Lab exercise -data selection solved sql

by adarsh sharma c# batch 2

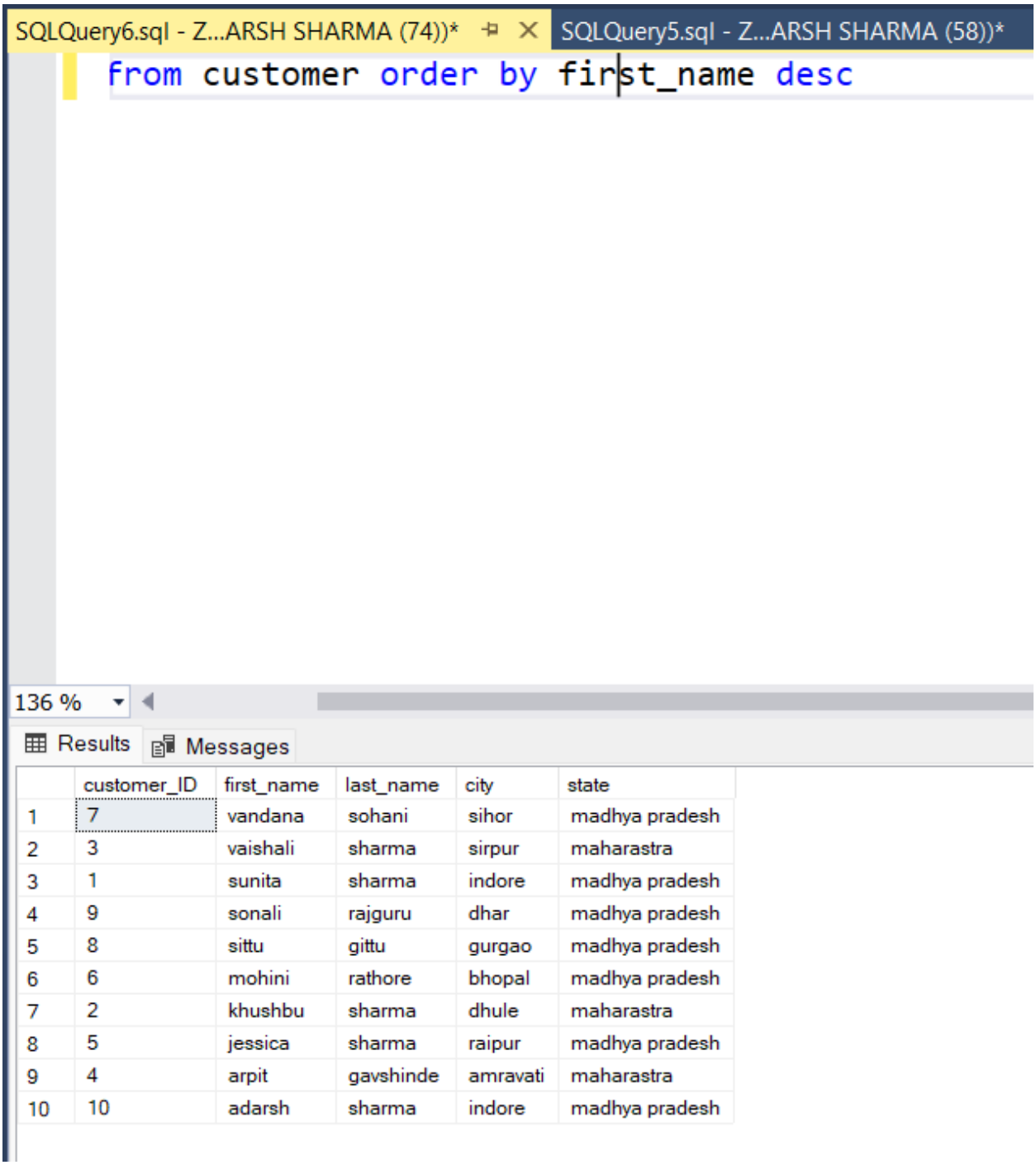
```
create database customers ;

create table customer
(
customer_ID int primary key identity(1,1),
first_name varchar (50),
last_name varchar (50),
city varchar (50),
state varchar (50),
);

insert into customer(first_name,last_name,city,state)
values ('adarsh','sharma','indore','madhya pradesh')
        ('sunita','sharma','indore','madhya pradesh'),
            ('khushbu','sharma','dhule','maharastra'),
            ('vaishali','sharma','sirpur','maharastra'),
            ('arpit','gavshinde','amravati','maharastra'),
            ('jessica','sharma','raipur','madhya pradesh'),
            ('mohini','rathore','bhopal','madhya pradesh'),
            ('vandana','sohani','sihor','madhya pradesh'),
            ('sittu','gittu','gurgao','madhya pradesh'),
            ('sonali','rajguru','dhar','madhya pradesh');
```

```
create table Products(
product_id int primary key identity (1,1),
product_name varchar (200),
list_price Decimal(10,2),
model_year int ,
category_id int
);

insert into Products(product_name,list_price,model_year,category_id)
values('laptop1', 299.99, 2019, 1),
('tufgaming pc', 466.99, 2018, 1),
('zephyrus laptop', 489.99, 2018, 1),
(' iphone 15 pro', 3500.00, 2018, 2),
( 'dell laptop', 4200.00, 2019, 2),
( 'oneplus nord', 1500.00, 2017, 3),
( 'nord ce3 lite', 2000.00, 2020, 3),
( 'air pods pro', 1800.00, 2019, 2),
( 'realme xt', 350.00, 2021, 2);



create table Orders(
Order_id int primary key identity(1,1),
customer_id int foreign key (customer_id) references customer(customer_id),
order_date date
);
```

```
INSERT INTO Orders (customer_id, order_date)
VALUES
( 1, '2023-01-15'),
( 1, '2023-02-20'),
( 2, '2023-01-25'),
( 3, '2023-03-05'),
( 3, '2023-04-10'),
( 4, '2023-05-15'),
( 5, '2023-06-20');
```

1. Write a query to display customer list by the first name in descending order.

select* from customer order by first_name desc



	customer_ID	first_name	last_name	city	state
1	7	vandana	sohani	sihor	madhya pradesh
2	3	vaishali	sharma	sirpur	maharastra
3	1	sunita	sharma	indore	madhya pradesh
4	9	sonali	rajguru	dhar	madhya pradesh
5	8	sittu	gittu	gurgao	madhya pradesh
6	6	mohini	rathore	bhopal	madhya pradesh
7	2	khushbu	sharma	dhule	maharastra
8	5	jessica	sharma	raipur	madhya pradesh
9	4	arpit	gavshinde	amravati	maharastra
10	10	adarsh	sharma	indore	madhya pradesh

2. Write a query to display the first name, last name, and city of the customers. It sorts the customer list by the city first and then by the first name.

select first_name,last_name,city from customer order by city asc, first_name asc ,last_name asc

```
select first_name,last_name,city from customer order by city asc, first_name asc ,last_name asc
```

136 %

Results | Messages

	first_name	last_name	city
1	arpit	gavshinde	amravati
2	mohini	rathore	bhopal
3	sonali	rajguru	dhar
4	khushbu	sharma	dhule
5	sittu	gittu	gurgao
6	adarsh	sharma	indore
7	sunita	sharma	indore
8	jessica	sharma	raipur
9	vandana	sohani	sihor
10	vaishali	sharma	sirpur

3. Write a query to returns the top three most expensive products.

4. Write a query to finds the products whose list price is greater than 300 and model year is 2018.

select* from Products where list_price > 300 and model_year = 2018;

5. Write a query to finds products whose list price is greater than 3,000 or model year is 2018. Any product that meets one of these conditions is included in the result set.

select* from Products where list_price> 3000 or model_year = 2018;

6. Write a query to find the products whose list prices are between 1,899 and 1,999.99.

select* from Products where list_price BETWEEN 1899 and 1999;

7.Write a query uses the IN operator to find products whose list price is 299.99 or 466.99 or 489.99.

select* from Products where list_price IN (299.99, 466.99, 489.99);

8. Write a query to the customers where the first character in the last name is the letter in the range A through C:

select* from Customer WHERE last_name LIKE '[A-C]%';

SQLQuery8.sql - Z...ARSH SHARMA (61))* | SQLQuery7.sql - Z...ARSH SHARMA (63))*

```
select* from Products where list_price > 300 and model_year = 2018;
 select* from Products where list_price> 3000 or model_year = 2018;
 select* from Products where list_price BETWEEN 1899 and 1999;
select* from Products where list_price IN (299.99, 466.99, 489.99);
SELECT * FROM Customer WHERE last_name LIKE '[A-C]%';
SELECT * FROM Customer WHERE first_name NOT LIKE 'A%';
```

100 %

Results | Messages

	product_id	product_name	list_price	model_year	category_id
1	2	tufgaming pc	466.99	2018	1
2	3	zephyrus laptop	489.99	2018	1
3	4	iphone 15 pro	3500.00	2018	2

	product_id	product_name	list_price	model_year	category_id
1	2	tufgaming pc	466.99	2018	1
2	3	zephyrus laptop	489.99	2018	1
3	4	iphone 15 pro	3500.00	2018	2
4	5	dell laptop	4200.00	2019	2

	product_id	product_name	list_price	model_year	category_id

	product_id	product_name	list_price	model_year	category_id
1	1	laptop1	299.99	2019	1
2	2	tufgaming pc	466.99	2018	1
3	3	zephyrus laptop	489.99	2018	1

	customer_ID	first_name	last_name	city	state

	customer_ID	first_name	last_name	city	state
1	1	sunita	sharma	indore	madhya pradesh
2	2	khushbu	sharma	dhule	maharastra
3	3	vaishali	sharma	sirpur	maharastra
4	5	jessica	sharma	raipur	madhya pradesh
5	6	mohini	rathore	bho...	madhya pradesh
6	7	vandana	sohani	sihor	madhya pradesh
7	8	sittu	gittu	gurg...	madhya pradesh
8	9	sonali	rajguru	dhar	madhya pradesh

Query executed successfully.

9. Write a query using NOT LIKE operator to find customers where the first character in the first name is not the letter A:

select* from Customer WHERE first_name NOT LIKE 'A%';

10. Write a query to return the number of customers by state and city group state and city.

select state, city, COUNT(*) AS NumberOfCustomers From Customer GROUP BY State, City;

11. Write a query to return the number of orders placed by the customer group by customer id and year.

select customer_id, YEAR(order_date) AS OrderYear, COUNT(*) AS NumberOfOrders From Orders GROUP BY customer_id, Year(order_date);

12. Write query to finds the maximum and minimum list group by category id. Then, it filters out the category which has the maximum list price greater than 4,000 or the minimum list price less than 500.

select category_id, MAX(list_price) AS MaxPrice, MIN(list_price) AS MinPrice From Products GROUP BY category_id HAVING MAX(list_price)<=4000 AND MIN(list_price)>=500;