

# SQL ASSIGNMENT

Questions:

1. Find the product names for each of the orders in “Orderdetails” table and find their respective product lines as well

The screenshot shows a SQL query interface with the following details:

- Toolbar:** Includes icons for file operations, database connection, schema selection, and search.
- Navigation:** Shows the current instance is "Local instance 3306". The schema tree on the left lists the "classicmodels" schema with its tables (customers, employees, offices, orderdetails, orders, payments, productlines, products), views, stored procedures, and functions.
- Query Editor:** Displays the following SQL code:

```
1 •  SELECT orderNumber, classicmodels.orderdetails.productCode,productName,productLine FROM classicmodels.orderdetails
2   inner join classicmodels.products  on classicmodels.orderdetails.productCode = classicmodels.products.productCode ;
```
- Result Grid:** Shows the results of the query, which are 2996 rows of data from the Orderdetails table, joined with the Products table. The columns are orderNumber, productCode, productName, and productLine. The data includes rows like 10107, S10\_1678, 1969 Harley Davidson Ultimate Chopper, Motorcycles.
- Action Output:** Shows the history of actions taken during the query execution, including the original select statement and subsequent error messages (Error Code: 1054, Unknown column 'classicmodels.orderdetails.p...').
- Status:** At the bottom left, it says "Query Completed".

2. Using the “Payments” table, find out the total amount spent by each customer and their respective countries

Local Instance 3306

Administration Schemas

Query 4 products 1 orderdetails productlines 2 customers payments

Limit to 50000 rows

```

1 •  SELECT pay.customerNumber,country,sum(amount) FROM classicmodels.payments AS pay
2   inner join classicmodels.customers AS cus on pay.customerNumber = cus.customerNumber
3   group by customerNumber;

```

Result Grid Filter Rows: Search Export:

customerNumber	country	sum(amount)
443	U.S.A.	49967.78
447	USA	49967.78
448	Sweden	76776.44
450	USA	59551.38
452	Austria	51059.99
453	USA	70379.65
456	USA	29580.43
458	Spain	11240.09
462	USA	88627.49
471	Australia	44920.76
473	Italy	25358.32
475	USA	43748.92
484	Spain	5878.85
496	USA	7726.59
487	USA	42570.37
489	UK	29586.15
495	USA	65541.74
496	New Ze...	114497.19

Result 4

Action Output

Time	Action	Response	Duration / Fetch Time
52 16:50:54	SELECT customerNumber,sum(amou...	98 row(s) returned	0.00054 sec / 0.000...
53 17:00:04	SELECT * FROM classicmodels.cust...	122 row(s) returned	0.00092 sec / 0.000...
54 17:01:59	SELECT classicmodels.payments.c...	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax...	0.00026 sec
55 17:03:40	SELECT classicmodels.payments.c...	Error Code: 1054. Unknown column 'classicmodels.payments.customerNumber' in 'field list'	0.00057 sec
56 17:04:15	SELECT * FROM classicmodels.pay...	273 row(s) returned	0.00046 sec / 0.000...
57 17:04:49	SELECT pay.customerNumber,coun...	98 row(s) returned	0.0015 sec / 0.00002...

SQL script saved to '/Users/himanshusaroha/Desktop/sql solutions/2.sql'

3. Find out the number of customers from each country and their respective sales representative, their overall sales for each of the country

Local Instance 3306

Administration Schemas

customers 3 employees orderdetails orders payments

Limit to 50000 rows

```

1 •  SELECT country, count(c.customerNumber),concat(firstName, " ", lastName)"Sales Representative",sum(amount) FROM classicmodels.customers as c
2   inner join classicmodels.employees as e on c.salesRepEmployeeNumber = e.employeeNumber
3   inner join classicmodels.payments as p on p.customerNumber = c.customerNumber
4   group by country;

```

Result Grid Filter Rows: Search Export:

country	count(c.customerNum... Sales Representative sum(amount)
France	35
USA	93
Australia	16
Norway	8
Germany	7
Spain	23
Sweden	4
Denmark	6
Singapore	7
Japan	6
Finland	9
UK	12
Ireland	2
Canada	7
Hong Kong	1
Italy	9
Switzerland	2
Belgium	6
Larry Bott	295149.35
Leslie Thompson	3040029.52
Andy Fitter	509385.82
Barry Jones	270846.30
Barry Jones	198470.09
Barry Hernandez	984638.53
Barry Jones	120457.09
Pamela Castillo	197366.30
Mami Nishi	261671.60
Mami Nishi	167909.95
Larry Bott	391503.90
Barry Jones	49898.27
George Vanauf	205911.86
Mann Hui	45480.70
Pamela Castillo	325254.55
Martin Gerard	108777.92
Pamela Castillo	914771.03

Result 6

Action Output

Time	Action	Response	Duration / Fetch Time
78 17:17:21	SELECT country, count(cu...	Error Code: 1052. Column 'customerNumber' in field list is ambiguous	0.00058 sec
79 17:17:21	SELECT country, count(cu...	Error Code: 1052. Column 'customerNumber' in field list is ambiguous	0.00062 sec
80 17:17:22	SELECT country, count(cu...	Error Code: 1052. Column 'customerNumber' in field list is ambiguous	0.00063 sec
81 17:17:22	SELECT country, count(cu...	Error Code: 1052. Column 'customerNumber' in field list is ambiguous	0.00049 sec
82 17:17:23	SELECT country, count(cu...	Error Code: 1052. Column 'customerNumber' in field list is ambiguous	0.00062 sec
83 17:17:41	SELECT country, count(cu...	21 row(s) returned	0.0017 sec / 0.00002...

SQL script saved to '/Users/himanshusaroha/Desktop/sql solutions/3.sql'

5. List the customer names for those who their names are starting with "A" and their overall purchase, profit made for each customer

```

1 •  create view profitByProduct as
2   SELECT productCode,(MSRP - buyPrice)"Profit" FROM classicmodels.products as p;
3 •  create view profitByOrder as
4   SELECT customerName,cus.customerNumber,(Profit*quantityOrdered)"TotalProfit",od.productCode,od.orderNumber,(priceEach*quantityOrdered)"TotalPurchase"
5   inner join classicmodels.orderdetails as od on od.orderNumber = o.orderNumber
6   inner join profitByProduct as ppb on ppb.productCode = od.productCode
7   inner join classicmodels.customers as cus on cus.customerNumber = o.customerNumber;
8 •  Select customerName,sum(TotalPurchase)"Purchase",sum(TotalProfit)"Profit" from profitByorder
9  where customerName like 'A%'
10 group by customerName;
11
12

```

**Result Grid**

customerName	Purchase	Profit
Atelier graphique	22314.36	12879.20
Australian Collectors, Co.	180565.07	90298.32
AV Stores, Co.	148410.09	75401.01
Auto-Moto Classics Inc.	21554.26	9958.52
Alpha Cognac	60483.36	30871.62
Alpha Modem & Co.	56223.00	40172.72
Auto-Servis & Cia	58874.41	31268.44
Annis's Decorations, Ltd	13703.22	71184.57
Australian Gift Network, Co	55190.16	27616.20
Auto Camila Pettí	86436.97	46276.66
Australian Collectables, Ltd	55866.02	29687.05

**Action Output**

Action	Time	Response	Duration / Fetch Time
delete view profitByorder	21:47:17	Error Code: 1064. You have an error in your SQL syntax; check the manual...	0.0015 sec
drop view profitByorder	21:48:40	0 row(s) affected	0.0041 sec
drop view profitByproduct	21:48:47	0 row(s) affected	0.0026 sec
create view profitByProduct as	21:48:59	0 row(s) affected	0.0025 sec
create view profitByOrder as	21:48:59	0 row(s) affected	0.0030 sec
Select customerName,sum(TotalPurchase)"Purchase",sum(TotalProfit)"Profit" from profitByorder	21:48:59	11 row(s) returned	0.0018 sec / 0.00001...

6. Find the profit for each product line and also see the inventory in stock

```

1 •  create view profitByProduct as
2   SELECT productCode,(MSRP - buyPrice)"Profit",productLine,quantityInStock FROM classicmodels.products as p;
3 •  create view profitByOrder as
4   SELECT quantityInStock,productLine,customerName,cus.customerNumber,(Profit*quantityOrdered)"TotalProfit",od.productCode,od.orderNumber,(priceEach*quant...
5   inner join classicmodels.orderdetails as od on od.orderNumber = o.orderNumber
6   inner join profitByProduct as ppb on ppb.productCode = od.productCode
7   inner join classicmodels.customers as cus on cus.customerNumber = o.customerNumber;
8 •  Select productLine,sum(TotalProfit)"Profit",quantityInStock from profitByorder
9  group by productLine;

```

**Result Grid**

productLine	Profit	quantityInStock
Trucks and Buses	517414.19	1579
Vintage Cars	933851.74	6645
Classic Cars	100000.04	98
Motorcycles	599665.01	7089
Trains	84006.26	6450
Ships	336246.24	1898
Planes	475351.90	992

**Action Output**

Action	Time	Response	Duration / Fetch Time
create view profitByOrder as SELECT quantityInStock,productLine,customerName,cus.customerNumber,(Profit*quantityOrdered)"TotalProfit",od.productCode,od.orderNumber,(priceEach*quant...	22:03:44	Error Code: 1054. Unknown column 'quantityInStock' in 'field list'	0.0012 sec
drop view profitByproduct	22:04:06	0 row(s) affected	0.0026 sec
drop view profitByorder	22:04:06	Error Code: 1051. Unknown table 'classicmodels.profitbyorder'	0.00085 sec
create view profitByProduct as SELECT productCode,(MSRP - buyPrice)"Profit",productLine,customerName,cus.customerNumber,(Profit*quantityOrdered)"TotalProfit",od.productCode,od.orderNumber,(priceEach*quant...	22:04:08	0 row(s) affected	0.0030 sec
create view profitByOrder as SELECT quantityInStock,productLine,customerName,cus.customerNumber,(Profit*quantityOrdered)"TotalProfit",od.productCode,od.orderNumber,(priceEach*quant...	22:04:08	0 row(s) affected	0.0034 sec
Select productLine,sum(TotalProfit)"Profit",quantityInStock from profitByorder	22:04:08	7 row(s) returned	0.01 sec / 0.00007...

7. Check if the overall purchase value of each customers has exceeded the credit limit set for them and calculate the percent of deviation (both positive and negative)

The screenshot shows the SSMS interface with the following details:

- Object Explorer (Left):** Shows the database structure for "Local Instance 3306". It includes Schemas (classicmodels), Tables (customers, employees, offices, orderdetails, orders, payments, productlines, products), Views, Stored Procedures, Functions, and other objects like hr, northwind, super50, and Superstores.
- Query Editor (Top):** Contains a T-SQL script to create a view named "customerPurchase" which calculates total purchase, compares it with credit limit, and calculates the percentage deviation.
- Results Grid (Main Area):** Displays the output of the query, showing columns: customerName, Purchase, isLimitExceed, and %deviation. The data includes rows for various companies like Atelier graphique, Signal Gift Stores, and Mini Wheels Co.
- Action Output (Bottom):** Shows the execution log with actions like creating the view, selecting data, and dropping the view, along with their times and durations.
- Message Bar (Bottom):** Shows "Query Completed".

```

1 • create view customerPurchase as
2   SELECT customerName,creditLimit,(priceEach*quantityOrdered)"TotalPurchase" from classicmodels.orders as o
3   inner join classicmodels.orderdetails as od on od.orderNumber = o.orderNumber
4   inner join classicmodels.customers as cus on cus.customerNumber = o.customerNumber
5 • Select customerName,sum(TotalPurchase)"Purchase", (sum(TotalPurchase)>creditLimit)"isLimitExceed",
6   (((sum(TotalPurchase)-creditLimit)/creditLimit)*100)"%deviation" from customerPurchase
7   group by customerName;
8
9
100% 1:9 | Result Grid Filter Rows: Search Export: 
Result Grid | Filter Rows: Search Export: 
customerName Purchase isLimitExceed %deviation
Atelier graphique 22314.36 1 6.258857
Signal Gift Stores 80180.88 1 11.672674
Australia Catalogs, Co. 159573.47 1 53.156939
La Rochelle Guitars 158573.12 1 34.156916
Baane Mini Imports 104224.79 1 27.570122
Mini Gifts Distributors Ltd. 591827.34 1 181.153131
Blauer See Auto, Co. 75937.76 1 27.198928
Mini Wheels Co. 66710.56 1 3.267121
Land of Toys Inc. 149085.15 1 29.752089
Euro+ Shopping Channel 820689.54 1 260.584156
Volvo Model Replicas, Co 66894.82 25.602256
Dunelm Direct Imports 300000.15 1 54.777221
Savile & Hennet, Co. 130305.35 1 5.180774
Dragon Souvenirs, Ltd. 156251.03 1 50.530857
Muscle Machine Inc. 177913.95 1 28.457726
Diecast Classics Inc. 104358.69 1 3.736272
Technics Stores Inc. 104545.22 1 23.575910
Result 4
Action Output
Time Action Response Duration / Fetch Time
241 22:17:16 drop view customerPurchase 0 row(s) affected 0.0030 sec
242 22:17:19 create view customerPurchase as SELECT customerName,creditLimit,(pric... 0 row(s) affected 0.0024 sec
243 22:17:19 Select customerName,sum(TotalPurchase)"Purchase", (sum(TotalPurchase)... 98 row(s) returned 0.0068 sec / 0.00002...
244 22:17:53 drop view customerPurchase 0 row(s) affected 0.0027 sec
245 22:17:55 create view customerPurchase as SELECT customerName,creditLimit,(pric... 0 row(s) affected 0.0023 sec
246 22:17:55 Select customerName,sum(TotalPurchase)"Purchase", (sum(TotalPurchase)... 98 row(s) returned 0.0078 sec / 0.00001...
Query Completed

```

8. Find the top performing sales agent, revenue generated and total number of customers for each of them individually, create this as a view

Local instance 3306

Administration Schemas

SCHEMAS

orderdetails products employees orders orderdetails orders customers employees profitbyorder

Limit to 50000 rows

```

1 • create view profitByProduct as
2   SELECT productCode,(MSRP - buyPrice)"Profit" FROM classicmodels.products as p;
3 • create view profitByOrder as
4   SELECT customerName,cus.customerNumber,(Profit*quantityOrdered)"TotalProfit",od.productCode,od.orderNumber,(priceEach*quantityOrdered)"TotalPurchase
5   inner join classicmodels.orderdetails as od on od.orderNumber = o.orderNumber
6   inner join profitbyproduct as ppb on ppb.productCode = od.productCode
7   inner join classicmodels.customers as cus on cus.customerNumber = o.customerNumber
8   inner join classicmodels.employees as e on e.employeeNumber = cus.salesRepEmployeeNumber
9   ;
10 • create view topSalesPersons as
11   select salesPerson,sum(TotalProfit)"Revenue Generated",count(customerName)"No. Of Customers" from profitbyorder
12   group by salesPerson;

```

Views

customerpurchase profitbyorder profitbyproduct topsalespersons

Stored Procedures Functions

hr northwind super50 Superstores

100% 31:10

Action Output

Time	Action	Response	Duration / Fetch Time
297 22:37:59	drop view profitbyorder	0 row(s) affected	0.0027 sec
298 22:37:59	drop view profitbyproduct	0 row(s) affected	0.0020 sec
299 22:38:02	create view profitByProduct as SELECT productCode,(MSRP - buyPrice)"... 0 rows(s) affected		0.0020 sec
300 22:38:02	create view profitByOrder as SELECT customerName,cus.customerNumbe... 0 row(s) affected		0.0027 sec
301 22:38:02	create view topSalesPersons as select salesPerson,sum(TotalProfit)"Reve... 0 row(s) affected		0.0021 sec
302 22:38:07	SELECT * FROM classicmodels.topsalespersons LIMIT 0, 50000 15 row(s) returned		0.0071 sec / 0.00000...

Query Completed