EASTERN INTERNATIONAL UNIVERSITY

SCHOOL OF COMPUTING

AND INFORMATION TECHNOLOGY

□□□

Practice Assignment 4

Practice Assignment – Quarter 4, 2023-2024

Course Name: Database

Course Code: CSE 301

Student's Full Name: Phan Ngoc Hanh Nhi

Student ID: 2131209002

---

1. Give a database 'SaleManagerment':

Clients(**Client_Number**, Client_Name, Address, City, Pincode, Province, Amount_Paid, Amount_Due)
Product(**Product_Number**, Product_Name, Quantity_On_Hand, Quantity_Sell, Sell_Price, Cost_Price)
Salesman (**Salesman_Number**, Salesman _Name, Address, City, Pincode, Province, Salary, Sales_Target, Target_Achieve, Phone)
Salesorder(**Order_Number**, Order_Date, **Client_Number**, **Salesman_Number**, Delivery_Status, Delivery_Date, Order_Status)
Salesorderdetails(**Order_Number, Product_Number**, Order_Quantity)

Query Syntax:

```
SELECT col_1, function_name(col_2)
FROM tablename
WHERE condition
GROUP BY column1, column2
HAVING Condition
ORDER BY column1, column2,.. ASC | DESC
LIMIT [offset,] row_count;
```

Practice in Class

a) Using Logical Operators (AND, OR, NOT, LIKE, IN, BETWEEN) and Comparison Operators (=, >, <, >=, <=, <>)

1. Show the all-clients details who lives in "Binh Duong".

```
151 •  select *
152    from clients
153    where province like 'Binh Duong';
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Client_Number	Client_Name	Address	City	Pincode	Province	Amount_Paid	Amount_Due
C101	Mai Xuan	Phu Hoa	Dai An	700001	Binh Duong	10000.0000	5000.0000
C102	Le Xuan	Phu Hoa	Thu Dau Mot	700051	Binh Duong	18000.0000	3000.0000
C104	Tran Tuan	Phu Tan	Thu Dau Mot	700080	Binh Duong	8000.0000	0.0000
C107	Nguyen Thanh	Hoa Phu	Dai An	700023	Binh Duong	8500.0000	7500.0000

2. Find the client's number and client's name who do not live in "Hanoi".

```
156 •  select Client_Number, Client_Name
157    from clients
158    where province <> 'Ha Noi';
```

Result Grid | Filter Rows:

Client_Number	Client_Name
C101	Mai Xuan
C102	Le Xuan
C103	Trinh Huu
C104	Tran Tuan
C105	Ho Nhu
C106	Tran Hai
C107	Nguyen Thanh
C108	Nguyen Sy
C109	Duong Thanh
C110	Tran Minh

3. Identify the names of all products with less than 25 in stock.

```
161 •  select *
162    from product
163    where Quantity_On_hand < 25;
```

Result Grid | Filter Rows: | Edit: | Export/Import:

Product_Number	Product_Name	Quantity_On_Hand	Quantity_Sell	Sell_Price	Cost_Price
P1001	TV	10	30	1000.0000	800.0000
P1002	Laptop	12	25	1500.0000	1100.0000
P1003	AC	23	10	400.0000	300.0000
P1004	Modem	22	16	250.0000	230.0000
P1005	Pen	19	13	12.0000	8.0000
P1006	Mouse	5	10	100.0000	105.0000

4. Find the product names where the company is making losses.

```
166 •   select Product_Name
167     from product
168     where Sell_Price < Cost_Price;
```

Result Grid | Filter Rows:

Product_Name
Mouse

5. Find the salesman's details who are able achieved their target.

```
171 •   select *
172     from salesman
173     where Target_Achieved >= Sales_Target;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Salesman_Number	Salesman_Name	Address	City	Pincode	Province	Salary	Sales_Target	Target_Achieved	Phone
S002	Phat	Tan An	Hanoi	700005	Hanoi	25000.0000	100	110	0903216542
S004	Tien	Phu Hoa	Dai An	700023	Binh Duong	16500.0000	70	72	0908654723

6. Select the names and city of salesmen who have not received a salary between 10000 and 17000.

```
176 •   select Salesman_Name, City
177     from salesman
178     where salary not between 10000 and 17000;
179
```

Result Grid | Filter Rows: | Export:

Salesman_Name	City
Phat	Hanoi
Khoa	Thu Dau Mot
Tin	Da Lat

7. Show order date and the clients_number of who bought the product between '2022-01-01' and '2022-02-15'.

```
181 •   select Order_Date, Client_Number
182     from salesorder
183     where Order_Date between '2022-01-01' and '2022-02-15';
184
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

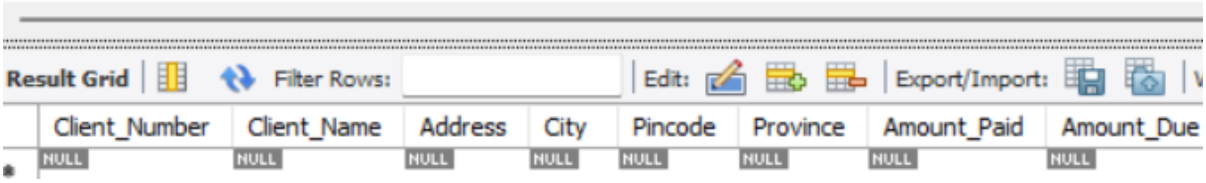
Order_Date	Client_Number
2022-01-15	C101
2022-01-25	C102
2022-01-31	C103
2022-02-10	C104

b) Finding strings in table

Pattern	Meaning
'a%'	Match strings that start with 'a'
'%a'	Match strings with end with 'a'
'a%t'	Match strings that contain the start with 'a' and end with 't'.
'%wow %'	Match strings that contain the substring 'wow' in them at any position.
'_wow %'	Match strings that contain the substring 'wow' in them at the second position.
' a%'	Match strings that contain 'a' at the second position.
'a__%'	Match strings that start with 'a and contain at least 2 more characters.

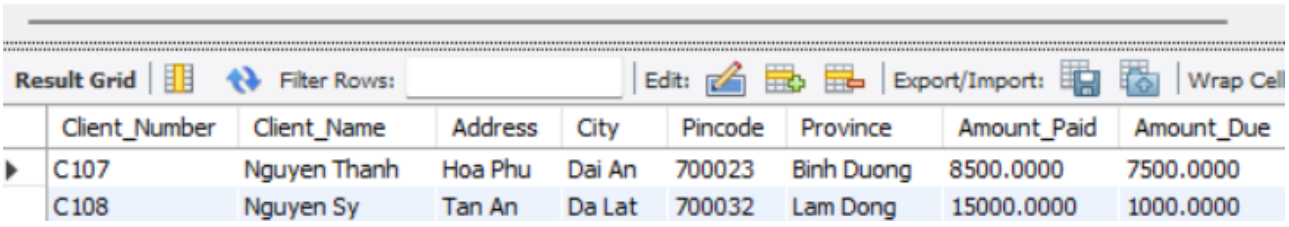
8. Find the names of cities in clients table where city name starts with "N"

```
186 •   select *
187     from clients
188     where City like 'N%';
```



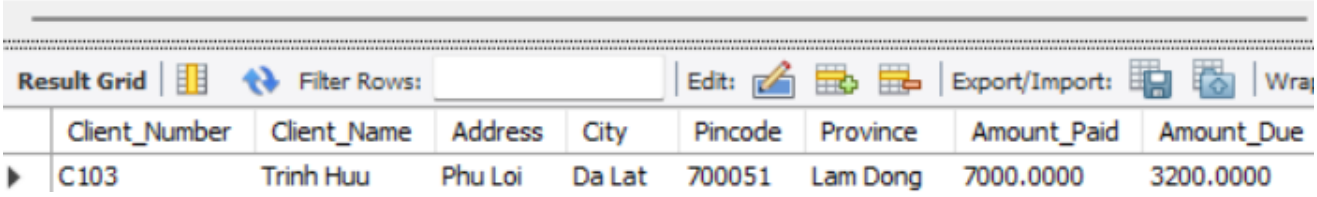
9. Display clients' information whose names have "u" in third position.

```
191 •   select *
192     from clients
193     where client_name like '__u%';
```



10. Find the details of clients whose names have "u" in the second last position.

```
196 •   select *
197     from clients
198     where client_name like '%u_';
```



11. Find the names of cities in clients table where city name starts with "D" and ends with "n".

```
201 •   select City
202     from clients
203     where City like 'D%n';
```

Result Grid | Filter Rows:

City
Dai An
Dai An

12. Select all clients details who belong from Ho Chi Minh, Hanoi and Da Lat.

```
206 •   select *
207     from clients
208     where City in ('Ho Chi Minh', 'Hanoi','Da Lat');
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Cont

Client_Number	Client_Name	Address	City	Pincode	Province	Amount_Paid	Amount_Due
C103	Trinh Huu	Phu Loi	Da Lat	700051	Lam Dong	7000.0000	3200.0000
C105	Ho Nhu	Chanh My	Hanoi	700005	Hanoi	7000.0000	150.0000
C106	Tran Hai	Phu Hoa	Ho Chi Minh	700002	Ho Chi Minh	7000.0000	1300.0000
C108	Nguyen Sy	Tan An	Da Lat	700032	Lam Dong	15000.0000	1000.0000
C109	Duong Thanh	Phu Hoa	Ho Chi Minh	700011	Ho Chi Minh	12000.0000	8000.0000
C110	Tran Minh	Phu My	Hanoi	700005	Hanoi	9000.0000	1000.0000

13. Choose all clients data who do not reside in Ho Chi Minh, Hanoi and Da Lat.

```
211 •   select *
212     from clients
213     where City not in ('Ho Chi Minh', 'Hanoi','Da Lat');
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Conter

Client_Number	Client_Name	Address	City	Pincode	Province	Amount_Paid	Amount_Due
C101	Mai Xuan	Phu Hoa	Dai An	700001	Binh Duong	10000.0000	5000.0000
C102	Le Xuan	Phu Hoa	Thu Dau Mot	700051	Binh Duong	18000.0000	3000.0000
C104	Tran Tuan	Phu Tan	Thu Dau Mot	700080	Binh Duong	8000.0000	0.0000
C107	Nguyen Thanh	Hoa Phu	Dai An	700023	Binh Duong	8500.0000	7500.0000

c) Using mySQL functions (Min(), Max(), COUNT(), AVG() and SUM())

14. Find the average salesman's salary.

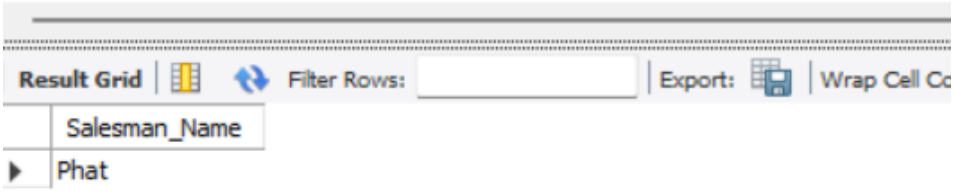
```
216 •   select AVG(salary)
217     as average_salary
218     from salesman;
```

Result Grid | Filter Rows:

average_salary
17916.66666667

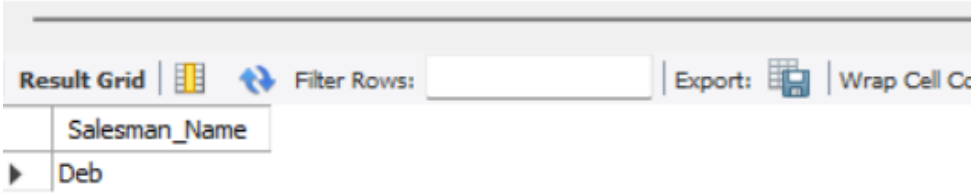
15. Find the name of the highest paid salesman.

```
221     -- Cách 1
222 •   select Salesman_Name
223     from salesman
224     where salary in (select max(salary) from salesman);
225
226     -- Cách 2
227 •   select Salesman_Name
228     from salesman
229     order by salary desc
230     limit 1;
```



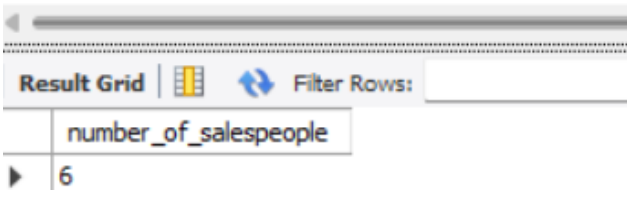
16. Find the name of the salesman who is paid the lowest salary.

```
233     -- Cach 1
234 •   select Salesman_Name
235     from salesman
236     where salary in (select min(salary) from salesman);
237
238     -- Cach 2
239 •   select Salesman_Name
240     from salesman
241     order by salary asc
242     limit 1;
```



17. Determine the total number of salespeople employed by the company.

```
245 •   select COUNT(Salesman_Number)
246     as number_of_salespeople
247     from salesman;
```



18. Compute the total salary paid to the company's salesman.

```
250 •   select SUM(salary)
251     as sum_of_salary
252     from salesman;
```

Result Grid | Filter Rows:

sum_of_salary
107500.0000

d) Using Order by keyword, limit clause

19. Select the salesman's details sorted by their salary.

```
255 •   select *
256     from salesman
257     order by salary ASC;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Salesman_Number	Salesman_Name	Address	City	Pincode	Province	Salary	Sales_Target	Target_Achieved	Phone
S005	Deb	Hoa Phu	Thu Dau Mot	700051	Binh Duong	13500.0000	60	48	0903213659
S001	Huu	Phu Tan	Ho Chi Minh	700002	Ho Chi Minh	15000.0000	50	35	0902361123
S004	Tien	Phu Hoa	Dai An	700023	Binh Duong	16500.0000	70	72	0908654723
S003	Khoa	Phu Hoa	Thu Dau Mot	700051	Binh Duong	17500.0000	40	30	0904589632
S006	Tin	Chanh My	Da Lat	700032	Lam Dong	20000.0000	80	55	0907853497
S002	Phat	Tan An	Hanoi	700005	Hanoi	25000.0000	100	110	0903216542

20. Display salesman names and phone numbers based on their target achieved (in ascending order) and their city (in descending order).

```
237 •   select Salesman_Name, Phone
238     from salesman
239     order by Target_Achieved ASC, city DESC;
```

Result Grid | Filter Rows: | Export:

Salesman_Name	Phone
Khoa	0904589632
Huu	0902361123
Deb	0903213659
Tin	0907853497
Tien	0908654723
Phat	0903216542

21. Display 3 first names of the salesman table and the salesman's names in descending order.

```
265 •   SELECT salesman_name
266     FROM Salesman
267     ORDER BY salesman_name DESC
268     limit 3;
```

Result Grid | Filter Rows:

salesman_name
Tin
Tien
Phat

22. Find salary and the salesman's names who is getting the highest salary.

```
271 •   select salary, salesman_name
272     from salesman
273     where salary in (select max(salary) from salesman)
274     order by salary desc
275     limit 1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell C

salary	salesman_name
25000.0000	Phat

23. Find salary and the salesman's names who is getting the second lowest salary.

```
278 •   select salary, salesman_name
279     from salesman
280     order by salary asc
281     limit 1,1;
```

Result Grid | Filter Rows:

salary	salesman_name
15000.0000	Huu

24. Display the first five sales orders in formation from the sales order table.

```
284 •   SELECT *
285     FROM Salesorder
286     ORDER BY order_number
287     limit 5;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Order_Number	Order_Date	Client_Number	Salesman_Number	Delivery_Status	Delivery_Date	Order_Status
O20001	2022-01-15	C101	S003	Delivered	2022-02-10	Successful
O20002	2022-01-25	C102	S003	Delivered	2022-02-15	Cancelled
O20003	2022-01-31	C103	S002	Delivered	2022-04-03	Successful
O20004	2022-02-10	C104	S003	Delivered	2022-04-23	Successful
O20005	2022-02-18	C101	S003	On Wav	NULL	Cancelled

25. Display the next ten sales order information from the sales order table except the first five sales orders.

```
290 •   SELECT *
291     FROM Salesorder
292     ORDER BY order_number
293     limit 5,10;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Conte

Order_Number	Order_Date	Client_Number	Salesman_Number	Delivery_Status	Delivery_Date	Order_Stat
O20006	2022-02-22	C105	S005	Ready to Ship	NULL	In Process
O20007	2022-04-03	C106	S001	Delivered	2022-05-08	Successful
O20008	2022-04-16	C102	S006	Ready to Ship	NULL	In Process
O20009	2022-04-24	C101	S004	On Way	NULL	Successful
O20010	2022-04-29	C106	S006	Delivered	2022-05-08	Successful
O20011	2022-05-08	C107	S005	Ready to Ship	NULL	Cancelled
O20012	2022-05-12	C108	S004	On Way	NULL	Successful
O20013	2022-05-16	C109	S001	Ready to Ship	NULL	In Process
O20014	2022-05-16	C110	S001	On Way	NULL	Successful

e) Using group by with having clause with aggregate functions (COUNT(), MAX(), MIN(), SUM(), AVG()), order by.

26. If there are more than one client, find the name of the province and the number of clients in each province, ordered high to low.

```
296 •   select Province, count(Province) as Quantity_Province
297     from clients
298     group by Province
299     having count(Province)>1
300     order by Quantity_Province desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Conte

Province	Quantity_Province
Binh Duong	4
Lam Dong	2
Hanoi	2
Ho Chi Minh	2

27. Display information clients have number of sales order more than 1.

```
312 •   select Clients.*
313     from clients, salesorder
314     where clients.Client_Number = salesorder.Client_Number
315     group by clients.Client_Number
316     having count(clients.Client_Number)>1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Client_Number	Client_Name	Address	City	Pincode	Province	Amount_Paid	Amount_Due
C101	Mai Xuan	Phu Hoa	Dai An	700001	Binh Duong	10000.0000	5000.0000
C102	Le Xuan	Phu Hoa	Thu Dau Mot	700051	Binh Duong	18000.0000	3000.0000
C106	Tran Hai	Phu Hoa	Ho Chi Minh	700002	Ho Chi Minh	7000.0000	1300.0000

Practice to grade

Question : Using database 'SaleManagerment' to write SQL queries following:

28. Display the name and due amount of those clients who live in "Hanoi".

```
325 •   SELECT Client_Name, Amount_Due
326     FROM clients
327     WHERE City = 'Hanoi';
```

Result Grid | Filter Rows:

Client_Name	Amount_Due
Ho Nhu	150.0000
Tran Minh	1000.0000

29. Find the client's details who has due more than 3000.

```
330 •   SELECT *
331     FROM clients
332     WHERE Amount Due > 3000;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Conte

Client_Number	Client_Name	Address	City	Pincode	Province	Amount_Paid	Amount_Due
C101	Mai Xuan	Phu Hoa	Dai An	700001	Binh Duong	10000.0000	5000.0000
C103	Trinh Huu	Phu Loi	Da Lat	700051	Lam Dong	7000.0000	3200.0000
C107	Nguyen Thanh	Hoa Phu	Dai An	700023	Binh Duong	8500.0000	7500.0000
C109	Duong Thanh	Phu Hoa	Ho Chi Minh	700011	Ho Chi Minh	12000.0000	8000.0000

30. Find the clients name and their province who has no due.

```
335 •   SELECT Client_Name, Province
336     FROM clients
337     WHERE Amount Due = 0;
```

Result Grid | Filter Rows:

Client_Name	Province
Tran Tuan	Binh Duong

31. Show details of all clients paying between 10,000 and 13,000.

```
340 •   SELECT *
341     FROM clients
342     WHERE Amount_Paid BETWEEN 10000 AND 13000;
343
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Cont

Client_Number	Client_Name	Address	City	Pincode	Province	Amount_Paid	Amount_Due
C101	Mai Xuan	Phu Hoa	Dai An	700001	Binh Duong	10000.0000	5000.0000
C109	Duong Thanh	Phu Hoa	Ho Chi Minh	700011	Ho Chi Minh	12000.0000	8000.0000

32. Find the details of clients whose name is “Dat”.

```
345 •   SELECT *
346     FROM clients
347     WHERE Client_Name = 'Dat';
```

Result Grid | Filter Rows: | Edit: | Export/Import:

Client_Number	Client_Name	Address	City	Pincode	Province	Amount_Paid	Amount_Due
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

33. Display all product name and their corresponding selling price.

```
350 •   SELECT Product_Name, Sell_Price
351     FROM product;
```

Result Grid | Filter Rows:

Product_Name	Sell_Price
TV	1000.0000
Laptop	1500.0000
AC	400.0000
Modem	250.0000
Pen	12.0000
Mouse	100.0000
Keyboard	120.0000
Headset	50.0000

34. How many TVs are in stock?

```
354 •   SELECT Quantity_On_Hand
355     FROM product
356     WHERE Product_Name = 'TV';
```

Result Grid | Filter Rows:

Quantity_On_Hand
10

35. Find the salesman’s details who are not able achieved their target.

```
359 •  SELECT *
360    FROM Salesman
361    WHERE Target_Achieved < Sales_Target;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Salesman_Number	Salesman_Name	Address	City	Pincode	Province	Salary	Sales_Target	Target_Achieved	Phone
S001	Huu	Phu Tan	Ho Chi Minh	700002	Ho Chi Minh	15000.0000	50	35	0902361123
S003	Khoa	Phu Hoa	Thu Dau Mot	700051	Binh Duong	17500.0000	40	30	0904589632
S005	Deb	Hoa Phu	Thu Dau Mot	700051	Binh Duong	13500.0000	60	48	0903213659
S006	Tin	Chanh My	Da Lat	700032	Lam Dong	20000.0000	80	55	0907853497

36. Show all the product details of product number ‘P1005’.

```
364 •  SELECT *
365    FROM product
366    WHERE Product_Number = 'P1005';
```

Result Grid | Filter Rows: | Edit: | Export/Import:

Product_Number	Product_Name	Quantity_On_Hand	Quantity_Sell	Sell_Price	Cost_Price
P1005	Pen	19	13	12.0000	8.0000

37. Find the buying price and sell price of a Mouse.

```
369 •  SELECT Cost_Price, Sell_Price
370    FROM product
371    WHERE Product_Name = 'Mouse';
```

Result Grid | Filter Rows:

Cost_Price	Sell_Price
105.0000	100.0000

38. Find the salesman names and phone numbers who lives in Thu Dau Mot.

```
374 •  SELECT Salesman_Name, Phone
375    FROM Salesman
376    WHERE City = 'Thu Dau Mot';
```

Result Grid | Filter Rows:

Salesman_Name	Phone
Khoa	0904589632
Deb	0903213659

39. Find all the salesman’s name and salary.

```
379 •  SELECT Salesman_Name, Salary
380    FROM Salesman;
```

Result Grid | Filter Rows:

Salesman_Name	Salary
Huu	15000.0000
Phat	25000.0000
Khoa	17500.0000
Tien	16500.0000
Deb	13500.0000
Tin	20000.0000

40. Select the names and salary of salesman who are received between 10000 and 17000.

```
383 •  SELECT Salesman_Name, Salary
384    FROM Salesman
385    WHERE Salary BETWEEN 10000 AND 17000;
```

Result Grid | Filter Rows: | Export:

Salesman_Name	Salary
Huu	15000.0000
Tien	16500.0000
Deb	13500.0000

41. Display all salesman details who received a salary between 10000 and 20000 and achieved their target.

```
388 •  SELECT *
389    FROM Salesman
390    WHERE Salary BETWEEN 10000 AND 20000
391    AND Target_Achieved >= Sales_Target;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Salesman_Number	Salesman_Name	Address	City	Pincode	Province	Salary	Sales_Target	Target_Achieved	Phone
S004	Tien	Phu Hoa	Dai An	700023	Binh Duong	16500.0000	70	72	0908654723

42. Display all salesman details who received a salary between 20000 and 30000 and not achieved their target.

```
394 •  SELECT *
395    FROM Salesman
396    WHERE Salary BETWEEN 20000 AND 30000
397    AND Target_Achieved < Sales_Target;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Salesman_Number	Salesman_Name	Address	City	Pincode	Province	Salary	Sales_Target	Target_Achieved	Phone
S006	Tin	Chanh My	Da Lat	700032	Lam Dong	20000.0000	80	55	0907853497

43. Find information about all clients whose names do not end with "h".

```
400 •  SELECT *
401    FROM clients
402    WHERE Client_Name NOT LIKE '%h';
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Conte

Client_Number	Client_Name	Address	City	Pincode	Province	Amount_Paid	Amount_Due
C101	Mai Xuan	Phu Hoa	Dai An	700001	Binh Duong	10000.0000	5000.0000
C102	Le Xuan	Phu Hoa	Thu Dau Mot	700051	Binh Duong	18000.0000	3000.0000
C103	Trinh Huu	Phu Loi	Da Lat	700051	Lam Dong	7000.0000	3200.0000
C104	Tran Tuan	Phu Tan	Thu Dau Mot	700080	Binh Duong	8000.0000	0.0000
C105	Ho Nhu	Chanh My	Hanoi	700005	Hanoi	7000.0000	150.0000
C106	Tran Hai	Phu Hoa	Ho Chi Minh	700002	Ho Chi Minh	7000.0000	1300.0000
C108	Nguyen Sy	Tan An	Da Lat	700032	Lam Dong	15000.0000	1000.0000

44. Find client names whose second letter is 'r' or second last letter 'a'.

```
404 •  select Client_Name
405    from clients
406    where Client_Name like '_r%'
407    or Client_Name like '%a_';
```

Result Grid | Filter Rows:

Client_Name
Mai Xuan
Le Xuan
Trinh Huu
Tran Tuan
Tran Hai
Tran Minh

45. Select all clients where the city name starts with "D" and at least 3 characters in length.

```
411 •  select *
412    from clients
413    where City like 'D___%';
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cel

Client_Number	Client_Name	Address	City	Pincode	Province	Amount_Paid	Amount_Due
C101	Mai Xuan	Phu Hoa	Dai An	700001	Binh Duong	10000.0000	5000.0000
C103	Trinh Huu	Phu Loi	Da Lat	700051	Lam Dong	7000.0000	3200.0000
C107	Nguyen Thanh	Hoa Phu	Dai An	700023	Binh Duong	8500.0000	7500.0000
C108	Nguyen Sy	Tan An	Da Lat	700032	Lam Dong	15000.0000	1000.0000

46. Select the salesman name, salaries and target achieved sorted by their target_achieved in descending order.

```
416 •  SELECT Salesman_Name, Salary, Target_Achieved
417    FROM salesman
418    ORDER BY Target_Achieved DESC;
```

Result Grid | Filter Rows: | Export: | Wra

Salesman_Name	Salary	Target_Achieved
Phat	25000.0000	110
Tien	16500.0000	72
Tin	20000.0000	55
Deb	13500.0000	48
Huu	15000.0000	35
Khoa	17500.0000	30

47. Select the salesman's details sorted by their sales_target and target_achieved in ascending order.

```
421 •  SELECT *
422    FROM Salesman
423    ORDER BY Sales_Target ASC, Target_Achieved ASC;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Salesman_Number	Salesman_Name	Address	City	Pincode	Province	Salary	Sales_Target	Target_Achieved	Phone
S003	Khoa	Phu Hoa	Thu Dau Mot	700051	Binh Duong	17500.0000	40	30	0904589632
S001	Huu	Phu Tan	Ho Chi Minh	700002	Ho Chi Minh	15000.0000	50	35	0902361123
S005	Deb	Hoa Phu	Thu Dau Mot	700051	Binh Duong	13500.0000	60	48	0903213659
S004	Tien	Phu Hoa	Dai An	700023	Binh Duong	16500.0000	70	72	0908654723
S006	Tin	Chanh My	Da Lat	700032	Lam Dong	20000.0000	80	55	0907853497
S002	Phat	Tan An	Hanoi	700005	Hanoi	25000.0000	100	110	0903216542

48. Select the salesman's details sorted ascending by their salary and descending by achieved target.

```
426 •  SELECT *
427    FROM Salesman
428    ORDER BY Salary ASC, Target_Achieved DESC;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Salesman_Number	Salesman_Name	Address	City	Pincode	Province	Salary	Sales_Target	Target_Achieved	Phone
S005	Deb	Hoa Phu	Thu Dau Mot	700051	Binh Duong	13500.0000	60	48	0903213659
S001	Huu	Phu Tan	Ho Chi Minh	700002	Ho Chi Minh	15000.0000	50	35	0902361123
S004	Tien	Phu Hoa	Dai An	700023	Binh Duong	16500.0000	70	72	0908654723
S003	Khoa	Phu Hoa	Thu Dau Mot	700051	Binh Duong	17500.0000	40	30	0904589632
S006	Tin	Chanh My	Da Lat	700032	Lam Dong	20000.0000	80	55	0907853497
S002	Phat	Tan An	Hanoi	700005	Hanoi	25000.0000	100	110	0903216542

49. Display salesman names and phone numbers in descending order based on their sales target.

```
431 •  SELECT Salesman_Name, Phone
432    FROM Salesman
433    ORDER BY Sales_Target DESC;
```

Result Grid | Filter Rows:

Salesman_Name	Phone
Phat	0903216542
Tin	0907853497
Tien	0908654723
Deb	0903213659
Huu	0902361123
Khoa	0904589632

50. Display the product name, cost price, and sell price sorted by quantity in hand.

```
436 •  SELECT Product_Name, Cost_Price, Sell_Price
437    FROM product
438    ORDER BY Quantity_On_Hand;
```

Result Grid | Filter Rows: | Export:

Product_Name	Cost_Price	Sell_Price
Mouse	105.0000	100.0000
TV	800.0000	1000.0000
Laptop	1100.0000	1500.0000
Pen	8.0000	12.0000
Modem	230.0000	250.0000
AC	300.0000	400.0000
Keyboard	90.0000	120.0000
Headset	40.0000	50.0000

51. Retrieve the clients' names in ascending order.

```
441 •  SELECT Client_Name
442    FROM clients
443    ORDER BY Client_Name ASC;
```

Result Grid | Filter Rows:

Client_Name
Duong Thanh
Ho Nhu
Le Xuan
Mai Xuan
Nguyen Sy
Nguyen Thanh
Tran Hai
Tran Minh
Tran Tuan
Trinh Huu

52. Display client information based on order by their city.

```
446 •   SELECT *
447     FROM clients
448     ORDER BY City;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Conten

Client_Number	Client_Name	Address	City	Pincode	Province	Amount_Paid	Amount_Due
C103	Trinh Huu	Phu Loi	Da Lat	700051	Lam Dong	7000.0000	3200.0000
C108	Nguyen Sy	Tan An	Da Lat	700032	Lam Dong	15000.0000	1000.0000
C101	Mai Xuan	Phu Hoa	Dai An	700001	Binh Duong	10000.0000	5000.0000
C107	Nguyen Thanh	Hoa Phu	Dai An	700023	Binh Duong	8500.0000	7500.0000
C105	Ho Nhu	Chanh My	Hanoi	700005	Hanoi	7000.0000	150.0000
C110	Tran Minh	Phu My	Hanoi	700005	Hanoi	9000.0000	1000.0000
C106	Tran Hai	Phu Hoa	Ho Chi Minh	700002	Ho Chi Minh	7000.0000	1300.0000
C109	Duong Thanh	Phu Hoa	Ho Chi Minh	700011	Ho Chi Minh	12000.0000	8000.0000
C102	Le Xuan	Phu Hoa	Thu Dau Mot	700051	Binh Duong	18000.0000	3000.0000
C104	Tran Tuan	Phu Tan	Thu Dau Mot	700080	Binh Duong	8000.0000	0.0000

53. Display client information based on order by their address and city.

```
451 •   SELECT *
452     FROM clients
453     ORDER BY Address, City;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content

Client_Number	Client_Name	Address	City	Pincode	Province	Amount_Paid	Amount_Due
C105	Ho Nhu	Chanh My	Hanoi	700005	Hanoi	7000.0000	150.0000
C107	Nguyen Thanh	Hoa Phu	Dai An	700023	Binh Duong	8500.0000	7500.0000
C101	Mai Xuan	Phu Hoa	Dai An	700001	Binh Duong	10000.0000	5000.0000
C106	Tran Hai	Phu Hoa	Ho Chi Minh	700002	Ho Chi Minh	7000.0000	1300.0000
C109	Duong Thanh	Phu Hoa	Ho Chi Minh	700011	Ho Chi Minh	12000.0000	8000.0000
C102	Le Xuan	Phu Hoa	Thu Dau Mot	700051	Binh Duong	18000.0000	3000.0000
C103	Trinh Huu	Phu Loi	Da Lat	700051	Lam Dong	7000.0000	3200.0000
C110	Tran Minh	Phu My	Hanoi	700005	Hanoi	9000.0000	1000.0000
C104	Tran Tuan	Phu Tan	Thu Dau Mot	700080	Binh Duong	8000.0000	0.0000
C108	Nguyen Sy	Tan An	Da Lat	700032	Lam Dong	15000.0000	1000.0000

54. Display client information based on their city, sorted high to low based on amount due.

```
456 •   SELECT *
457     FROM clients
458     ORDER BY City, Amount_Due DESC;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content

Client_Number	Client_Name	Address	City	Pincode	Province	Amount_Paid	Amount_Due
C103	Trinh Huu	Phu Loi	Da Lat	700051	Lam Dong	7000.0000	3200.0000
C108	Nguyen Sy	Tan An	Da Lat	700032	Lam Dong	15000.0000	1000.0000
C107	Nguyen Thanh	Hoa Phu	Dai An	700023	Binh Duong	8500.0000	7500.0000
C101	Mai Xuan	Phu Hoa	Dai An	700001	Binh Duong	10000.0000	5000.0000
C110	Tran Minh	Phu My	Hanoi	700005	Hanoi	9000.0000	1000.0000
C105	Ho Nhu	Chanh My	Hanoi	700005	Hanoi	7000.0000	150.0000
C109	Duong Thanh	Phu Hoa	Ho Chi Minh	700011	Ho Chi Minh	12000.0000	8000.0000
C106	Tran Hai	Phu Hoa	Ho Chi Minh	700002	Ho Chi Minh	7000.0000	1300.0000
C102	Le Xuan	Phu Hoa	Thu Dau Mot	700051	Binh Duong	18000.0000	3000.0000
C104	Tran Tuan	Phu Tan	Thu Dau Mot	700080	Binh Duong	8000.0000	0.0000

55. Display the data of sales orders depending on their delivery status from the current date to the old date.

```
461 •   SELECT *
462     FROM SalesOrder
463     ORDER BY Delivery_Date DESC;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Order_Number	Order_Date	Client_Number	Salesman_Number	Delivery_Status	Delivery_Date	Order_Status
O20007	2022-04-03	C106	S001	Delivered	2022-05-08	Successful
O20010	2022-04-29	C106	S006	Delivered	2022-05-08	Successful
O20004	2022-02-10	C104	S003	Delivered	2022-04-23	Successful
O20003	2022-01-31	C103	S002	Delivered	2022-04-03	Successful
O20002	2022-01-25	C102	S003	Delivered	2022-02-15	Cancelled
O20001	2022-01-15	C101	S003	Delivered	2022-02-10	Successful
O20005	2022-02-18	C101	S003	On Way	NULL	Cancelled
O20006	2022-02-22	C105	S005	Ready to Ship	NULL	In Process
O20008	2022-04-16	C102	S006	Ready to Ship	NULL	In Process
O20009	2022-04-24	C101	S004	On Way	NULL	Successful
O20011	2022-05-08	C107	S005	Ready to Ship	NULL	Cancelled
O20012	2022-05-12	C108	S004	On Way	NULL	Successful
O20013	2022-05-16	C109	S001	Ready to Ship	NULL	In Process
O20014	2022-05-16	C110	S001	On Way	NULL	Successful

56. Display the last five sales order information from the sales order table.

```
466 •   SELECT *
467     FROM SalesOrder
468     ORDER BY Order_Number DESC
469     LIMIT 5;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Order_Number	Order_Date	Client_Number	Salesman_Number	Delivery_Status	Delivery_Date	Order_Status
O20014	2022-05-16	C110	S001	On Way	NULL	Successful
O20013	2022-05-16	C109	S001	Ready to Ship	NULL	In Process
O20012	2022-05-12	C108	S004	On Way	NULL	Successful
O20011	2022-05-08	C107	S005	Ready to Ship	NULL	Cancelled
O20010	2022-04-29	C106	S006	Delivered	2022-05-08	Successful

57. Count the pincode in the client table.

```
472 •   SELECT COUNT(DISTINCT Pincode)
473     AS Number_Of_Pincode
474     FROM clients;
```

Result Grid | Filter Rows:

Number_Of_Pincode
8

58. How many clients are living in Binh Duong?

```
477 •   SELECT COUNT(*)
478     AS Binh_Duong_Clients
479     FROM clients
480     WHERE Province like 'Binh Duong';
```

Result Grid | Filter Rows:

Binh_Duong_Clients
4

59. Count the clients for each province.

```
483 •   SELECT Province, COUNT(*)
484     AS Number_Of_Clients
485     FROM clients
486     GROUP BY Province;
```

Result Grid | Filter Rows:

Province	Number_Of_Clients
Binh Duong	4
Lam Dong	2
Hanoi	2
Ho Chi Minh	2

60. If there are more than three clients, find the name of the province and the number of clients in each province.

```
489 •   SELECT Province, COUNT(*)
490     AS Number_Of_Clients
491     FROM clients
492     GROUP BY Province
493     HAVING COUNT(*) > 3;
```

Result Grid | Filter Rows:

Province	Number_Of_Clients
Binh Duong	4

61. Display product number and product name and count number orders of each product more than 1 (in ascending order).

```
496 •  SELECT p.Product_Number, p.Product_Name, COUNT(so.Order_Number)
497    AS Order_Count
498    FROM product p
499    JOIN SalesOrderDetails so ON p.Product_Number = so.Product_Number
500    GROUP BY p.Product_Number, p.Product_Name
501    HAVING COUNT(so.Order_Number) > 1
502    ORDER BY Order Count ASC;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Product_Number	Product_Name	Order_Count
P1008	Headset	2
P1007	Keyboard	2
P1004	Modem	2
P1006	Mouse	2
P1005	Pen	2
P1002	Laptop	4
P1001	TV	4

62. Find products which have more quantity on hand than 20 and less than average of quantity on hand.

```
505 •  SELECT *
506    FROM product
507    WHERE Quantity_On_Hand > 20
508    AND Quantity_On_Hand < (SELECT AVG(Quantity_On_Hand) FROM product);
```

Result Grid | Filter Rows: | Edit: | Export/Import:

Product_Number	Product_Name	Quantity_On_Hand	Quantity_Sell	Sell_Price	Cost_Price
P1003	AC	23	10	400.0000	300.0000
P1004	Modem	22	16	250.0000	230.0000