

ASSIGNMENT -04**TASK 01****A. Describe the data in hand in your own words.**

Table 01: cust_dimen: It consists of all the details of 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

Table 02: market_fact: It consists of all the 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

Table 03: orders_dimen: Details of every order placed by the customers.

Order_ID (INT): Order ID

Order_Date (TEXT): Order Date

Order_Priority (TEXT): Priority of the Order

Ord_id (TEXT): Unique Order ID

Table 04: prod_dimen: The details of product category and sub category of each and every product.

Product_Category (TEXT): Product Category

Product_Sub_Category (TEXT): Product Sub Category

Prod_id (TEXT): Unique Product ID

Table 05: shipping_dimen: The details of all the shipping orders of the products

Order_ID (INT): Order ID

Ship_Mode (TEXT): Shipping Mode

Ship_Date (TEXT): Shipping Date

Ship_id (TEXT): Unique Shipment ID

B. Identify and list the Primary Keys and Foreign Keys for this dataset

Table 01: cust_dimen

Primary Key: Cust_id

Foreign Key: Not Available

Table 02: market_fact

Primary Key: Not Available

Foreign Key: Ord_id, Prod_id, Ship_id, Cust_id

Table 03: orders_dimen

Primary Key: Ord_id

Foreign Key: Not Available

Table 04: prod_dimen

Primary Key: Prod_id, Product_Sub_Category

Foreign Key: Not Available

Table 05: shipping_dimen

Primary Key: Ship_id

Foreign Key: Not Available

Task 02:

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

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```

/*1st query*/
select Customer_name AS 'Customer Name', Customer_segment AS 'Customer Segment'
from cust_dimen;
/*2nd query*/

```

The Results grid displays the following data:

Customer Name	Customer Segment
MUHAMMED MACINTYRE	SMALL BUSINESS
BARRY FRENCH	CONSUMER
CLAY ROZENDAL	CORPORATE
CARLOS SOLTERO	CONSUMER
CARL JACKSON	CORPORATE
MONICA FEDERLE	CORPORATE
DOROTHY BADDERS	HOME OFFICE
NEOLA SCHNEIDER	HOME OFFICE
CARLOS DALY	HOME OFFICE
CLAUDIA MINER	SMALL BUSINESS
ALLEN ROSEBLATT	SMALL BUSINESS

The Output pane shows the execution details for the query:

#	Time	Action	Message	Duration / Fetch
130	11:24:15	select prod_id, product_sub_category from prod_dimen where product_category in ("furniture", "...	8 row(s) returned	0.000 sec / 0.000 sec
131	11:28:07	SELECT c.customer_name, COUNT(*) AS no_of_tables_purchased FROM market_fact m...	43 row(s) returned	0.344 sec / 0.000 sec
132	11:34:02	select Customer_name AS 'Customer Name', Customer_segment AS 'Customer Segment' from cu...	1832 row(s) returned	0.000 sec / 0.000 sec

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

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```

/*2nd query*/
Select *
From cust_dimen
order by cust_id DESC;

```

The Results grid displays the following data:

Customer_Name	Province	Region	Customer_Segment	Cust_id
SALLY HUGSBY	ONTARIO	ONTARIO	CONSUMER	Cust_999
SAM ZELDIN	ONTARIO	ONTARIO	SMALL BUSINESS	Cust_998
ALEJANDRO GROVE	ONTARIO	ONTARIO	CORPORATE	Cust_997
JOHN LUCAS	ONTARIO	ONTARIO	CORPORATE	Cust_996
HAROLD RYAN	ONTARIO	ONTARIO	HOME OFFICE	Cust_995
JIM KRIZ	ONTARIO	ONTARIO	CONSUMER	Cust_994
KEAN NGUYEN	ONTARIO	ONTARIO	CORPORATE	Cust_993
ARTHUR PRICHEP	ONTARIO	ONTARIO	HOME OFFICE	Cust_992
STUART CALHOUN	ONTARIO	ONTARIO	CONSUMER	Cust_991
TRACY PODDAR	ONTARIO	ONTARIO	CORPORATE	Cust_990
MICHELLE LONSDALE	NORTH...	NORTH...	CORPORATE	Cust_99
ARTHUR GAINER	QUEBEC	QUEBEC	CORPORATE	Cust_989

The Output pane shows the execution details for the query:

#	Time	Action	Message	Duration / Fetch
131	11:28:07	SELECT c.customer_name, COUNT(*) AS no_of_tables_purchased FROM market_fact m...	43 row(s) returned	0.344 sec / 0.000 sec
132	11:34:02	select Customer_name AS 'Customer Name', Customer_segment AS 'Customer Segment' from cu...	1832 row(s) returned	0.000 sec / 0.000 sec
133	11:35:31	Select * From cust_dimen order by cust_id DESC	1832 row(s) returned	0.031 sec / 0.016 sec

3) A query to get the Order ID, Order date from table orders_dimen where 'Order Priority' is high

MySQL Workbench interface showing a query executed on the 'superstores' schema. The query is:

```

/*3rd query*/
select Order_ID ,order_Date,order_Priority
from orders_dimen
where Order_Priority = 'HIGH';

```

The results are displayed in a grid with the following columns: Order_ID, order_Date, order_Priority. The results show 17 rows of data.

Order_ID	order_Date	order_Priority
293	01-10-2012	HIGH
483	10-07-2011	HIGH
613	17-06-2011	HIGH
643	24-03-2011	HIGH
1540	04-08-2012	HIGH
1702	06-05-2011	HIGH
1761	23-12-2010	HIGH
2532	10-10-2011	HIGH
2791	09-10-2009	HIGH
3524	02-05-2012	HIGH
4676	31-08-2011	HIGH
5894	12-08-2009	HIGH

The Output pane shows the execution details:

#	Time	Action	Message	Duration / Fetch
19	16:42:17	SELECT * FROM PROD_DIMEN	17 row(s) returned	0.047 sec / 0.000 sec
20	16:43:03	SELECT * FROM SHIPPING_DIMEN	7701 row(s) returned	0.078 sec / 0.141 sec
21	16:58:16	select Order_ID ,order_Date,order_Priority from orders_dimen where Order_Priority = 'HIGH'	1137 row(s) returned	0.031 sec / 0.016 sec

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

MySQL Workbench interface showing a query executed on the 'market_fact' table. The query is:

```

/*4th query*/
select sum(sales) AS Total_sales,avg(sales) AS Avg_sales
from market_fact;

```

The results are displayed in a grid with the following columns: Total_sales, Avg_sales. The results show 1 row of data.

Total_sales	Avg_sales
14647187.904000023	1757.1002763915576

The Output pane shows the execution details:

#	Time	Action	Message	Duration / Fetch
23	17:10:11	select sum(sales),avg(sales) from market_fact	1 row(s) returned	0.047 sec / 0.000 sec
24	17:10:52	select sum(sales) AS Total_sales,avg(sales) AS Average_sales from market_fact	1 row(s) returned	0.047 sec / 0.000 sec
25	17:11:29	select sum(sales) AS Total_sales,avg(sales) AS Avg_sales from market_fact	1 row(s) returned	0.047 sec / 0.000 sec

5) A query to get the maximum and minimum sales from maket_fact table.

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```

/*5th query*/
select Max(sales) as max, min(sales) as min
from market_fact;

```

The Result Grid shows the output of the query:

max	min
89061.05	2.24

The Information tab at the bottom shows the execution details for the query:

#	Time	Action	Message	Duration / Fetch
24	17:10:52	select sum(sales) AS Total_sales,avg(sales) AS Average_sales from market_fact	1 row(s) returned	0.047 sec / 0.000 sec
25	17:11:29	select sum(sales) AS Total_sales,avg(sales) AS Avg_sales from market_fact	1 row(s) returned	0.047 sec / 0.000 sec
26	17:14:22	select Max(sales) as max, min(sales) as min from market_fact	1 row(s) returned	0.047 sec / 0.000 sec

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

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```

/*6th query*/
Select Region ,Count(cust_id) As No_of_customers
from cust_dimen
group by region
order by Count(cust_id) desc;

```

The Result Grid shows the output of the query:

Region	No_of_customers
WEST	382
ATLANTIC	344
ONTARIO	337
PRARIE	313
QUEBEC	210
YUKON	130
NORTHWEST TERRITORIES	76
NUNAVUT	40

The Information tab at the bottom shows the execution details for the query:

#	Time	Action	Message	Duration / Fetch
33	17:24:05	select distinct region ,count(cust_id) from cust_dimen order by region desc	1 row(s) returned	0.016 sec / 0.000 sec
34	17:25:23	Select region ,Count(cust_id) As No_of_customers from cust_dimen group by region order by Co...	8 row(s) returned	0.015 sec / 0.000 sec
35	17:26:10	Select Region ,Count(cust_id) As No_of_customers from cust_dimen group by region order by C...	8 row(s) returned	0.031 sec / 0.000 sec

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

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```

--7th query*
Select Region ,Count(cust_id) As No_of_customers
from cust_dimen
group by region
order by Count(cust_id) desc limit 1;

```

The Result Grid shows the output:

Region	No_of_customers
WEST	382

The Action Output pane shows the execution details:

#	Time	Action	Message	Duration / Fetch
40	17:35:57	Select region.count(cust_id) as numb from cust_dimen group by region having count(cust_id)=(\$...	Error Code: 1247. Reference 'numb' not supported (reference to group function)	0.000 sec
41	17:39:41	SELECT MAX (mycount) regions FROM (SELECT region,COUNT(cust_id) mycount FROM cus...	Error Code: 1248. Every derived table must have its own alias	0.000 sec
42	17:46:28	Select Region ,Count(cust_id) As No_of_customers from cust_dimen group by region order by C...	1 row(s) returned	0.031 sec / 0.000 sec

SQL script saved to: 'C:\Users\win\Desktop\SQL4.sql'

8) A query to retrieve 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)

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```

SELECT
c.customer_name, COUNT(*) AS no_of_tables_purchased
FROM
market_fact m
INNER JOIN cust_dimen c
ON m.cust_id = c.cust_id
WHERE
c.region = 'atlantic'
AND m.prod_id = ( SELECT
prod_id
FROM

```

The Result Grid shows the output:

customer_name	no_of_tables_purchased
ALEXSANDRA GANNAWAY	1
ANEMONE RATNER	1
BARRY FRANZ	1
BECKY MARTIN	1
BEN PETERMAN	1

The Action Output pane shows the execution details:

#	Time	Action	Message	Duration / Fetch
129	11:22:43	SELECT c.region, COUNT(distinct s.ship_id) AS no_of_shipments, SUM(m.profit) AS profit_e...	8 row(s) returned	4.079 sec / 0.000 sec
130	11:24:15	select prod_id,product_sub_category from prod_dimen where product_category in ('furniture',...	8 row(s) returned	0.000 sec / 0.000 sec
131	11:28:07	SELECT c.customer_name, COUNT(*) AS no_of_tables_purchased FROM market_fact m...	43 row(s) returned	0.344 sec / 0.000 sec

Query Completed

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

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```

50
51 /*9th query*/
52 select Customer_name,customer_segment
53 from Cust_dimen
54 where province="ontario" and customer_segment="small business";

```

The Result Grid displays the following data:

Customer_name	customer_segment
CHRISTINA VANDERZANDEN	SMALL BUSINESS
MEG O'CONNEL	SMALL BUSINESS
CHRISTINE SUNDARESAM	SMALL BUSINESS
DOUG O'CONNELL	SMALL BUSINESS
CHRISTINE KARGATIS	SMALL BUSINESS
CRAIG CARROLL	SMALL BUSINESS
BILL DONATELLI	SMALL BUSINESS
RUSSELL APPEGATE	SMALL BUSINESS
BRAD EASON	SMALL BUSINESS
JASON GROSS	SMALL BUSINESS
HAROLD PAULAN	SMALL BUSINESS
ADAM BELLAVANCE	SMALL BUSINESS
PAULINE CHAND	SMALL BUSINESS

The Output pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
14	09:50:14	select count(*)	Customer_name from Cust_dimen where province="ontario" and customer_seg...	1 row(s) returned 0.016 sec / 0.000 sec
15	09:51:26	select Customer_name,customer_segment	from Cust_dimen where province="ontario" and cust...	70 row(s) returned 0.015 sec / 0.000 sec
16	09:52:47	select Customer_name,customer_segment	from Cust_dimen where province="ontario" and cust...	70 row(s) returned 0.015 sec / 0.000 sec

10) A query to retrieve the number and id of products sold in decreasing order of products sold (display product id, no_of_products sold)

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```

71 select prod_id,count(prod_id) as number_of_product_sold
72 from market_fact
73 group by prod_id
74 order by number_of_product_sold Desc;
75

```

The Result Grid displays the following data:

prod_id	number_of_product_sold
Prod_6	1225
Prod_3	915
Prod_4	883
Prod_5	788
Prod_8	758
Prod_13	633
Prod_1	525
Prod_2	434
Prod_15	360
Prod_11	349
Prod_17	337
Prod_12	288

The Output pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
141	11:47:56	select prod_id,count(prod_id) as number	from market_fact group by prod_id order by number Desc	17 row(s) returned 0.094 sec / 0.000 sec
142	11:49:09	select prod_id,count(prod_id) as number_of_product_sold	from market_fact group by prod_id or...	Error Code: 1054. Unknown column 'number' in 'order clause' 0.000 sec
143	11:49:35	select prod_id,count(prod_id) as number_of_product_sold	from market_fact group by prod_id or...	17 row(s) returned 0.187 sec / 0.000 sec

11) A query 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.

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```

--11th query*
select prod_id, product_sub_category
from prod_dimen
where product_category in ("furniture", "Technology");

```

The Result Grid displays the following data:

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

The Output pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
35	11:02:39	select prod_id, product_sub_category from prod_dimen where product_category in (FURNITURE...	Error Code: 1054. Unknown column 'FURNITURE' in 'where clause'	0.000 sec
36	11:03:03	select prod_id, product_sub_category from prod_dimen where product_category in ("FURNITURE...	8 row(s) returned	0.015 sec / 0.000 sec
37	11:03:25	select prod_id, product_sub_category from prod_dimen where product_category in ("furniture"...	8 row(s) returned	0.000 sec / 0.000 sec

12) A query to display the product categories in descending order of profits (display the product category wise profits i.e. product_category, profits)?

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```

--12th query*
select c.product_category, m.profit
from market_fact m
INNER JOIN prod_dimen c
ON c.prod_id = m.prod_id
group by c.product_category
order by m.profit desc;

```

The Result Grid displays the following data:

product_category	profit
TECHNOLOGY	1148.9
OFFICE SUPPLIES	-30.51
FURNITURE	-693.23

The Output pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
47	11:22:41	select * from market_fact	8336 row(s) returned	0.000 sec / 0.360 sec
48	11:23:52	select c.product_category, m.profit from market_fact m INNER JOIN prod_dimen c ON c.prod...	8336 row(s) returned	0.594 sec / 0.156 sec
49	11:25:01	select c.product_category, m.profit from market_fact m INNER JOIN prod_dimen c ON c.prod...	3 row(s) returned	0.172 sec / 0.000 sec

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

The screenshot shows MySQL Workbench with a query window titled "SQL4" containing the following SQL code:

```

/*13th query*/
select c.product_sub_category,c.product_category, m.profit
from prod_dimen c
inner join market_fact m
on c.prod_id=m.prod_id
group by c.product_sub_category;

```

The "Result Grid" displays the following data:

product_sub_category	product_category	profit
SCISSORS, RULERS AND TRIMMERS	OFFICE SUPPLIES	-30.51
PENS & ART SUPPLIES	OFFICE SUPPLIES	4.56
TELEPHONES AND COMMUNICATION	TECHNOLOGY	1148.9
PAPER	OFFICE SUPPLIES	729.34
OFFICE MACHINES	TECHNOLOGY	1219.87
LABELS	OFFICE SUPPLIES	1.32
APPLIANCES	OFFICE SUPPLIES	1675.98
TABLES	FURNITURE	-693.23
BOOKCASES	FURNITURE	-317.48
OFFICE FURNISHINGS	FURNITURE	-103.48

The "Output" window shows the execution log with three entries:

#	Time	Action	Message	Duration / Fetch
144	11:52:58	select c product_category, m profit from market_fact m INNER JOIN prod_dimen c ON c prod_...	3 row(s) returned	0.171 sec / 0.000 sec
145	12:03:09	select c product_sub_category,c product_category, m profit from prod_dimen c inner join market...	8336 row(s) returned	0.015 sec / 0.704 sec
146	12:06:07	select c product_sub_category,c product_category, m profit from prod_dimen c inner join market...	17 row(s) returned	0.109 sec / 0.000 sec

14) A query to display the order date, order quantity and the sales for the order.

The screenshot shows MySQL Workbench with a query window titled "SQL4" containing the following SQL code:

```

/*14th query*/
Select s.order_date as Date,p.order_quantity As Quantity,p.sales as Sales
from market_fact p
join orders_dimen s
on p.ord_id=s.ord_id;

```

The "Result Grid" displays the following data:

Date	Quantity	Sales
28-05-2011	5	14.76
12-05-2009	12	41.97
12-05-2009	18	57.17
12-05-2009	11	81.25
12-05-2009	44	3202.25
12-05-2009	10	35.64
31-05-2011	3	73.44
07-03-2010	1	49.61
11-05-2011	??	1074.66

The "Output" window shows the execution log with three entries:

#	Time	Action	Message	Duration / Fetch
70	13:07:37	Select s.order_date,p.order_quantity,p.sales from market_fact p join orders_dimen s on p.ord_id...	8336 row(s) returned	0.125 sec / 0.609 sec
71	13:08:19	Select s.order_date as Date,p.order_quantity As Quantity,p.sales from market_fact p join orders...	8336 row(s) returned	0.125 sec / 0.235 sec
72	13:08:40	Select s.order_date as Date,p.order_quantity As Quantity,p.sales as Sales from market_fact p joi...	8336 row(s) returned	0.172 sec / 0.296 sec

- 15) A query to 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. The SQL editor contains the following query:

```

109  /*15th query*/
110  select customer_name
111  from cust_dimen
112  where customer_name like "__r%" or customer_name like "__d%";
113

```

The Results grid shows the output of the query, displaying customer names that match the criteria. The output is as follows:

customer_name
GRANT CARROLL
BRAD EASON
FRANK PRICE
GRANT CARROLL
BRYAN DAVIS
GRANT CARROLL
BRENDAN DODSON
GRANT CARROLL
BRAD EASON
FRANK PRICE
CHAD CUNNINGHAM
BRYAN MILLS

The Output pane shows the execution log with the following messages:

#	Time	Action	Message	Duration / Fetch
156	12:21:35	select customer_name from cust_dimen where customer_name like "__r%" or customer_name li...	318 row(s) returned	0.015 sec / 0.000 sec
157	12:23:56	select customer_name from cust_dimen where customer_name like "__r%" or customer_name li...	352 row(s) returned	0.015 sec / 0.000 sec
158	12:24:35	select customer_name from cust_dimen where customer_name like "__r%" or customer_name li...	239 row(s) returned	0.000 sec / 0.000 sec

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

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```

99  /*16th query*/
100  select c.cust_id,c.customer_name,p.sales,c.region
101  from cust_dimen c,market_fact p
102  where c.cust_id=p.cust_id
103  and p.sales between 1000 and 5000;
104

```

The Results grid shows the output of the query, displaying customer information and sales data. The output is as follows:

cust_id	customer_name	sales	region
Cust_3	CLAY ROZENDAL	4965.7595	NUNAVUT
Cust_3	CLAY ROZENDAL	1285.37	NUNAVUT
Cust_8	NEOLA SCHNEIDER	1815.49	NUNAVUT
Cust_9	CARLOS DALY	1474.33	NUNAVUT
Cust_13	JIM RADFORD	2480.9205	NUNAVUT
Cust_16	ANNIE CYPRUS	4253.009	NUNAVUT
Cust_16	ANNIE CYPRUS	1210.0515	NUNAVUT
Cust_19	JACK GARZA	1078.49	NUNAVUT
Cust_20	JULIA WEST	3554.46	NUNAVUT
Cust_24	NICOLE HANSEN	3338.98	NUNAVUT
Cust_25	DOROTHY WARDLE	1311.25	NUNAVUT

The Output pane shows the execution log with the following messages:

#	Time	Action	Message	Duration / Fetch
75	13:18:40	select * from cust_dimen	1832 row(s) returned	0.000 sec / 0.016 sec
76	13:19:01	select * from market_fact	8336 row(s) returned	0.000 sec / 0.360 sec
77	13:38:07	select c.cust_id,c.customer_name,p.sales,c.region from cust_dimen c,market_fact p where c.c...	2083 row(s) returned	0.063 sec / 0.109 sec

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

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```

105  /*17th query*/
106
107  SELECT sales as 3rd_highest
108  FROM market_fact
109  ORDER BY sales DESC LIMIT 2,1;

```

The Results tab shows the output of the query:

3rd_highest
41343.21

The Output tab shows the execution log:

#	Time	Action	Message	Duration / Fetch
92	15:01:16	SELECT * FROM market_fact ORDER BY sales DESC LIMIT 3,1	1 row(s) returned	0.297 sec / 0.000 sec
93	15:02:12	SELECT sales as 3rd_highest FROM market_fact ORDER BY sales DESC LIMIT 2,1	1 row(s) returned	0.062 sec / 0.000 sec
94	15:02:34	SELECT sales as 3rd_highest FROM market_fact ORDER BY sales DESC LIMIT 2,1	1 row(s) returned	0.047 sec / 0.000 sec

18) A query to obtain 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)

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```

127  /*18th query*/
128  SELECT
129    c.region, COUNT(distinct s.ship_id) AS no_of_shipments, SUM(m.profit) AS profit_each_region
130  FROM
131    market_fact m
132  INNER JOIN
133    cust_dimen c ON m.cust_id = c.cust_id
134  ORDER BY profit_each_region DESC;

```

The Results tab shows the output of the query:

region	no_of_shipments	profit_each_region
YUKON	34	3151.0499999999993
NUNAVUT	1	-481.04
NORTHWEST TERRITORIES	10	-3213.11
PRARIE	65	-8760.2999999999997
ATLANTIC	44	-16559.7300000000003
WEST	69	-21699.7899999999997
QUEBEC	47	-29957.1999999999993
ONTARIO	79	-35948.0600000000005

The Output tab shows the execution log:

#	Time	Action	Message	Duration / Fetch
3	20:53:25	SELECT c.region, COUNT(distinct s.ship_id) AS no_of_shipments, SUM(m.profit) AS profit_e...	Error Code: 1146. Table 'sample_workor.market_fact' doesn't exist	0.032 sec
4	20:53:50	use superstores	0 row(s) affected	0.000 sec
5	20:54:17	SELECT c.region, COUNT(distinct s.ship_id) AS no_of_shipments, SUM(m.profit) AS profit_e...	8 row(s) returned	2.781 sec / 0.000 sec