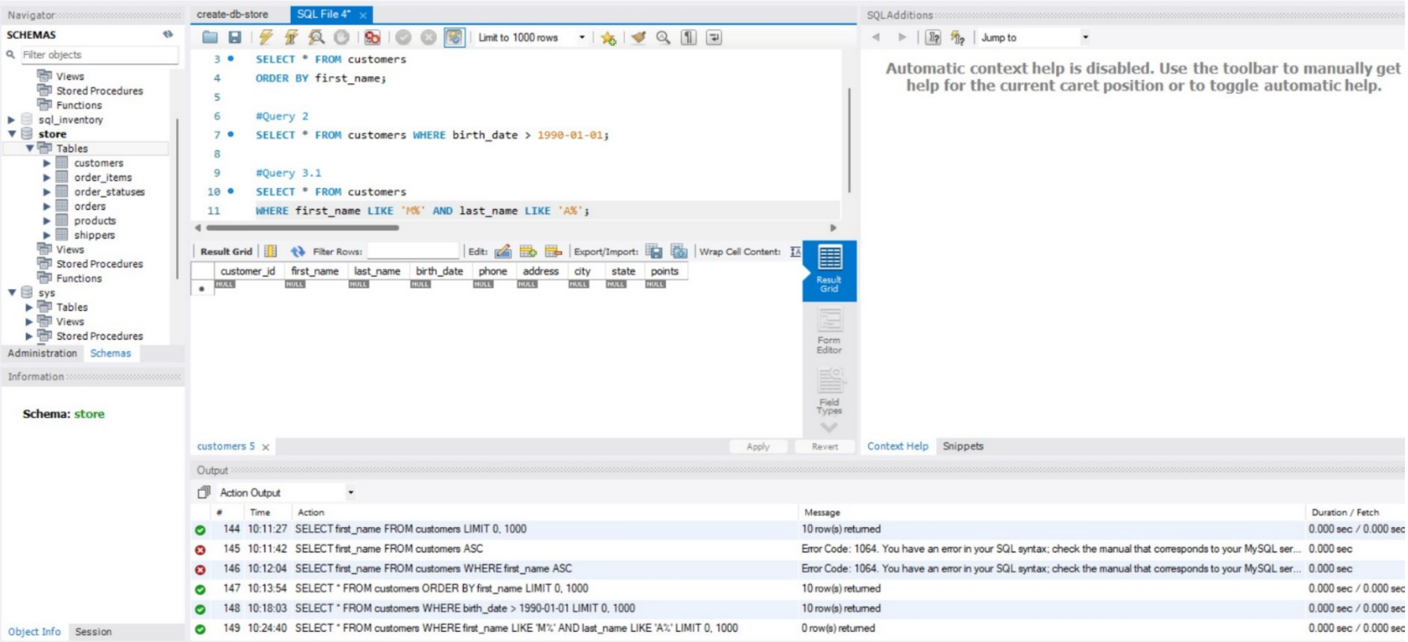
```

#Query 1 continued.. Arrange first_name in ascending order
SELECT * FROM customers
ORDER BY first_name;

#Query 2
SELECT * FROM customers WHERE birth_date > 1990-01-01;

```

customer_id	first_name	last_name	birth_date	phone	address	city	state
1	Babara	MacCaffrey	1986-03-28	781-932-9754	0 Sage Terrace	Waltham	MA
2	Ines	Brushfield	1986-04-13	804-427-9456	14187 Commercial Trail	Hampton	VA
3	Freddi	Boagey	1985-02-07	719-724-7869	251 Springs Junction	Colorado Springs	CO
4	Ambur	Roseburgh	1974-04-14	407-231-8017	30 Arapahoe Terrace	Orlando	FL
5	Clemmie	Betchley	1973-11-07	NULL	5 Spohn Circle	Arlington	TX
6	Elka	Twiddell	1991-09-04	312-480-8498	7 Manley Drive	Chicago	IL
7	Ilene	Dowson	1964-08-30	615-641-4759	50 Lillian Crossing	Nashville	TN
8	Thacher	Naseby	1993-07-17	941-527-3977	538 Mosinee Center	Sarasota	FL
9	Romola	Rumgay	1992-05-23	559-181-3744	3520 Ohio Trail	Visalia	CA

Query 3.1 :

Write a query to find all customers whose first_name starts with the letter M and last starts with the letter A.

Again I used the command SELECT * FROM customers table putting the condition WHERE as I needed only those customers whose first name started with M giving the command LIKE 'M%' (since it's a string I put the letter in single inverted commas with the% sign to denote exact match) and last name with A giving the command LIKE 'A%' (similar to the first name command with letter M)



```
SELECT * FROM customers
ORDER BY first_name;

#Query 2
SELECT * FROM customers WHERE birth_date > 1990-01-01;

#Query 3.1
SELECT * FROM customers
WHERE first_name LIKE 'M%' AND last_name LIKE 'A%';
```

customer_id	first_name	last_name	birth_date	phone	address	city	state	points
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

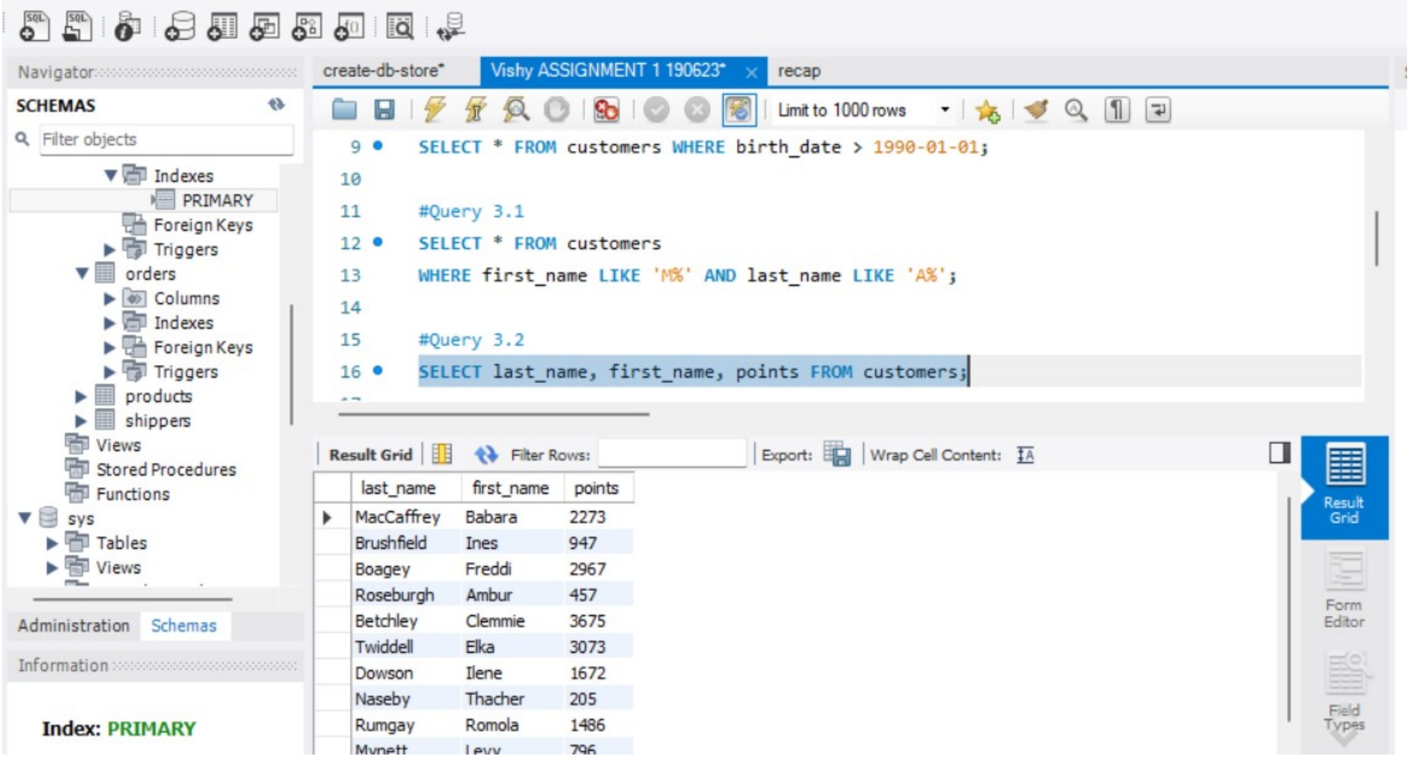
Schema: store

```
#    Time      Action                                                                                   Message                                                                                      Duration / Fetch
144  10:11:27  SELECT first_name FROM customers LIMIT 0, 1000                                           10 row(s) returned                                                                           0.000 sec / 0.000 sec
145  10:11:42  SELECT first_name FROM customers ASC                                                     Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL ser...   0.000 sec
146  10:12:04  SELECT first_name FROM customers WHERE first_name ASC                                    Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL ser...   0.000 sec
147  10:13:54  SELECT * FROM customers ORDER BY first_name LIMIT 0, 1000                                10 row(s) returned                                                                           0.000 sec / 0.000 sec
148  10:18:03  SELECT * FROM customers WHERE birth_date > 1990-01-01 LIMIT 0, 1000                     10 row(s) returned                                                                           0.000 sec / 0.000 sec
149  10:24:40  SELECT * FROM customers WHERE first_name LIKE 'M%' AND last_name LIKE 'A%' LIMIT 0, 1000 0 row(s) returned                                                                            0.000 sec / 0.000 sec
```

Query 3.2

Write a statement to show last_name, first_name and points

This syntax was very straightforward. I listed the last name, first name, and the points of all the customers from the customers table by giving the command SELECT last_name, first_name, points (in the order mentioned) FROM customers. This got me the result in the order of last name, first name and the points.



```
SELECT * FROM customers WHERE birth_date > 1990-01-01;

#Query 3.1
SELECT * FROM customers
WHERE first_name LIKE 'M%' AND last_name LIKE 'A%';

#Query 3.2
SELECT last_name, first_name, points FROM customers;
```

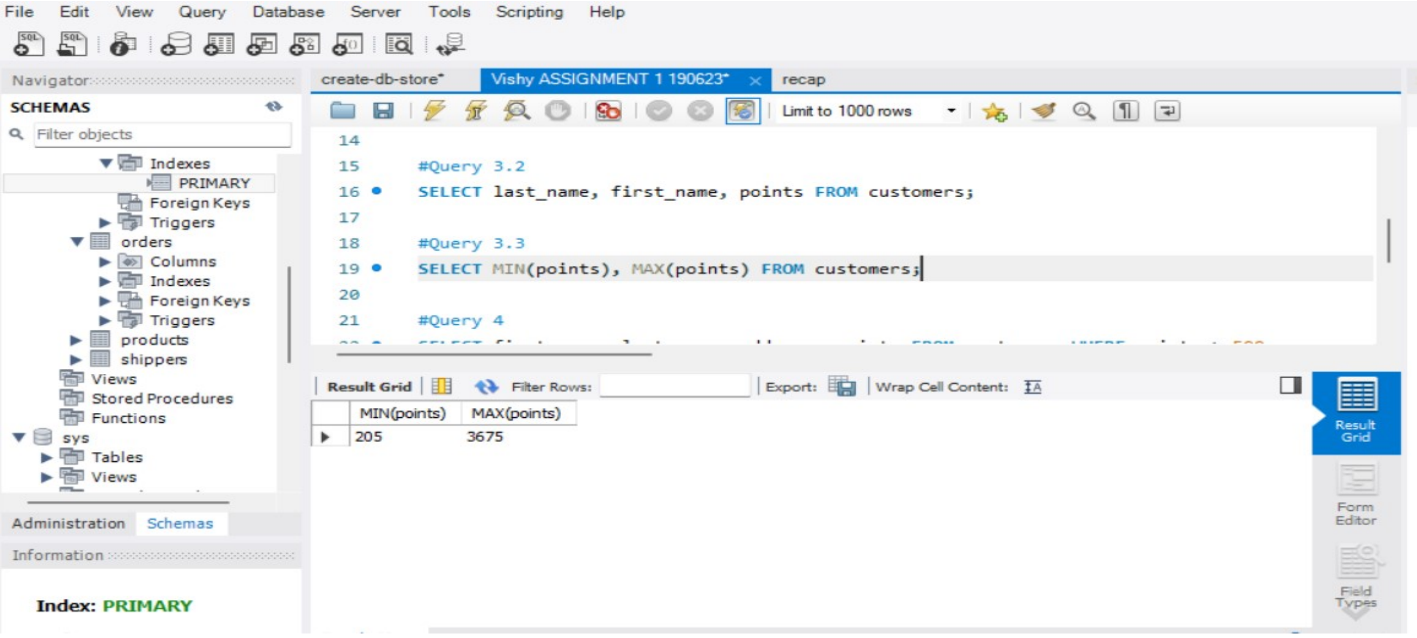
last_name	first_name	points
MacCaffrey	Babara	2273
Brushfield	Ines	947
Boagey	Freddi	2967
Roseburgh	Ambur	457
Betchley	Clemmie	3675
Twiddell	Elka	3073
Dowson	Ilene	1672
Naseby	Thacher	205
Rumgay	Romola	1486
Mynett	Levy	796

Index: PRIMARY

Query 3.3:

Write a query to find the minimum and maximum points

I gave the command SELECT MIN- for minimum (points), and MAX- for maximum (points) FROM the table customers; (the semicolon is used to end the syntax.)



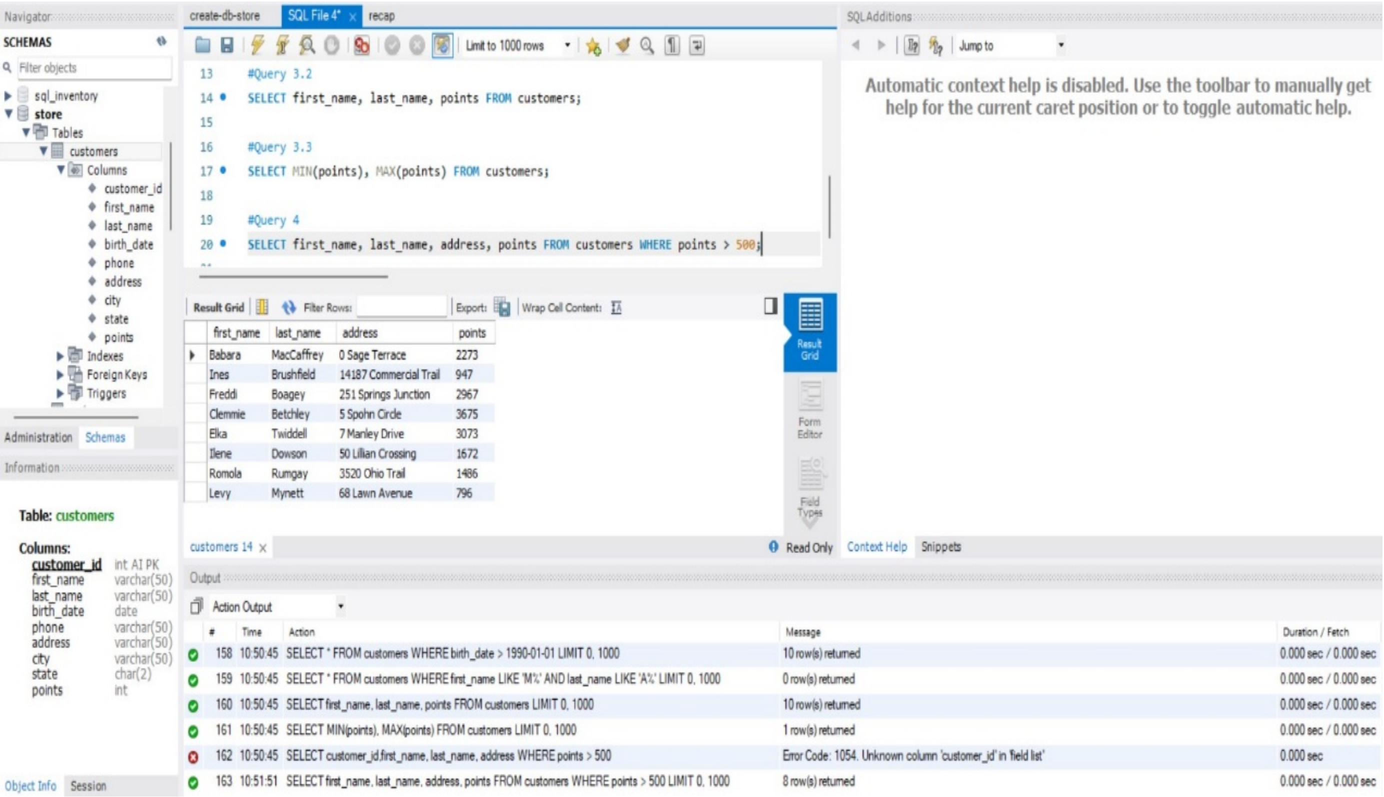
```
#Query 3.2
SELECT last_name, first_name, points FROM customers;

#Query 3.3
SELECT MIN(points), MAX(points) FROM customers;

#Query 4
```

MIN(points)	MAX(points)
205	3675

Index: PRIMARY

ADDITIONAL QUERIES

Query 4 : I wrote a query to find the first name, last name, address and points of the customers giving a condition WHERE their points are >500



```
#Query 3.2
SELECT first_name, last_name, points FROM customers;

#Query 3.3
SELECT MIN(points), MAX(points) FROM customers;

#Query 4
SELECT first_name, last_name, address, points FROM customers WHERE points > 500;
```

first_name	last_name	address	points
Babara	MacCaffrey	0 Sage Terrace	2273
Ines	Brushfield	14187 Commercial Trail	947
Freddi	Boagey	251 Springs Junction	2967
Clemmie	Betchley	5 Spohn Circle	3675
Elka	Twiddell	7 Manley Drive	3073
Ilene	Dowson	50 Lillian Crossing	1672
Romola	Rumgay	3520 Ohio Trail	1486
Levy	Mynett	68 Lawn Avenue	796

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Table: customers

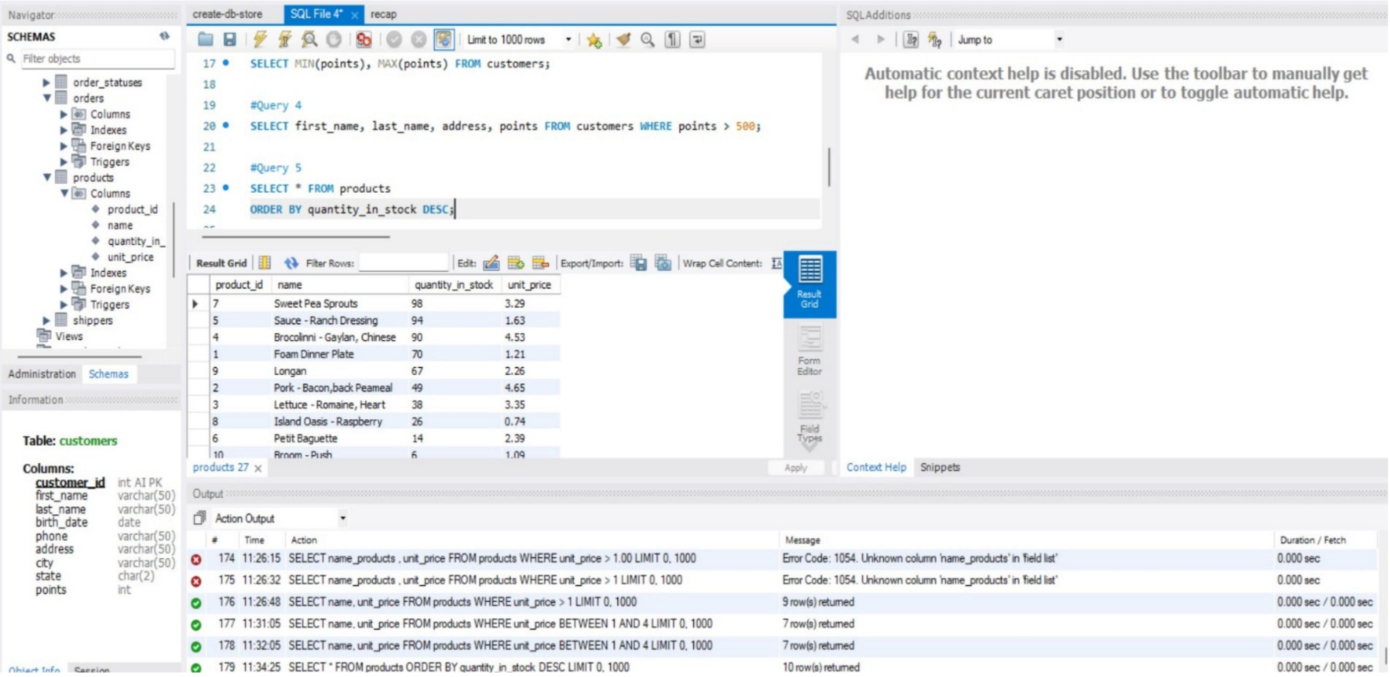
Columns:

customer_id	int AI PK
first_name	varchar(50)
last_name	varchar(50)
birth_date	date
phone	varchar(50)
address	varchar(50)
city	varchar(50)
state	char(2)
points	int

```
#    Time      Action                                                                           Message                                               Duration / Fetch
158  10:50:45  SELECT * FROM customers WHERE birth_date > 1990-01-01 LIMIT 0, 1000                 10 row(s) returned                                    0.000 sec / 0.000 sec
159  10:50:45  SELECT * FROM customers WHERE first_name LIKE 'M%' AND last_name LIKE 'A%' LIMIT 0, 1000   0 row(s) returned                              0.000 sec / 0.000 sec
160  10:50:45  SELECT first_name, last_name, points FROM customers LIMIT 0, 1000                  10 row(s) returned                                    0.000 sec / 0.000 sec
161  10:50:45  SELECT MIN(points), MAX(points) FROM customers LIMIT 0, 1000                       1 row(s) returned                                     0.000 sec / 0.000 sec
162  10:50:45  SELECT customer_id,first_name, last_name, address WHERE points > 500               Error Code: 1054. Unknown column 'customer_id' in 'field list'   0.000 sec
163  10:51:51  SELECT first_name, last_name, address, points FROM customers WHERE points > 500 LIMIT 0, 1000   8 row(s) returned                     0.000 sec / 0.000 sec
```

Query 5 : I wrote a query to find the Quantity in stock of the products in descending order

For doing so I put in the syntax SELECT * FROM products (table) ordering by the column quantity in stock (in descending order) DESC;



```
SELECT MIN(points), MAX(points) FROM customers;

#Query 4
SELECT first_name, last_name, address, points FROM customers WHERE points > 500;

#Query 5
SELECT * FROM products
ORDER BY quantity_in_stock DESC;
```

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

product_id	name	quantity_in_stock	unit_price
7	Sweet Pea Sprouts	98	3.29
5	Sauce - Ranch Dressing	94	1.63
4	Brocolinni - Gaylan, Chinese	90	4.53
1	Foam Dinner Plate	70	1.21
9	Longan	67	2.26
2	Pork - Bacon,back Peameal	49	4.65
3	Lettuce - Romaine, Heart	38	3.35
8	Island Oasis - Raspberry	26	0.74
6	Petit Baguette	14	2.39
10	Broom - Push	6	1.09

Table: customers

Columns:

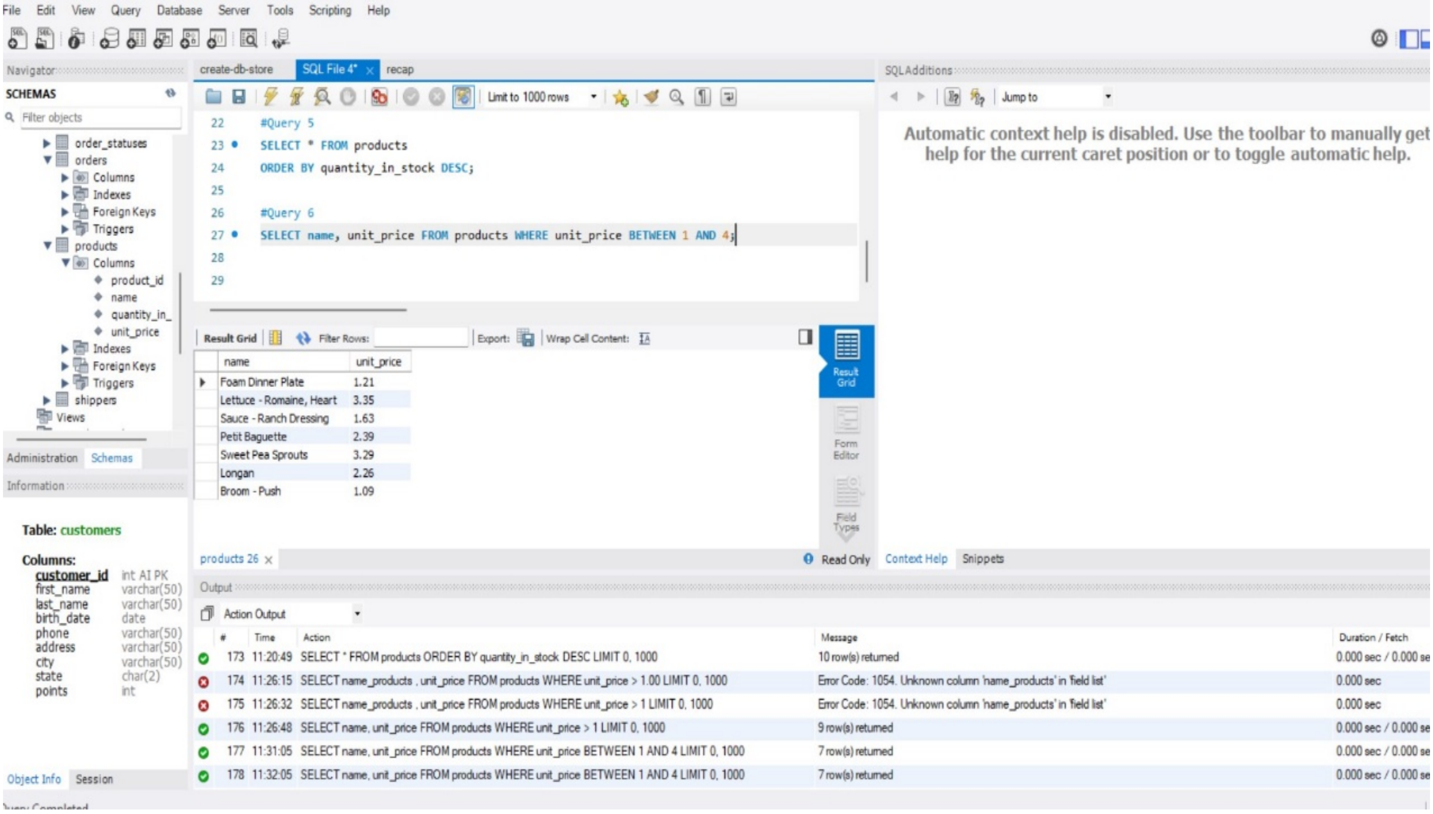
customer_id	int AI PK
first_name	varchar(50)
last_name	varchar(50)
birth_date	date
phone	varchar(50)
address	varchar(50)
city	varchar(50)
state	char(2)
points	int

```
#    Time      Action                                                                         Message                                                   Duration / Fetch
174  11:26:15  SELECT name_products , unit_price FROM products WHERE unit_price > 1.00 LIMIT 0, 1000   Error Code: 1054. Unknown column 'name_products' in 'field list'   0.000 sec
175  11:26:32  SELECT name_products , unit_price FROM products WHERE unit_price > 1 LIMIT 0, 1000      Error Code: 1054. Unknown column 'name_products' in 'field list'   0.000 sec
176  11:26:48  SELECT name, unit_price FROM products WHERE unit_price > 1 LIMIT 0, 1000                9 row(s) returned                                          0.000 sec / 0.000 sec
177  11:31:05  SELECT name, unit_price FROM products WHERE unit_price BETWEEN 1 AND 4 LIMIT 0, 1000    7 row(s) returned                                          0.000 sec / 0.000 sec
178  11:32:05  SELECT name, unit_price FROM products WHERE unit_price BETWEEN 1 AND 4 LIMIT 0, 1000    7 row(s) returned                                          0.000 sec / 0.000 sec
179  11:34:25  SELECT * FROM products ORDER BY quantity_in_stock DESC LIMIT 0, 1000                   10 row(s) returned                                         0.000 sec / 0.000 sec
```

Query 6 : I wrote a query to find the names of the products and unit prices in the range of 1 to 4.

In order to get the range of the product names and their unit prices between 1 to 4 I put in the syntax SELECT name, unit_price FROM products WHERE unit_price BETWEEN 1 AND 4 (Although the name turned blue in the script it did get me the result. When I tried changing it into a variable it came with an error; as mentioned in the class, if any column name changes to blue it may be in use elsewhere and we need to give a variable. So I went ahead with the name itself.)

Using the command BETWEEN, AND gave me the exact result of the range between 1 and 4.



```
#Query 5
SELECT * FROM products
ORDER BY quantity_in_stock DESC;

#Query 6
SELECT name, unit_price FROM products WHERE unit_price BETWEEN 1 AND 4;
```

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

name	unit_price
Foam Dinner Plate	1.21
Lettuce - Romaine, Heart	3.35
Sauce - Ranch Dressing	1.63
Petit Baguette	2.39
Sweet Pea Sprouts	3.29
Longan	2.26
Broom - Push	1.09

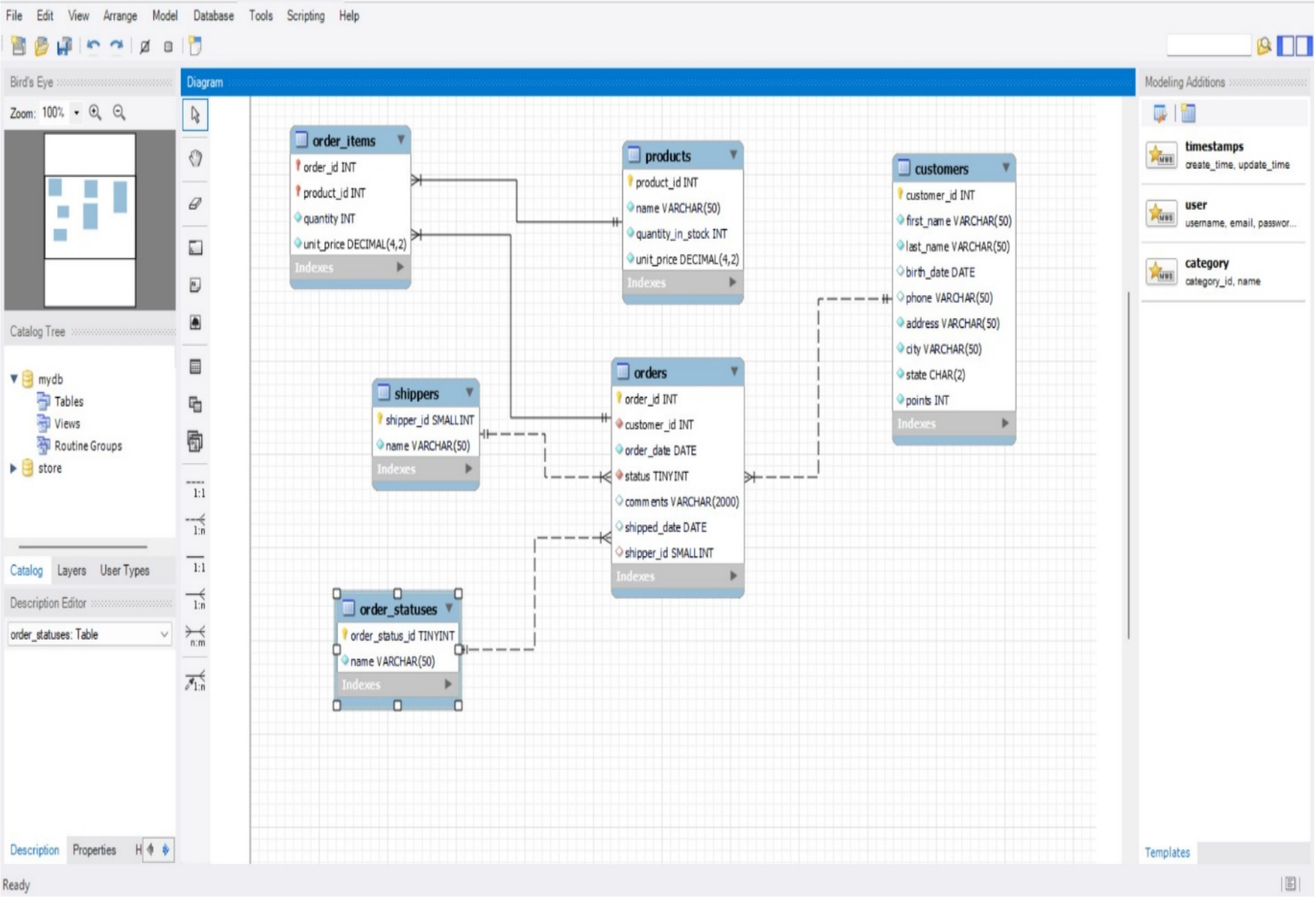
Table: customers

Columns:

customer_id	int AI PK
first_name	varchar(50)
last_name	varchar(50)
birth_date	date
phone	varchar(50)
address	varchar(50)
city	varchar(50)
state	char(2)
points	int

```
#    Time      Action                                                                         Message                                                   Duration / Fetch
173  11:20:49  SELECT * FROM products ORDER BY quantity_in_stock DESC LIMIT 0, 1000                   10 row(s) returned                                         0.000 sec / 0.000 se
174  11:26:15  SELECT name_products , unit_price FROM products WHERE unit_price > 1.00 LIMIT 0, 1000   Error Code: 1054. Unknown column 'name_products' in 'field list'   0.000 sec
175  11:26:32  SELECT name_products , unit_price FROM products WHERE unit_price > 1 LIMIT 0, 1000      Error Code: 1054. Unknown column 'name_products' in 'field list'   0.000 sec
176  11:26:48  SELECT name, unit_price FROM products WHERE unit_price > 1 LIMIT 0, 1000                9 row(s) returned                                          0.000 sec / 0.000 se
177  11:31:05  SELECT name, unit_price FROM products WHERE unit_price BETWEEN 1 AND 4 LIMIT 0, 1000    7 row(s) returned                                          0.000 sec / 0.000 se
178  11:32:05  SELECT name, unit_price FROM products WHERE unit_price BETWEEN 1 AND 4 LIMIT 0, 1000    7 row(s) returned                                          0.000 sec / 0.000 se
```

EER Diagram



Identifying the primary key and the foreign key

	PRIMARY KEY	FOREIGN KEY
order_items	order_id/ product_id	order_id
products	product_id	product_id
customers	customer_id	customer_id
orders	order_id	Order_id, customer_id, shippers_id, order_status_id
shippers	shipper_id	Shipper_id
order_statuses	order_status_id	order_status_id