

1. Describe the data in hand in your own words.

The image shows three identical instances of MySQL Workbench running side-by-side. Each instance has a title bar "MySQL Workbench" and a status bar at the bottom indicating "Local instance MySQL57", "File Edit View Query Database Server Tools Scripting Help", "10:26 ENG 26-01-2021", and a toolbar with various icons. The main area is a "SQL File 3" editor window with the following content:

```
/*
1. cust_dimen: Details of all the customers
Customer_Name (TEXT): Name of the customer
Province (TEXT): Province of the customer
Region (TEXT): Region of the customer
Customer_Segment (TEXT): Segment of the customer
Cust_id (TEXT): Unique Customer ID

2. market_fact: Details of every order item sold
Ord_id (TEXT): Order ID
Prod_id (TEXT): Prod ID
Ship_id (TEXT): Shipment ID
Cust_id (TEXT): Customer ID
Sales (DOUBLE): Sales from the Item sold
Discount (DOUBLE): Discount on the Item sold
Order_Quantity (INT): Order Quantity of the Item sold
Profit (DOUBLE): Profit from the Item sold
Shipping_Cost (DOUBLE): Shipping Cost of the Item sold
Product_Base_Margin (DOUBLE): Product Base Margin on the Item sold

3. orders_dimen: Details of every order placed
Order_ID (INT): Order ID
Order_Date (TEXT): Order Date
Order_Priority (TEXT): Priority of the Order
Ord_id (TEXT): Unique Order ID

4. prod_dimen: Details of product category and sub category
Product_Category (TEXT): Product Category
Product_Sub_Category (TEXT): Product Sub Category
Prod_id (TEXT): Unique Product ID

5. shipping_dimen: Details of shipping of orders
Order_ID (INT): Order ID
Ship_Mode (TEXT): Shipping Mode
Ship_Date (TEXT): Shipping Date
Ship_id (TEXT): Unique Shipment ID
*/
```

The "Information" pane on the left shows the schema "superstores" selected. The "Object Info" tab is active at the bottom of each window.

2. Identify and list the Primary Keys and Foreign Keys for this dataset provided to you (In case you don't find either primary or foreign key, then specially mention this in your answer)

```

MySQL Workbench
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superstores
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Schema: superstores
Object Info Session
Output
Query 1
/*Create database superstores;*/
-- Identify and list the Primary Keys and Foreign Keys for this dataset
-- (Hint: If a table don't have Primary Key or Foreign Key, then specifically mention it in your answer.)
1. cust_dimen
   Primary Key: Cust_id
   Foreign Key: NA
2. market_fact
   Primary Key: NA
   Foreign Key: Ord_id, Prod_id, Ship_id, Cust_id
3. orders_dimen
   Primary Key: Ord_id
   Foreign Key: NA
4. prod_dimen
   Primary Key: Prod_id, Product_Sub_Category
   Foreign Key: NA
5. shipping_dimen
   Primary Key: Ship_id
   Foreign Key: NA
*/

```

Task 2:- Basic & Advanced Analysis

1) Write a query to display the Customer_Name and Customer Segment using alias name "Customer Name", "Customer Segment" from table Cust_dimen.

```

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Information
Schema: superstores
Object Info Session
Output
Query 1
/*Question1 */
1. SELECT Customer_Name as "Customer Name", Customer_Segment as "Customer Segment"
   FROM cust_dimen

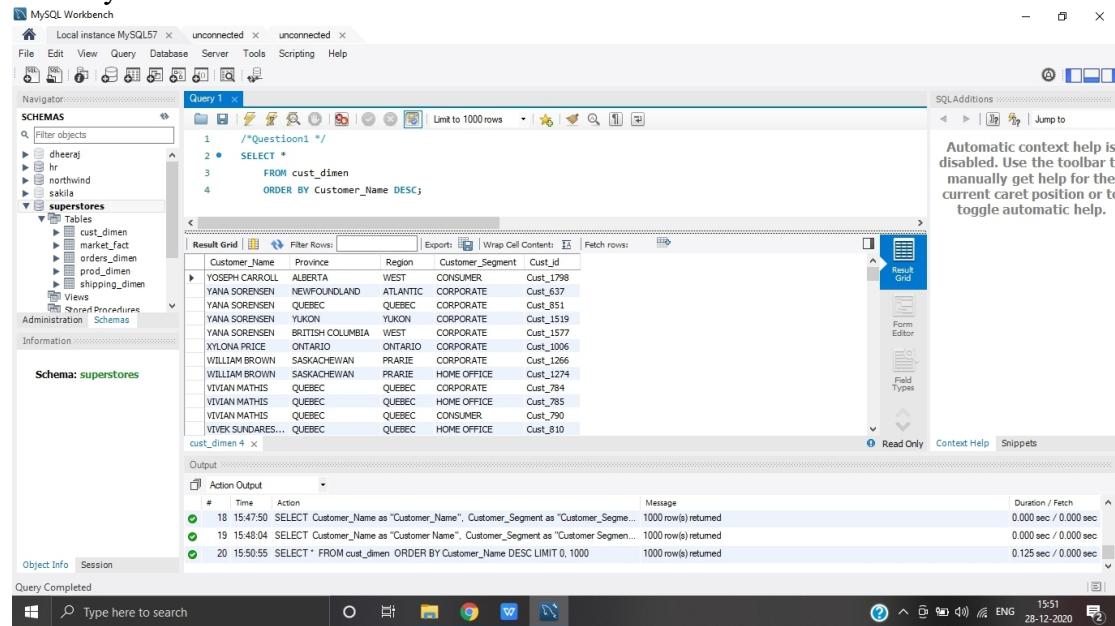
```

Customer Name	Customer Segment
MUHAMMED MACINTYRE	SMALL BUSINESS
BARRY FRENCH	CONSUMER
CLAY ROZENDAL	CORPORATE
CARLOS SOLTERO	CONSUMER
CARL JACKSON	CORPORATE
MONICA FEDERLE	CORPORATE
DOROTHY BADERS	HOME OFFICE
NEOLA SCHNEIDER	HOME OFFICE
OLGA COOPER	HOME OFFICE

Action Output

#	Time	Action	Message	Duration / Fetch
17	15:47:32	SELECT Customer_Name "Customer_Name", Customer_Segment "Customer_Segment" F...	1000 row(s) returned	0.141 sec / 0.000 sec
18	15:47:50	SELECT Customer_Name as "Customer_Name", Customer_Segment as "Customer_Segment"...	1000 row(s) returned	0.000 sec / 0.000 sec
19	15:48:04	SELECT Customer_Name as "Customer Name", Customer_Segment as "Customer Segmen...	1000 row(s) returned	0.000 sec / 0.000 sec

2) Write a query to find all the details of the customer from the table cust_dimen order by desc



```

1  /*Question 1 */
2 *  SELECT *
3   FROM cust_dimen
4   ORDER BY Customer_Name DESC;

```

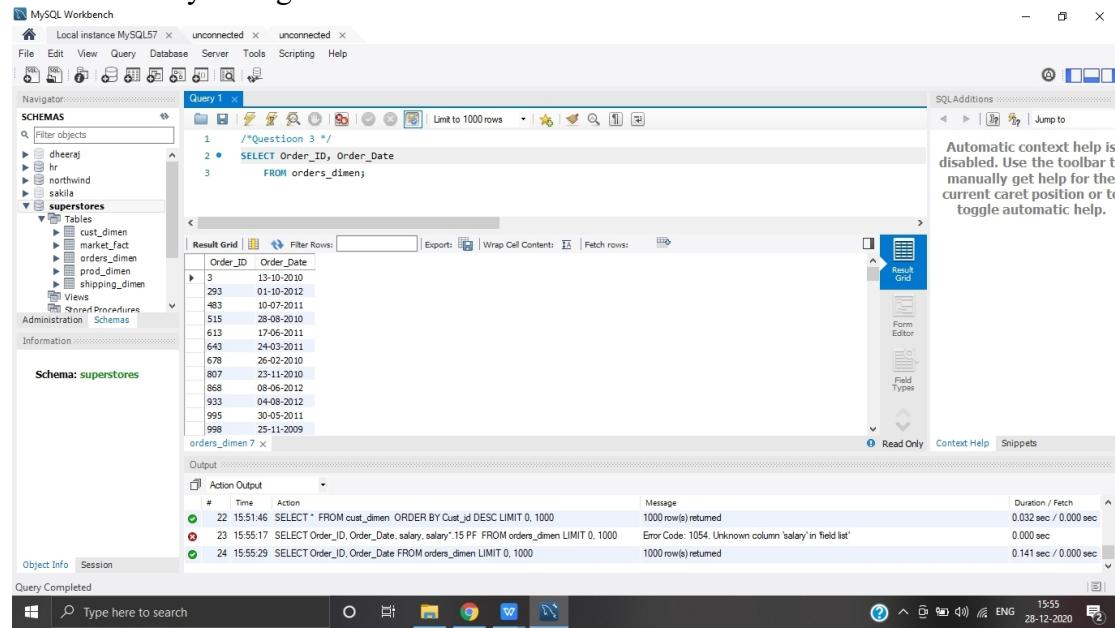
Customer_Name	Province	Region	Customer_Segment	Cust_Id
YANA SORENSEN	ALBERTA	WEST	CONSUMER	Cust_1798
YANA SORENSEN	NEWFOUNDLAND	ATLANTIC	CORPORATE	Cust_637
YANA SORENSEN	QUEBEC	QUEBEC	CORPORATE	Cust_851
YANA SORENSEN	YUKON	CORPORATE	Cust_1519	
YANA SORENSEN	BRITISH COLUMBIA	WEST	CORPORATE	Cust_1577
XLYONA PRICE	ONTARIO	ONTARIO	CORPORATE	Cust_1006
WILLIAM BROWN	SASKACHEWAN	PRARIE	CORPORATE	Cust_1266
WILLIAM BROWN	SASKACHEWAN	PRARIE	HOME OFFICE	Cust_1274
VIVIAN MATHES	QUEBEC	QUEBEC	CORPORATE	Cust_784
VIVIAN MATHES	QUEBEC	QUEBEC	HOME OFFICE	Cust_785
VIVIAN MATHES	QUEBEC	QUEBEC	CONSUMER	Cust_790
VIVEK SUNDARES...	QUEBEC	QUEBEC	HOME OFFICE	Cust_810

cust_dimen 4

Output

#	Time	Action	Message	Duration / Fetch
18	15:47:50	SELECT Customer_Name as "Customer_Name", Customer_Segment as "Customer_Segment", Cust_Id as "Cust_Id" FROM cust_dimen ORDER BY Customer_Name DESC LIMIT 0, 1000	1000 row(s) returned	0.000 sec / 0.000 sec
19	15:48:04	SELECT Customer_Name as "Customer Name", Customer_Segment as "Customer Segment", Cust_Id as "Cust Id" FROM cust_dimen ORDER BY Customer_Name DESC LIMIT 0, 1000	1000 row(s) returned	0.000 sec / 0.000 sec
20	15:50:55	SELECT * FROM cust_dimen ORDER BY Customer_Name DESC LIMIT 0, 1000	1000 row(s) returned	0.125 sec / 0.000 sec

3) Write a query to get the Order ID, Order date from table orders_dimen where ‘Order Priority’ is high.



```

1  /*Question 3 */
2 *  SELECT Order_ID, Order_Date
3   FROM orders_dimen;

```

Order_ID	Order_Date
3	13-10-2010
293	01-10-2012
483	10-07-2011
515	28-08-2010
613	17-06-2011
643	24-03-2011
678	26-02-2010
807	23-11-2010
868	08-06-2012
933	04-08-2012
995	30-05-2011
998	25-11-2009

orders_dimen 7

Output

#	Time	Action	Message	Duration / Fetch
22	15:51:46	SELECT * FROM cust_dimen ORDER BY Cust_id DESC LIMIT 0, 1000	1000 row(s) returned	0.032 sec / 0.000 sec
23	15:55:17	SELECT Order_ID, Order_Date, salary, salary*15 PF FROM orders_dimen LIMIT 0, 1000	Error Code: 1054. Unknown column 'salary' in field list'	0.000 sec
24	15:55:29	SELECT Order_ID, Order_Date FROM orders_dimen LIMIT 0, 1000	1000 row(s) returned	0.141 sec / 0.000 sec

4)Find the total and the average sales (display total_sales and avg_sales)

The screenshot shows the MySQL Workbench interface with the following details:

- Query Editor:** Contains the following SQL code:

```
1 /*Create database superstores;*/
2 /* Find the total and the average sales (display total_sales and avg_sales)*/
3 • SELECT
4     SUM(sales) AS total_sales, AVG(sales) AS avg_sales
5     FROM
6     market_fact
```
- Result Grid:** Displays the output of the query:

total_sales	avg_sales
14647187.90400023	1757.100276391557
- Output Panel:** Shows the execution log:

#	Time	Action	Message	Duration / Fetch
1	18:14:14	SELECT SUM(sales) AS total_sales, AVG(sales) AS avg_sales FROM market_fact LIMIT 0, 1000	1 row(s) returned	0.422 sec / 0.000 sec
- System Tray:** Shows the date and time as 25-12-2020 18:14.

5)Write a query to get the maximum and minimum sales from market_fact table.

The screenshot shows the MySQL Workbench interface with the following details:

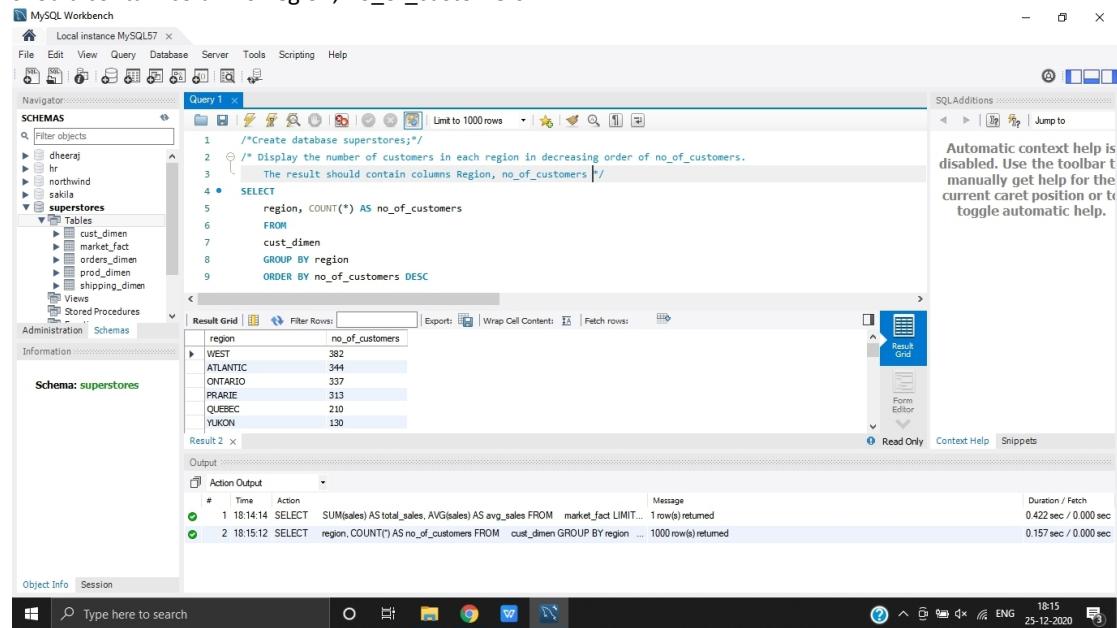
- Query Editor:** Contains the following SQL code:

```
1 /*Question 5 */
2 • SELECT MAX(sales), MIN(sales)
3     FROM market_fact;
```
- Result Grid:** Displays the output of the query:

MAX(sales)	MIN(sales)
89061.05	2.24
- Output Panel:** Shows the execution log:

#	Time	Action	Message	Duration / Fetch
23	15:55:17	SELECT Order_ID, Order_Date, salary, salary*15 PF FROM orders_dimen LIMIT 0, 1000	Error Code: 1054. Unknown column 'salary' in field list'	0.000 sec
24	15:55:29	SELECT Order_ID, Order_Date FROM orders_dimen LIMIT 0, 1000	1000 row(s) returned	0.141 sec / 0.000 sec
25	15:59:24	SELECT MAX(sales), MIN(sales) FROM market_fact LIMIT 0, 1000	1 row(s) returned	0.109 sec / 0.000 sec
- System Tray:** Shows the date and time as 28-12-2020 15:59.

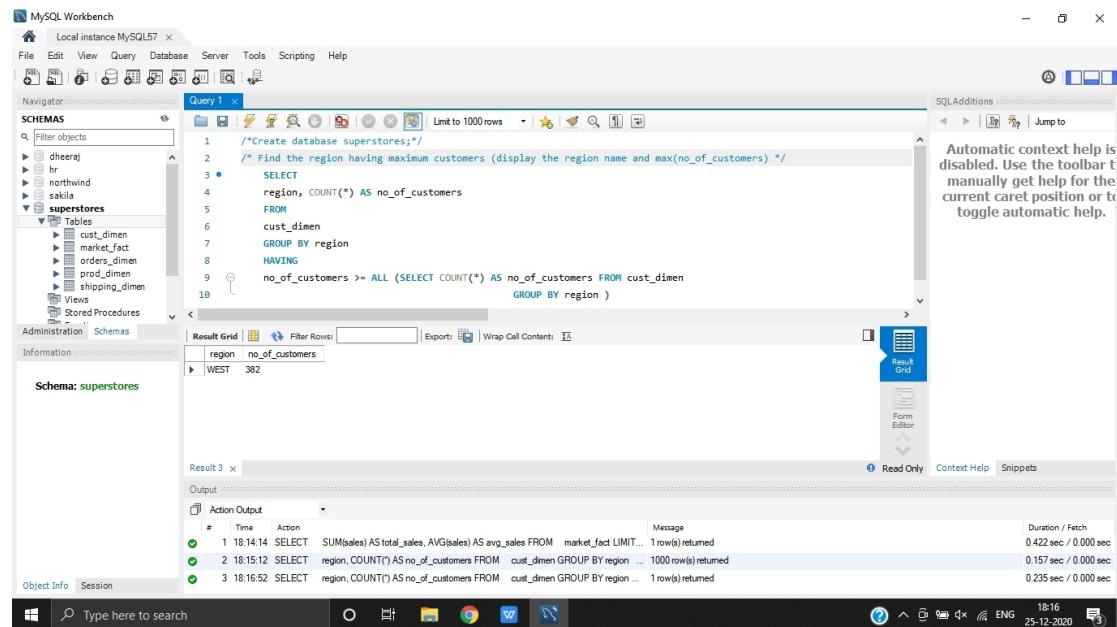
6)Display the number of customers in each region in decreasing order of no_of_customers. The result should contain columns Region, no_of_customers.



```

MySQL Workbench
File Edit View Query Database Server Tools Scripting Help
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SCHEMAS
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  superstores
    Tables
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      market_fact
      orders_dimen
      prod_dimen
      shipping_dimen
    Views
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Information Schema: superstores
Object Info Session
Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch Rows: | Result Grid | Form Editor | Read Only | Context Help | Snippets
Action Output | # Time Action Message Duration / Fetch
  1 18:14:14 SELECT SUM(sales) AS total_sales, AVG(sales) AS avg_sales FROM market_fact LIMIT... 1 row(s) returned 0.422 sec / 0.000 sec
  2 18:15:12 SELECT region, COUNT(*) AS no_of_customers FROM cust_dimen GROUP BY region ... 1000 row(s) returned 0.157 sec / 0.000 sec
Output
  
```

7)Find the region having maximum customers (display the region name and max(no_of_customers))



```

MySQL Workbench
File Edit View Query Database Server Tools Scripting Help
Navigator Schemas
SCHEMAS
  Filter objects
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  hr
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  sakila
  superstores
    Tables
      cust_dimen
      market_fact
      orders_dimen
      prod_dimen
      shipping_dimen
    Views
    Stored Procedures
Information Schema: superstores
Object Info Session
Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch Rows: | Result Grid | Form Editor | Read Only | Context Help | Snippets
Action Output | # Time Action Message Duration / Fetch
  1 18:14:14 SELECT SUM(sales) AS total_sales, AVG(sales) AS avg_sales FROM market_fact LIMIT... 1 row(s) returned 0.422 sec / 0.000 sec
  2 18:15:12 SELECT region, COUNT(*) AS no_of_customers FROM cust_dimen GROUP BY region ... 1000 row(s) returned 0.157 sec / 0.000 sec
  3 18:16:52 SELECT region, COUNT(*) AS no_of_customers FROM cust_dimen GROUP BY region ... 1 row(s) returned 0.235 sec / 0.000 sec
Output
  
```

8) Find all the customers from Atlantic region who have ever purchased 'TABLES' and the number of tables purchased (display the customer name, no_of_tables purchased)

```

MySQL Workbench - Local instance MySQL57
File Edit View Query Database Server Tools Scripting Help
Navigator: Schemas: superstores Tables: cust_dimen market_fact orders_dimen prod_dimen shipping_dimen Views Stored Procedures Functions Administration Schemas Information: Schema: superstores
SQL Editor: SQL File 3
Customer_Name count(*)
1. /*Question 8*/
2. * select Customer_Name, count(*) as num_tables
3. from superstores.market_fact m, superstores.cust_dimen c, superstores.prod_dimen p
4. where m.Cust_id = c.Cust_id and m.Prod_id = p.Prod_id and
5. p.Product_Sub_Category = 'TABLES' and c.Region = 'ATLANTIC'
6. group by Customer_Name;
Result Grid: Customer_Name num_tables
ALEKSANDRA GANNAWAY 1
ANNE-MARIE RATHER 1
BARRY FRANZ 1
BECKY MARTIN 1
BEN PETERMAN 1
BOBBY TRAFTON 1
BRADLEY TALBOTT 1
BRIAN STUGART 1
CARLOS MEADOR 1
CARLOS SOLTERO 1
CATHY ARMSTRONG 1
CHRISTINA DEMOSS 1
CHRISTY BRITTAINE 1
CHUCK CLARK 1
CHUCK SACHS 1
CRAIG YEDWAB 1
DAVID FLASHING 1
Read Only Context Help Snippets
Object Info Session Output
Type here to search

```

9) Find all the customers from Ontario province who own Small Business. (display the customer name, no of small business owners)

```

MySQL Workbench - Local instance MySQL57
File Edit View Query Database Server Tools Scripting Help
Navigator: Schemas: superstores Tables: cust_dimen market_fact orders_dimen prod_dimen shipping_dimen Views Stored Procedures Functions Administration Schemas Information: Schema: superstores
SQL Editor: SQL File 3
Customer_Name count(*)
1. /*Question 9*/
2. * select Customer_Name, count(*) as 'SMALL Business'
3. where Customer_Segment = 'SMALL BUSINESS' and Province = 'ONTARIO'
4. group by Customer_Name;
Result Grid: Customer_Name SMALL Business
ADAM BELLAVANCE 1
ALAN HWANG 1
ALAN SHONELY 1
AMY COX 1
ANDREW ROBERTS 1
ANDREE RATHER 1
ARTHUR PROCHEP 1
BERNARD VENIER 1
BILL DONATELLI 1
BOBBY ELIAS 1
BRAD EASON 1
CHRISTINA VANDE... 1
CHRISTINE KARGA... 1
CHRISTINE PHAN 1
CHRISTINE SUND... 1
CLYDE KELTY 1
CRAIG CANAHAN 1
Read Only Context Help Snippets
Object Info Session Output
Type here to search

```

10)Find the number and id of products sold in decreasing order of products sold
(display product id, no_of_products_sold)

```

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Tables
cust_dimen
market_fact
orders_dimen
prod_dimen
shipping_dimen
Views
Stored Procedures
Administration Schemas
Information
Schema: superstores
Result Grid | Filter Rows | Export: | Wrap Cell Content: 
product_id no_of_products_sold
Prod_6 1225
Prod_2 915
Prod_4 883
Prod_5 788
Prod_8 758
Prod_13 633
Prod_1 525
Result 4 x
Output
Action Output
# Time Action Message
2 18:15:12 SELECT region, COUNT(*) AS no_of_customers FROM cust_dimen GROUP BY region... 1000 row(s) returned
0.157 sec / 0.000 sec
3 18:16:52 SELECT region, COUNT(*) AS no_of_customers FROM cust_dimen GROUP BY region... 1 row(s) returned
0.235 sec / 0.000 sec
4 18:18:25 SELECT prod_id AS product_id, COUNT(*) AS no_of_products_sold FROM market_fa... 17 row(s) returned
0.078 sec / 0.000 sec
Duration / Fetch
Object Info Session
Type here to search
18:18 25-12-2020

```

11)Display product Id and product sub category whose product category belongs to Furniture and Technology. The result should contain columns product id, product sub category

```

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market_fact
orders_dimen
prod_dimen
shipping_dimen
Views
Stored Procedures
Administration Schemas
Information
Schema: superstores
Result Grid | Filter Rows | Export: | Wrap Cell Content: 
prod_id Product_Sub_Category
Prod_4 TELEPHONES AND COMMUNICATION
Prod_5 OFFICE FURNISHINGS
Prod_8 COMPUTER PERIPHERALS
Prod_10 BOOKCASES
Prod_11 TABLES
Prod_14 COPIERS AND FAX
Prod_15 CHAIRS & CHAIRMATS
Prod_17 OFFICE MACHINES
prod_dimen 3 x
Output
Action Output
# Time Action Message
2 14:03:30 select Prod_id, Product_Category,Product_Sub_Category From prod_dimen where Product_Cat... 8 row(s) returned
0.000 sec / 0.000 sec
3 14:05:17 select Prod_id, Product_Sub_Category From prod_dimen where Product_Cat... 8 row(s) returned
0.000 sec / 0.000 sec
Duration / Fetch
Object Info Session
Type here to search
14:05 31-12-2020

```

12) Display the product categories in descending order of profits (display the product Category wise profits i.e. product_category, profits)?

```

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prod_dimen
shipping_dimen
Views
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Administration Schemas
Information
Schema: superstores
SQL File 3 ×
Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows: |
Product_Category SUM(Profit)
TECHNOLOGY 886313.520000014
OFFICE SUPPLIES 524956.7699999997
FURNITURE 75968.7300000004
Result 7 ×
Object Info Session
Output
Read Only Context Help Snippets
Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows: |
Product_Category SUM(Profit)
TECHNOLOGY 886313.520000014
OFFICE SUPPLIES 524956.7699999997
FURNITURE 75968.7300000004
Result 7 ×
Object Info Session
Output
Read Only Context Help Snippets

```

The screenshot shows the MySQL Workbench interface with a query window containing the following SQL code:

```

1 /*Question 12*/
2 select Product_Category, SUM(Profit) from superstores.market_fact s,superstores.prod_dimen p
3 where s.Prod_Id = p.Prod_Id
4 group by Product_Category order by Profit desc;

```

The result grid displays the following data:

Product_Category	SUM(Profit)
TECHNOLOGY	886313.520000014
OFFICE SUPPLIES	524956.7699999997
FURNITURE	75968.7300000004

13) Display the product category, product sub-category and the profit within each subcategory in three columns.

```

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prod_dimen
shipping_dimen
Views
Stored Procedures
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Schema: superstores
SQL File 3 ×
Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows: |
Product_Category Product_Sub_Category Profit
OFFICE SUPPLIES SCISSORS, RULERS AND TRIMMERS -30.51
OFFICE SUPPLIES PENS & ART SUPPLIES 4.56
TECHNOLOGY TELEPHONES AND COMMUNICATION 1148.9
OFFICE SUPPLIES PAPER 729.34
TECHNOLOGY OFFICE MACHINES 1219.87
OFFICE SUPPLIES PAPER -47.64
OFFICE SUPPLIES LABELS 1.32
TECHNOLOGY TELEPHONES AND COMMUNICATION 1137.91
OFFICE SUPPLIES PENS & ART SUPPLIES 45.84
OFFICE SUPPLIES PAPER -27.72
OFFICE SUPPLIES APPLIANCES 1675.98
OFFICE SUPPLIES PAPER 79.34
OFFICE SUPPLIES SCISSORS, RULERS AND TRIMMERS 23.12
FURNITURE TABLES -493.23
FURNITURE BOOKCASES -317.48
FURNITURE OFFICE FURNISHINGS -103.48
OFFICE SUPPLIES ENVELOPES 193.12
Result 8 ×
Object Info Session
Output
Read Only Context Help Snippets
Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows: |
Product_Category Product_Sub_Category Profit
OFFICE SUPPLIES SCISSORS, RULERS AND TRIMMERS -30.51
OFFICE SUPPLIES PENS & ART SUPPLIES 4.56
TECHNOLOGY TELEPHONES AND COMMUNICATION 1148.9
OFFICE SUPPLIES PAPER 729.34
TECHNOLOGY OFFICE MACHINES 1219.87
OFFICE SUPPLIES PAPER -47.64
OFFICE SUPPLIES LABELS 1.32
TECHNOLOGY TELEPHONES AND COMMUNICATION 1137.91
OFFICE SUPPLIES PENS & ART SUPPLIES 45.84
OFFICE SUPPLIES PAPER -27.72
OFFICE SUPPLIES APPLIANCES 1675.98
OFFICE SUPPLIES PAPER 79.34
OFFICE SUPPLIES SCISSORS, RULERS AND TRIMMERS 23.12
FURNITURE TABLES -493.23
FURNITURE BOOKCASES -317.48
FURNITURE OFFICE FURNISHINGS -103.48
OFFICE SUPPLIES ENVELOPES 193.12
Result 8 ×
Object Info Session
Output
Read Only Context Help Snippets

```

The screenshot shows the MySQL Workbench interface with a query window containing the following SQL code:

```

1 /*Question 13*/
2 SELECT Product_Category,Product_Sub_Category,Profit
3 FROM superstores.market_fact s,superstores.prod_dimen p
4 WHERE s.Prod_Id = p.Prod_Id;

```

The result grid displays the following data:

Product_Category	Product_Sub_Category	Profit
OFFICE SUPPLIES	SCISSORS, RULERS AND TRIMMERS	-30.51
OFFICE SUPPLIES	PENS & ART SUPPLIES	4.56
TECHNOLOGY	TELEPHONES AND COMMUNICATION	1148.9
OFFICE SUPPLIES	PAPER	729.34
TECHNOLOGY	OFFICE MACHINES	1219.87
OFFICE SUPPLIES	PAPER	-47.64
OFFICE SUPPLIES	LABELS	1.32
TECHNOLOGY	TELEPHONES AND COMMUNICATION	1137.91
OFFICE SUPPLIES	PENS & ART SUPPLIES	45.84
OFFICE SUPPLIES	PAPER	-27.72
OFFICE SUPPLIES	APPLIANCES	1675.98
OFFICE SUPPLIES	PAPER	79.34
OFFICE SUPPLIES	SCISSORS, RULERS AND TRIMMERS	23.12
FURNITURE	TABLES	-493.23
FURNITURE	BOOKCASES	-317.48
FURNITURE	OFFICE FURNISHINGS	-103.48
OFFICE SUPPLIES	ENVELOPES	193.12

14) Display the order date, order quantity and the sales for the order

The screenshot shows the MySQL Workbench interface with a query editor and a result grid. The query is:

```
1 /*Question 14*/
2 • SELECT Order_Date,Order_Quantity,Sales
3   FROM superstores.market_fact s,superstores.orders_dimen c
4 WHERE s.Old_Id = c.Old_Id;
```

The result grid displays the following data:

Order_Date	Order_Quantity	Sales
27-07-2010	29	136.81
07-07-2009	13	42.27
27-07-2010	26	4791.69
09-11-2010	43	2327.69
01-07-2009	35	423.15
27-07-2010	23	164.02
28-05-2011	5	14.76
29-12-2011	48	3410.1575
29-12-2011	33	162
29-12-2011	8	57.22
26-05-2010	43	4072.01
30-10-2011	38	465.9
24-02-2011	27	305.05
25-12-2011	15	3364.248
25-12-2011	10	1410.93
15-08-2009	48	460.69
04-10-2010	30	443.46

15) Display the names of the customers whose name contains the

- i) Second letter as 'R'
- ii) Fourth letter as 'D'

The screenshot shows the MySQL Workbench interface with a query editor and a result grid. The queries are:

```
1 /*Question 15*/
2 • SELECT Customer_Name FROM cust_dimen WHERE Customer_Name LIKE '_R%';
3 • SELECT Customer_Name FROM cust_dimen WHERE Customer_Name LIKE '__D%';
```

The result grid displays the following data:

Customer_Name
BRAD EASON
BRAD EASON
CHAD CUNNINGHAM
FRED WASSERMAN
CINDY SCHNELLING
CHAD CUNNINGHAM
TRUDY SCHMIDT
TRUDY SCHMIDT
CHAD SIEVERT
BRAD NORVELL
CHAD SIEVERT
BRAD NORVELL
CHAD SIEVERT
BRAD EASON
SANDRA GLASSCO

16) Write a SQL query to make a list with Cust_Id, Sales, Customer Name and their region where sales are between 1000 and 5000.

```

1 • /*Question 16*/
2 • SELECT market_fact.Cust_id,market_fact.Sales,
3     cust_dimen.Customer_Name,cust_dimen.Region
4     FROM cust_dimen,market_fact
5     WHERE market_fact.Cust_id=cust_dimen.Cust_id
6     AND market_fact.Sales BETWEEN 1000 AND 5000;

```

Cust_Id	Sales	Customer_Name	Region
Cust_3	4965.7595	CLAY ROZENDAL	NUNAVUT
Cust_3	1285.37	CLAY ROZENDAL	NUNAVUT
Cust_8	1815.49	NEOLA SCHNEIDER	NUNAVUT
Cust_9	1474.33	CARLOS DALY	NUNAVUT
Cust_12	4462.23	SYLVIA FOULSTON	NUNAVUT
Cust_13	2480.9205	JIM RADFORD	NUNAVUT
Cust_16	4253.009	ANNE CYRUS	NUNAVUT
Cust_16	1210.0515	ANNE CYRUS	NUNAVUT
Cust_19	1078.49	JACK GARZA	NUNAVUT
Cust_20	3554.46	JULIA WEST	NUNAVUT
Cust_24	3338.98	NICOLE HANSEN	NUNAVUT
Cust_25	1311.25	DOROTHY WARDLE	NUNAVUT
Cust_32	3922.42	JOY BELL	NUNAVUT
Cust_32	1733.3625	JOY BELL	NUNAVUT
Cust_39	1003.06	BETH PAIGE	NUNAVUT

17) Write a SQL query to find the 3rd highest sales.

```

1 • /* Question 17*/
2 • SELECT Sales FROM market_fact Order by Sales DESC LIMIT 3;
3

```

Sales
89061.05
49923.76
41943.21

18) Where is the least profitable product subcategory shipped the most? For the least profitable product sub-category, display the region-wise no_of_shipments and the profit made in each region in decreasing order of profits (i.e. region, no_of_shipments, profit_in_each_region)

→ Note: You can hardcode the name of the least profitable product subcategory

The screenshot shows the MySQL Workbench interface. The left sidebar displays the Navigator with the 'superstores' schema selected. The central area contains a SQL editor window titled 'SQL File 3*' with the following query:

```
/*Question 18*/
SELECT Region, count(Ship_Id) AS no_of_shipment, sum(Profit) AS profit_in_each_region
FROM superstores.cust_dimen c,superstores.market_fact s,superstores.prod_dimen p
WHERE c.Cust_id = s.Cust_id AND s.Prod_id = p.Prod_id
GROUP BY Region
ORDER BY profit_in_each_region ASC;
```

Below the SQL editor is a 'Result Grid' window showing the results of the query:

Region	no_of_shipment	profit_in_each_region
NUNAVUT	76	1506.430000000012
YUKON	539	74404.7999999993
NORTHWEST TERRITORIES	390	91755.4400000008
QUEBEC	775	138658.8799999998
ATLANTIC	1070	231491.1899999992
WEST	1979	285506.539999999
PRARIE	1694	311652.2299999963
ONTARIO	1813	352263.51

The bottom status bar shows the date and time: 26-01-2021 11:06.