

Lab 7: Java – MySQL Connection

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Date:

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Subject:

Software Development Concepts

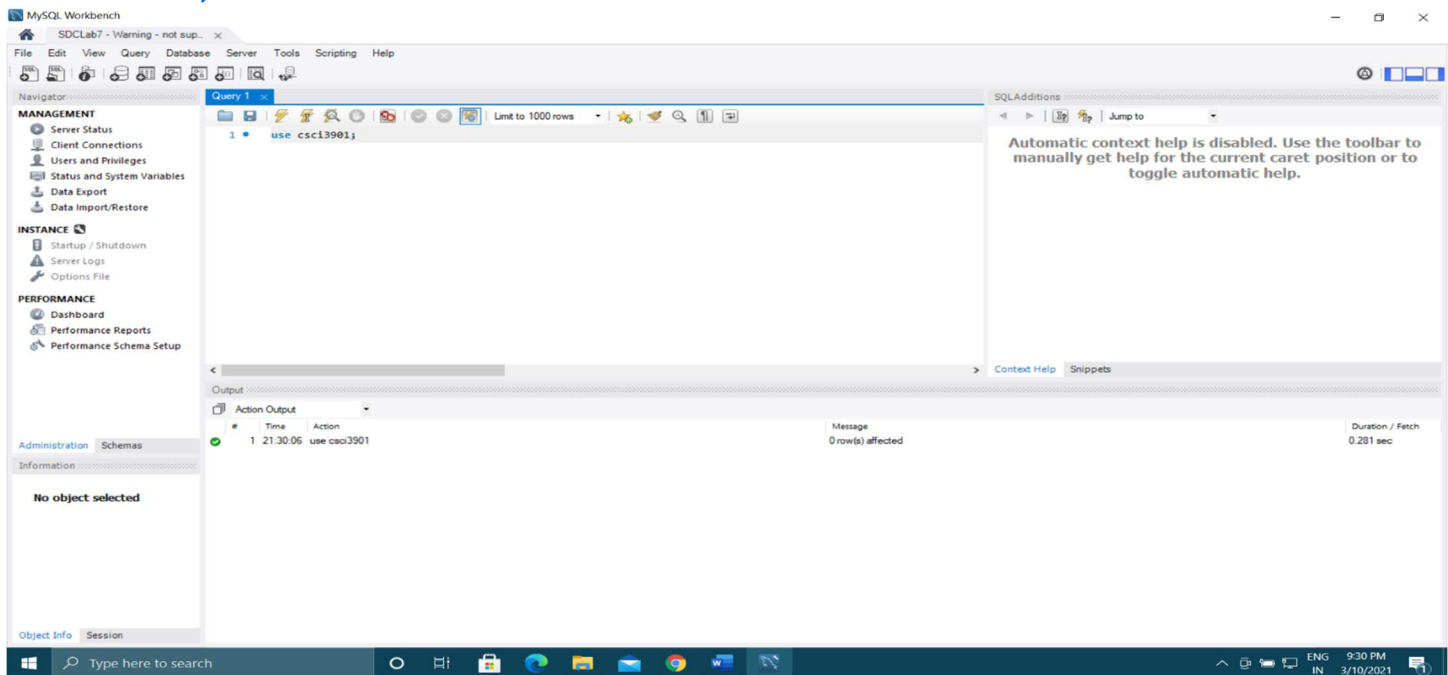
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Professor:

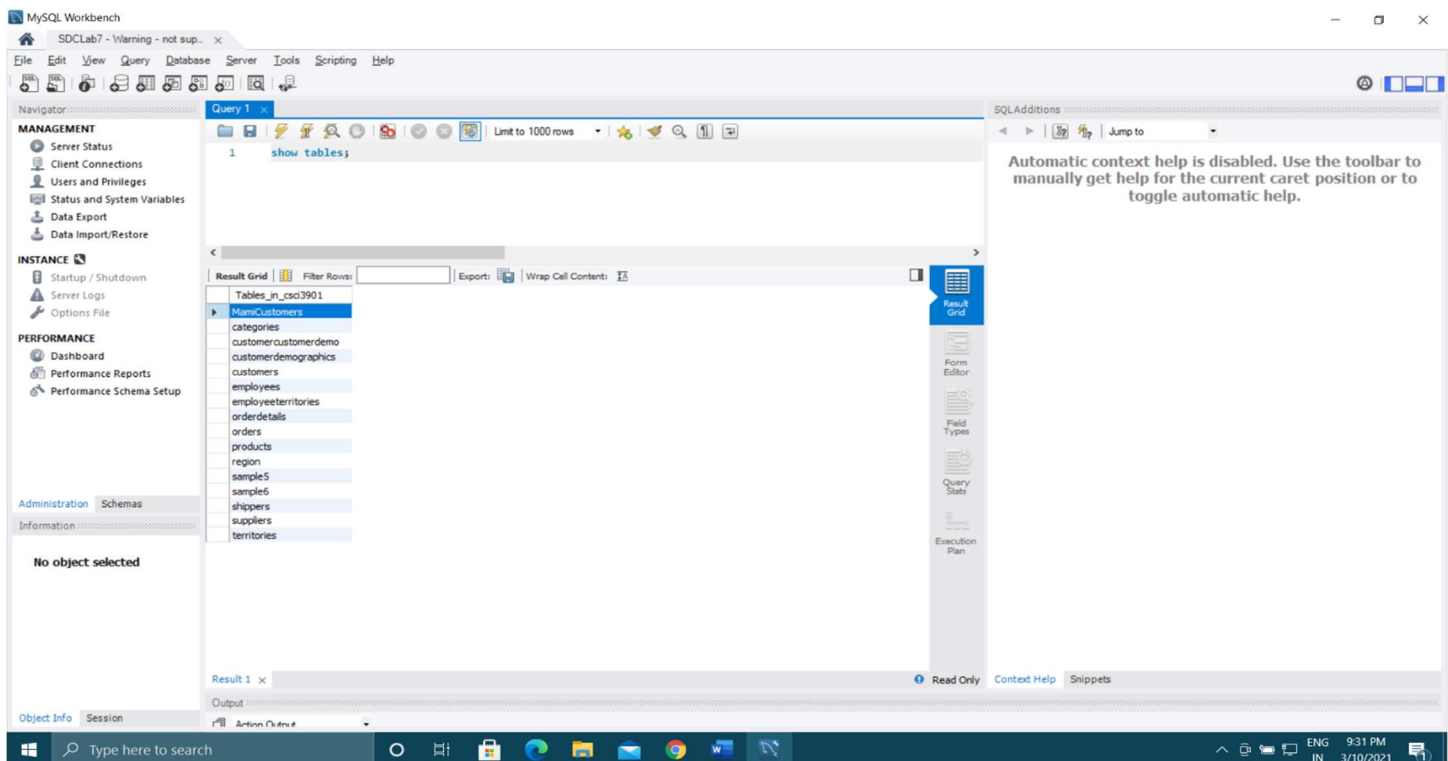
Matthew Amy

Part 1 – Using MySQLWorkbench

Q1.) Open the MySQLWorkbench application. Execute the command **use csci3901;** in the workbench to access the class database.



Q2.) Use the command **show tables;** command to identify and report which tables are in the database.



Q3.) Report the outcome of the following SQL Statements:

a) **Select * from orders where OrderID = 10260;**

- OrderID: 10260
- CustomerID: OTTIK
- EmployeeID: 4
- OrderDate: 1996-07-19
- RequiredDate: 1996-08-16
- ShippedDate: 1996-07-29
- ShipVia: 1
- Freight: 55.0900
- ShipName: Ottilies Kseladen
- ShipAddress: Mehrheimerstr. 369
- ShipCity: Kln
- ShipRegion: null
- ShipPostalCode: 50739
- ShipCountry: Germany

b) **Select * from orderdetails where OrderID = 10260;**

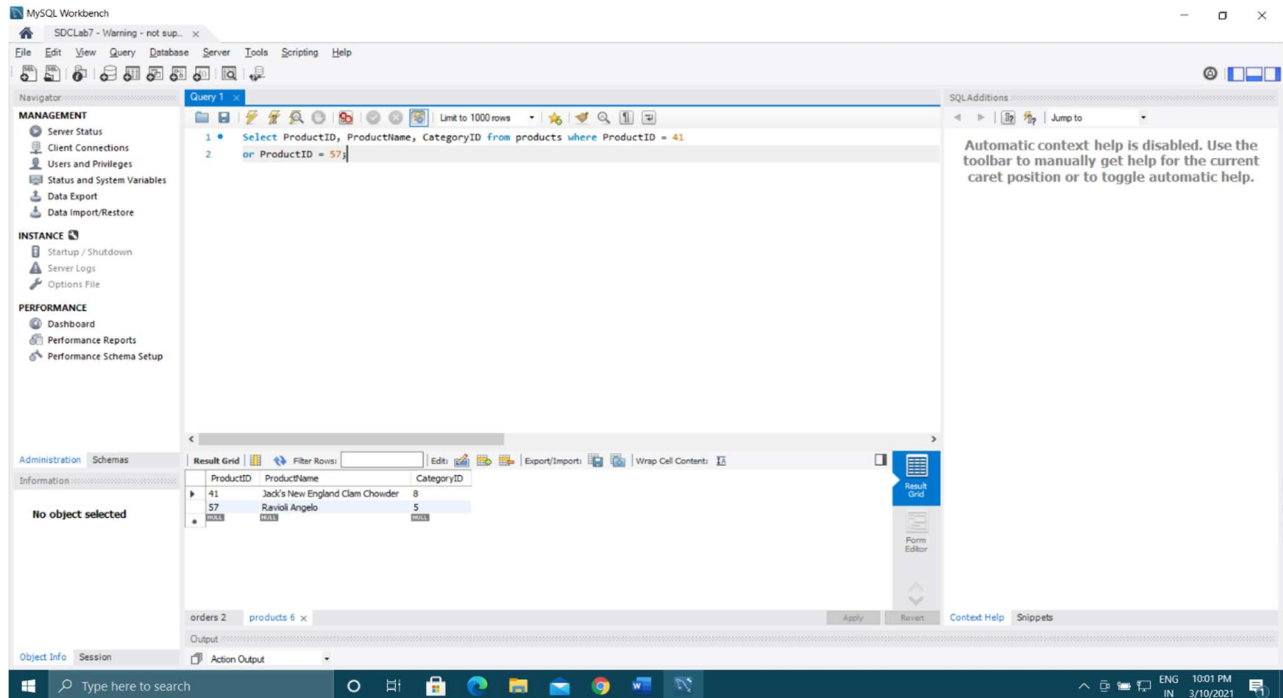
The screenshot shows the MySQL Workbench interface. The left sidebar contains the 'MANAGEMENT' and 'INSTANCE' sections. The main window displays the 'Query 1' editor with the SQL statement: `SELECT * FROM orderdetails where OrderId=10260;`. Below the editor, the 'Result Grid' shows the following data:

OrderID	ProductID	UnitPrice	Quantity	Discount
10260	41	7.7000	16	0
10260	57	15.6000	50	0
10260	62	39.4000	15	0
10260	70	12.0000	21	0

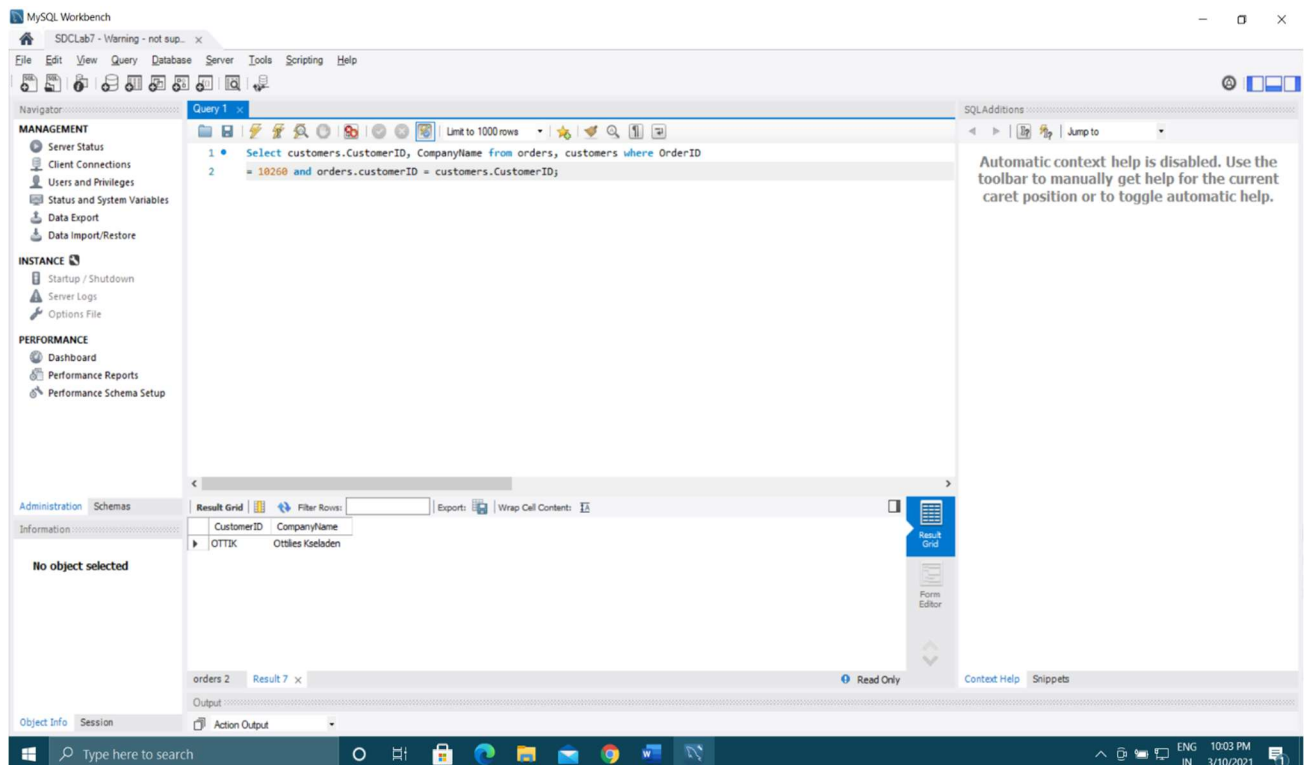
Below the result grid, the 'Output' section shows the execution log:

#	Time	Action	Message	Duration / Fetch
1	21:30:06	use csc3901	0 row(s) affected	0.281 sec
2	21:30:49	show tables	16 row(s) returned	0.250 sec / 0.000 sec
3	21:32:08	SELECT * FROM orders where OrderId=10260 LIMIT 0, 1000	1 row(s) returned	0.281 sec / 0.000 sec
4	21:51:48	SELECT * FROM orderdetails where OrderId=10260 LIMIT 0, 1000	4 row(s) returned	0.250 sec / 0.000 sec

c) Select ProductID, ProductName, CategoryID from products where ProductID = 41 or ProductID = 57;

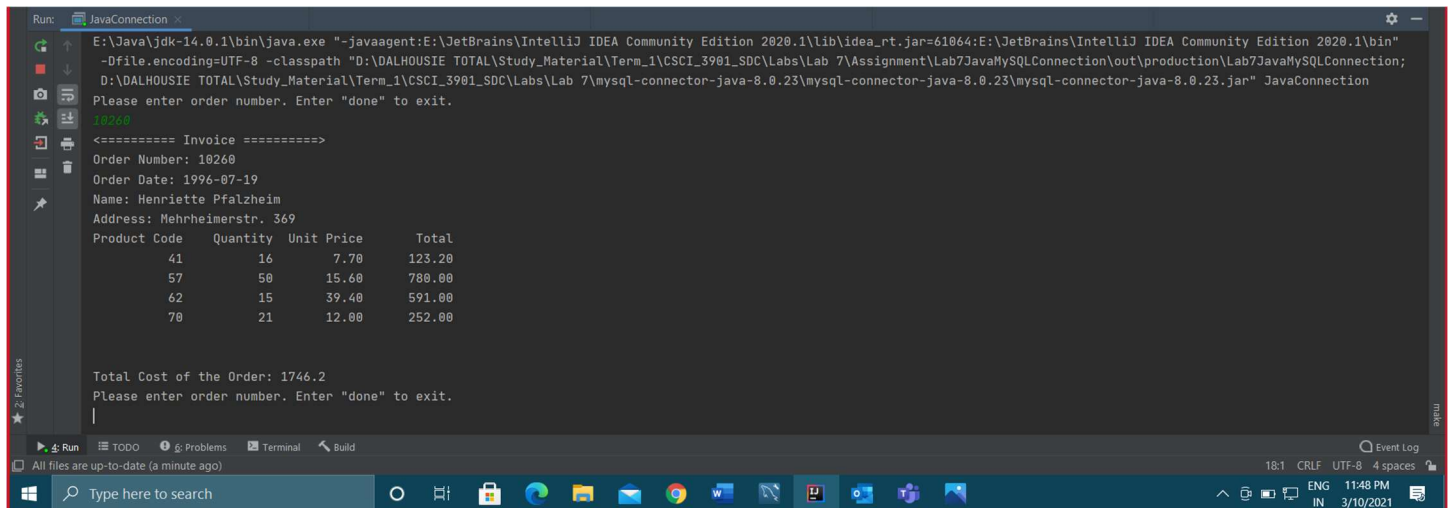


d) Select customers.CustomerID, CompanyName from orders, customers where OrderID = 10260 and orders.customerID = customers.CustomerID;



Part 2 – Java Connection

Q1.) The output of your program on order **10260** from part 2.



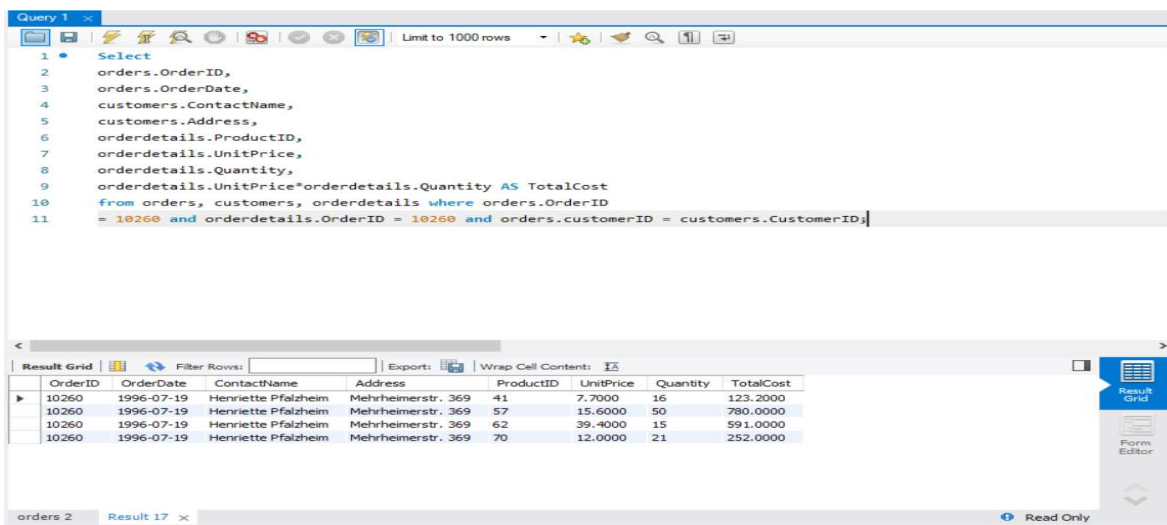
```
E:\Java\jdk-14.0.1\bin\java.exe "-javaagent:E:\JetBrains\IntelliJ IDEA Community Edition 2020.1\lib\idea_rt.jar=61064:E:\JetBrains\IntelliJ IDEA Community Edition 2020.1\bin"
-Dfile.encoding=UTF-8 -classpath "D:\DALHOUSIE TOTAL\Study_Material\Term_1\CSCI_3901_SDC\Labs\Lab 7\Assignment\Lab7JavaMySQLConnection\out\production\Lab7JavaMySQLConnection;
D:\DALHOUSIE TOTAL\Study_Material\Term_1\CSCI_3901_SDC\Labs\Lab 7\mysql-connector-java-8.0.23\mysql-connector-java-8.0.23\mysql-connector-java-8.0.23.jar" JavaConnection
Please enter order number. Enter "done" to exit.
10260
<===== Invoice =====>
Order Number: 10260
Order Date: 1996-07-19
Name: Henriette Pfalzheim
Address: Mehrheimerstr. 369
Product Code    Quantity    Unit Price    Total
41              16          7.70         123.20
57              50         15.60         780.00
62              15         39.40         591.00
70              21         12.00         252.00

Total Cost of the Order: 1746.2
Please enter order number. Enter "done" to exit.
|
```

Part 3 – Questions

Q1.) How could you test the correctness of your program from Part 2?

- Successfully able to add the mysql-connector-java-8.0.23.jar dependency in IntelliJ.
- Successfully able to establish connection with the csci3901 database.
- Successfully able to accept the orderID from the user.
- Successfully able to fetch the data from csci3901 database forming the invoice for the user entered orderID.
- Successfully able to calculate the Total Cost of the orders placed.
- Verified the output by running the same query on MySQLWorkbench.



```
1 Select
2 orders.OrderID,
3 orders.OrderDate,
4 customers.ContactName,
5 customers.Address,
6 orderdetails.ProductID,
7 orderdetails.UnitPrice,
8 orderdetails.Quantity,
9 orderdetails.UnitPrice*orderdetails.Quantity AS TotalCost
10 from orders, customers, orderdetails where orders.OrderID
11 = 10260 and orderdetails.OrderID = 10260 and orders.customerID = customers.CustomerID;
```

OrderID	OrderDate	ContactName	Address	ProductID	UnitPrice	Quantity	TotalCost
10260	1996-07-19	Henriette Pfalzheim	Mehrheimerstr. 369	41	7.7000	16	123.2000
10260	1996-07-19	Henriette Pfalzheim	Mehrheimerstr. 369	57	15.6000	50	780.0000
10260	1996-07-19	Henriette Pfalzheim	Mehrheimerstr. 369	62	39.4000	15	591.0000
10260	1996-07-19	Henriette Pfalzheim	Mehrheimerstr. 369	70	12.0000	21	252.0000