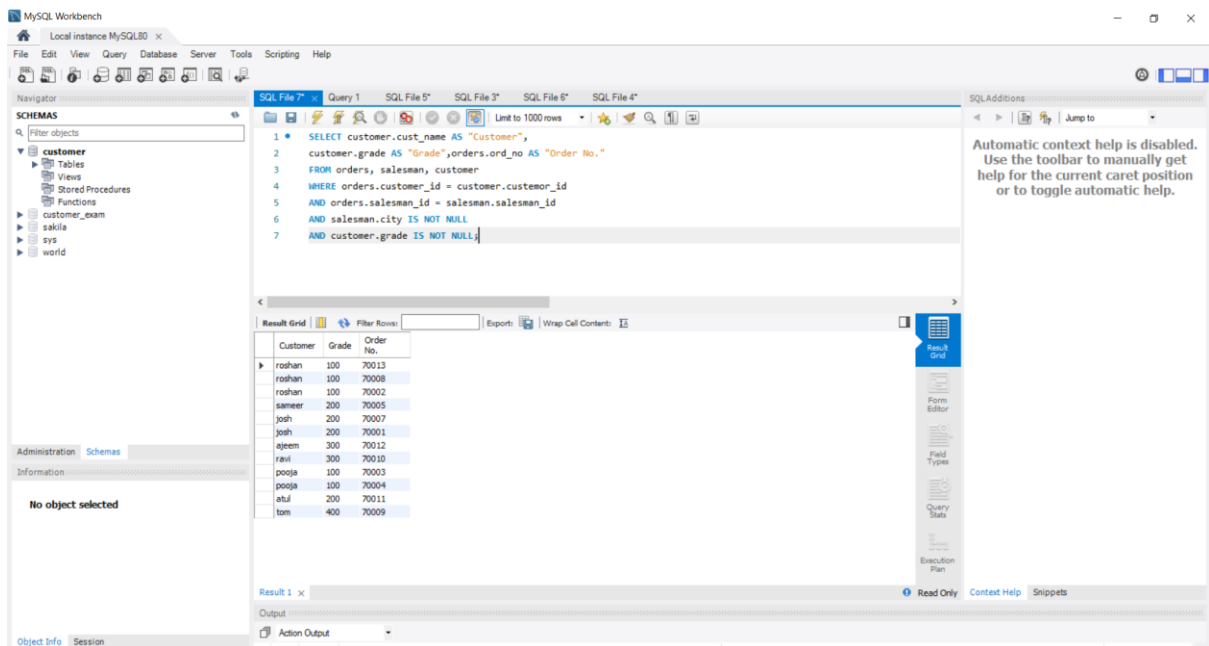


QUESTION 1



MySQL Workbench interface showing a query and its result grid.

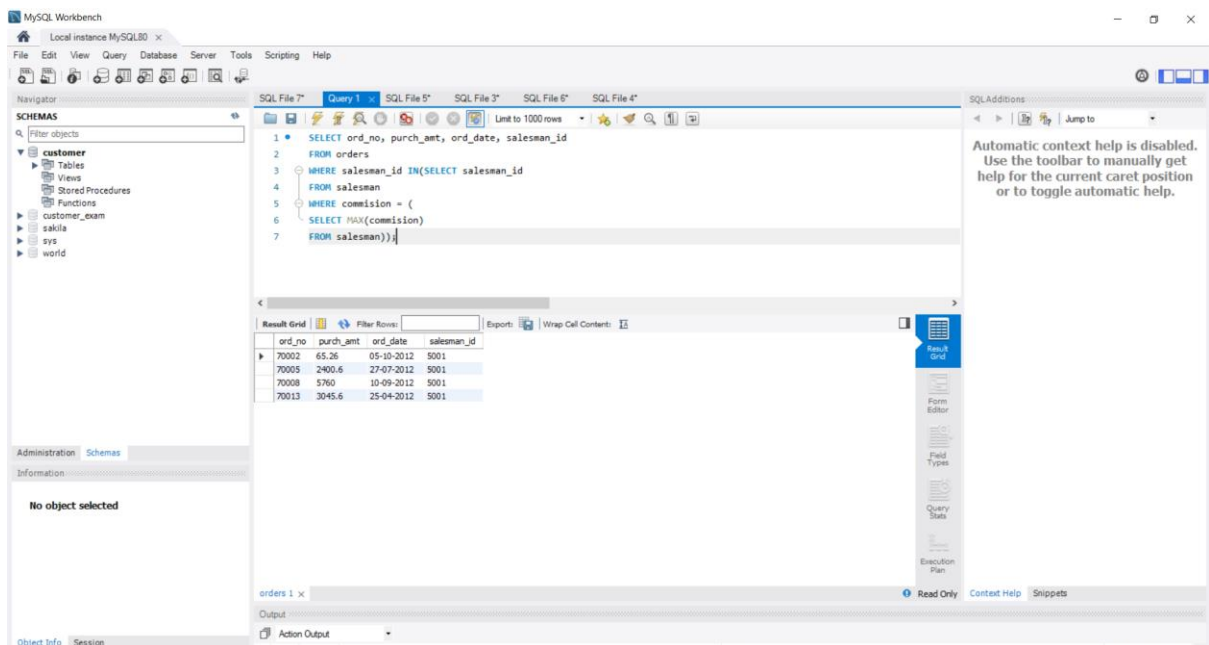
Query 1:

```
1 SELECT customer.cust_name AS "Customer",
2 customer.grade AS "Grade", orders.ord_no AS "Order No."
3 FROM orders, salesman, customer
4 WHERE orders.customer_id = customer.customer_id
5 AND orders.salesman_id = salesman.salesman_id
6 AND salesman.city IS NOT NULL
7 AND customer.grade IS NOT NULL
```

Result Grid:

Customer	Grade	Order No.
roshan	100	70013
roshan	100	70008
roshan	100	70002
sameer	200	70005
josh	200	70007
josh	200	70001
ajem	300	70012
ravi	300	70010
poorja	100	70003
poorja	100	70004
atul	200	70011
tom	400	70009

QUESTION 2



MySQL Workbench interface showing a query and its result grid.

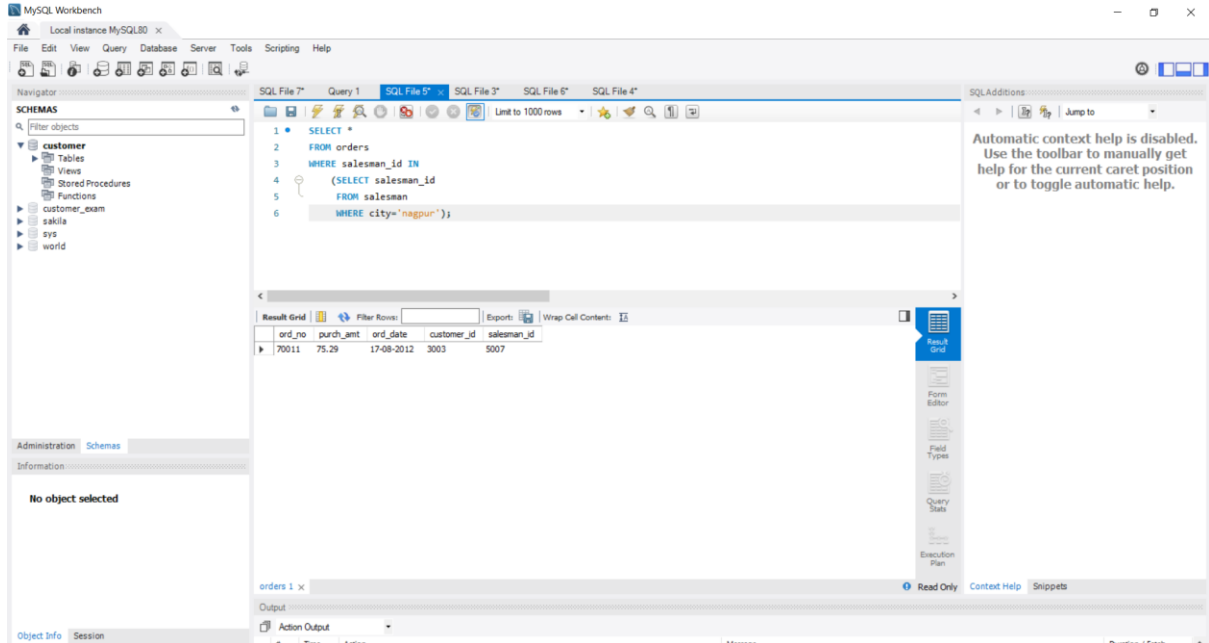
Query 1:

```
1 SELECT ord_no, purch_amt, ord_date, salesman_id
2 FROM orders
3 WHERE salesman_id IN (SELECT salesman_id
4 FROM salesman
5 WHERE commission = (
6 SELECT MAX(commission)
7 FROM salesman)))
```

Result Grid:

ord_no	purch_amt	ord_date	salesman_id
70002	65.26	05-10-2012	5001
70005	2400.6	27-07-2012	5001
70008	5760	10-09-2012	5001
70013	3045.6	25-04-2012	5001

QUESTION 3



MySQL Workbench interface showing a query in the SQL Editor. The query is:

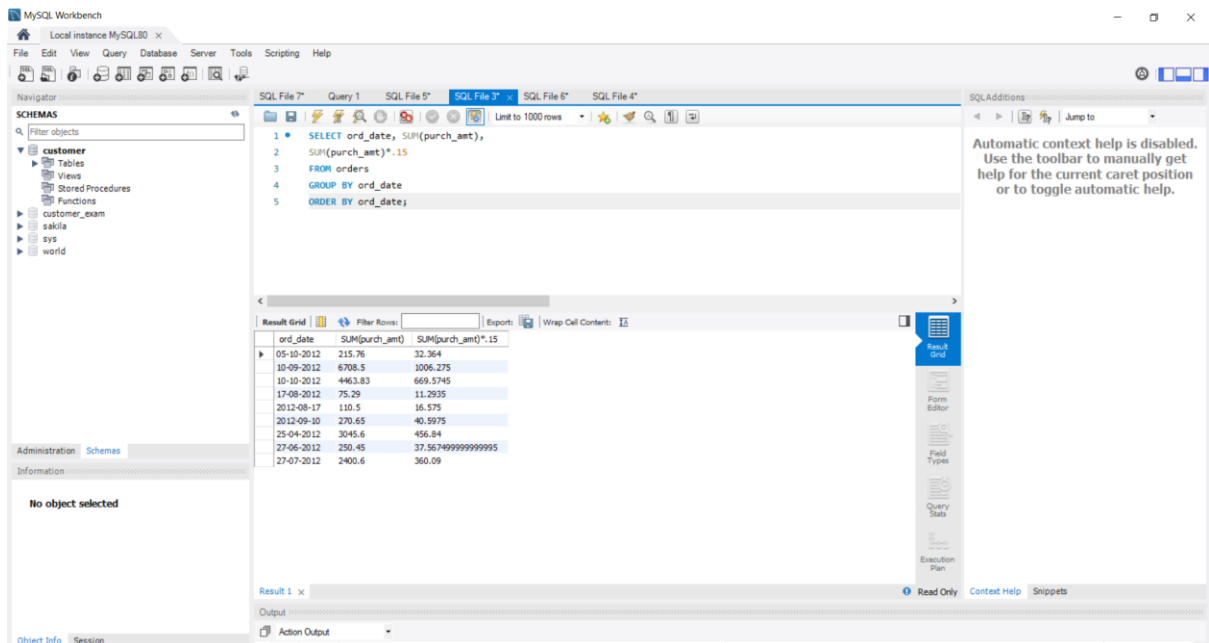
```
1 SELECT *
2 FROM orders
3 WHERE salesman_id IN
4 (SELECT salesman_id
5 FROM salesman
6 WHERE city='nagpur');
```

The Result Grid shows the following data:

ord_no	purch_amt	ord_date	customer_id	salesman_id
70011	75.29	17-08-2012	3003	5007

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

QUESTION 4



MySQL Workbench interface showing a query in the SQL Editor. The query is:

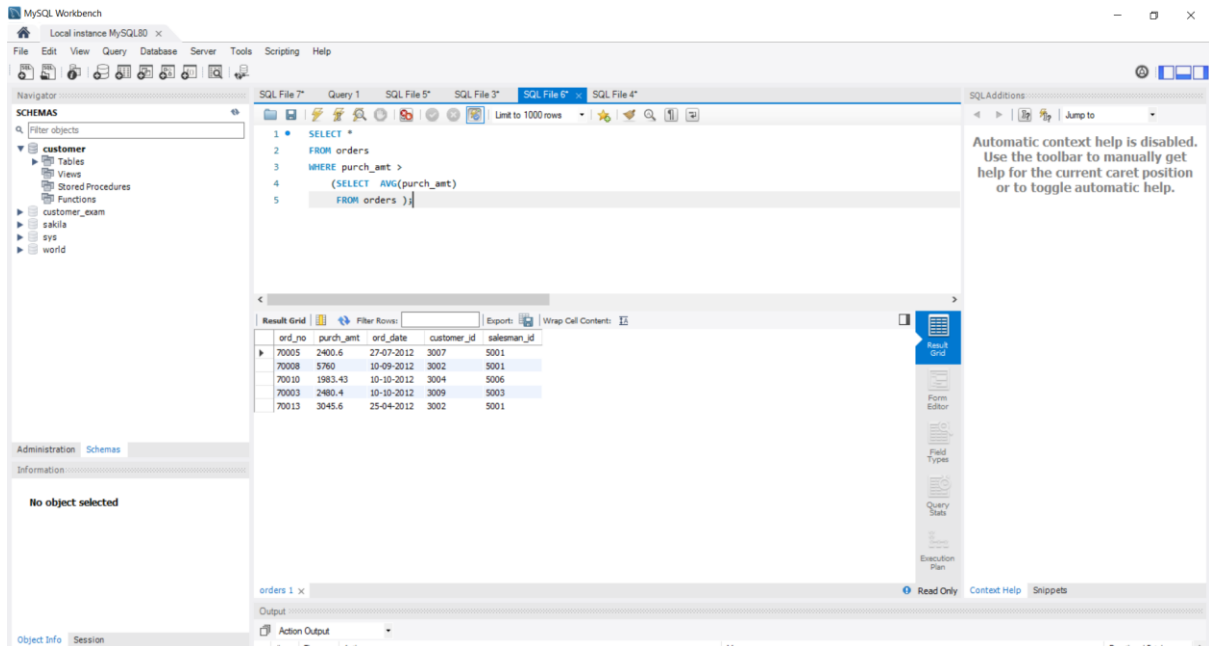
```
1 SELECT ord_date, SUM(purch_amt),
2 SUM(purch_amt)*.15
3 FROM orders
4 GROUP BY ord_date
5 ORDER BY ord_date;
```

The Result Grid shows the following data:

ord_date	SUM(purch_amt)	SUM(purch_amt)*.15
05-10-2012	215.76	32.364
10-09-2012	6708.5	1006.275
10-10-2012	4463.83	669.5745
17-08-2012	75.29	11.2935
2012-08-17	110.5	16.575
2012-09-10	270.65	40.5975
25-04-2012	3045.6	456.84
27-06-2012	250.45	37.5675
27-07-2012	2400.6	360.09

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

QUESTION 5



The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with the 'customer' database selected. The main editor window shows a SQL query in 'SQL File 4':

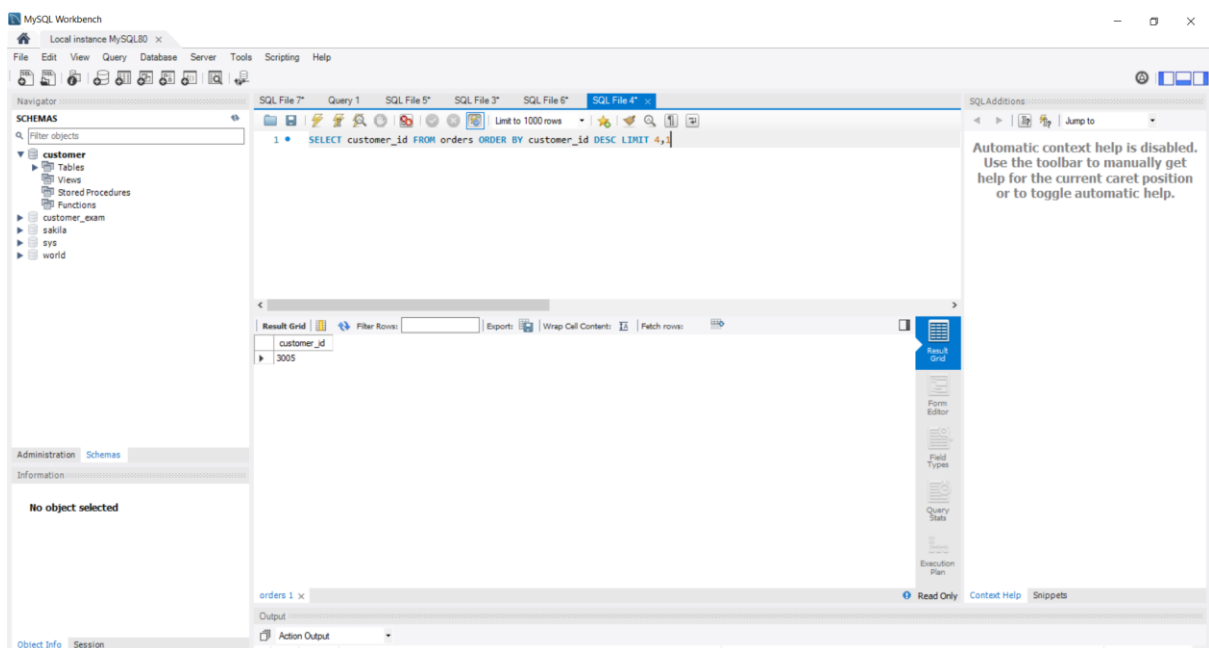
```
1 SELECT *
2 FROM orders
3 WHERE purch_amt >
4 (SELECT AVG(purch_amt)
5 FROM orders )
```

The 'Result Grid' below the query displays the following data:

ord_no	purch_amt	ord_date	customer_id	salesman_id
70005	2400.6	27-07-2012	3007	5001
70008	5760	10-09-2012	3002	5001
70010	1983.43	10-10-2012	3004	5006
70003	2480.4	10-10-2012	3009	5003
70013	3045.6	25-04-2012	3002	5001

The right sidebar shows the 'SQLAdditions' panel with a message: 'Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.'

QUESTION 6



The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with the 'customer' database selected. The main editor window shows a SQL query in 'SQL File 4':

```
1 SELECT customer_id FROM orders ORDER BY customer_id DESC LIMIT 4;
```

The 'Result Grid' below the query displays the following data:

customer_id
3005

The right sidebar shows the 'SQLAdditions' panel with a message: 'Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.'

QUESTION 7

The main difference between entity and relationship in DBMS is that the entity is a real-world object while the relationship is an association between the entities. Also, in the ER diagram, a rectangle represents an entity while a rhombus or diamond represents a relationship. A Database Management System (DBMS) is a software program that stores, retrieves and manipulates data in the databases. A DBMS contains multiple databases, and each database consists of multiple tables. The tables are related to each other using relationships. DBMS provides multiple advantages. The user can change and retrieve data in DBMS using Structured Query Language (SQL). Furthermore, it helps to organize data, increase data consistency and to protect data. MySQL, Oracle, DB2, MSSQL are some examples of DBMSs. An entity is a table in DBMS, and it represents a real-world object. These entities are connected to each other using relationships.