EASTERN INTERNATIONAL UNIVERSITY Practice Assignment – Quarter 4, 2022-2023

SCHOOL OF COMPUTING Course Name: Database

AND INFORMATION TECHNOLOGY Course Code: CSE 301

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Practice Assignment 5

Course Code. CSL 301

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Student ID: 2031200016

Instruction:

* Students are allowed to write their answers (like SQL queries, Screen shot of outputs, etc.) in word file (Answer sheet) provided by instructor. After finishing the assignment, students must convert the word file (Answer sheet) into a PDF file. Finally, students upload the file in Moodle.

1. Create the following tables in a new database 'Assignment3':

Clients(<u>Client Number</u>, Client_Name, Address, City, Pincode, Province, Amount_Paid, Amount_Due)

Product(<u>Product Number</u>, Product_Name, Quantity_On_Hand, Quantity_Sell, Sell_Price, Cost_Price)

Salesman (<u>Salesman Number</u>, Salesman _Name, Address, City, Pincode, Province, Salary, Sales_Target,
Target_Achieve, Phone)

Salesorder(<u>Order Number</u>, Order_Date, <u>Client Number</u>, <u>Salesman Number</u>, Delivery_Status, Delivery Date, Order Status)

Salesorderdetails(Order Number, Product Number, Order Quantity)

Insert more values data below:

Salesman

('S007','Quang','Chanh My','Da Lat',700032,'Lam Dong',25000,90,95,'0900853487') ('S008','Hoa','Hoa Phu','Thu Dau Mot',700051,'Binh Duong',13500,50,75,'0998213659')

Salesorder

('O20015','2022-05-12','C108','S007','On Way', '2022-05-15','Successful') ('O20016','2022-05-16','C109','S008','Ready to Ship',null,'In Process')

Salesorderdetails

('O20015','P1008',15),

('O20015','P1007',10),

('O20016','P1007',20);

('O20016','P1003',5);

1. Using Joining table to combine rows from more tables. (NATURAL JOIN, INNER JOIN, LEFT JOIN, RIGHT JOIN, CROSS JOIN, SEFT JOIN)

Supported Types of Joins in MySQL

INNER JOIN: Returns records that have matching values in both tables

LEFT JOIN: Returns all records from the left table, and the matched records from the right table

RIGHT JOIN: Returns all records from the right table, and the matched records from the left table

CROSS JOIN: Returns all records from both tables

INNER JOIN

LEFT JOIN

RIGHT JOIN

TABLE1

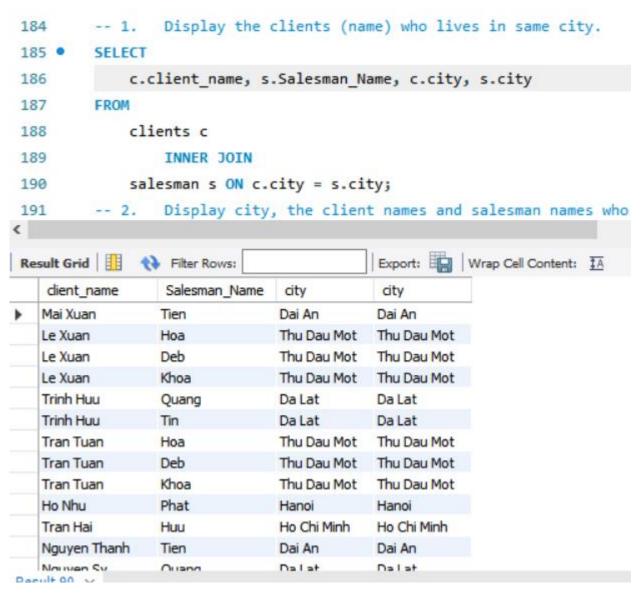
TABLE2

TABLE2

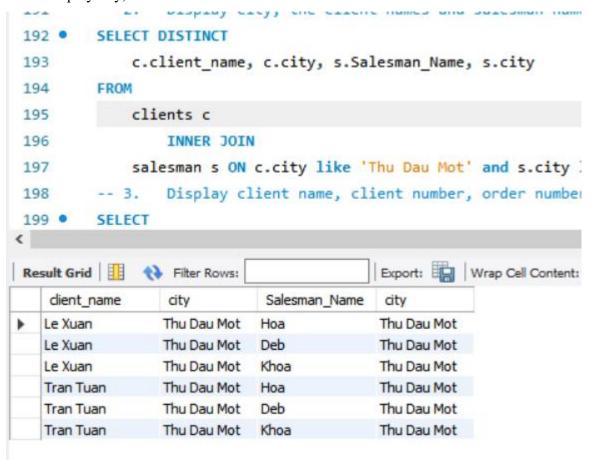
TABLE2

TABLE2

1. Display the clients (name) who lives in same city.



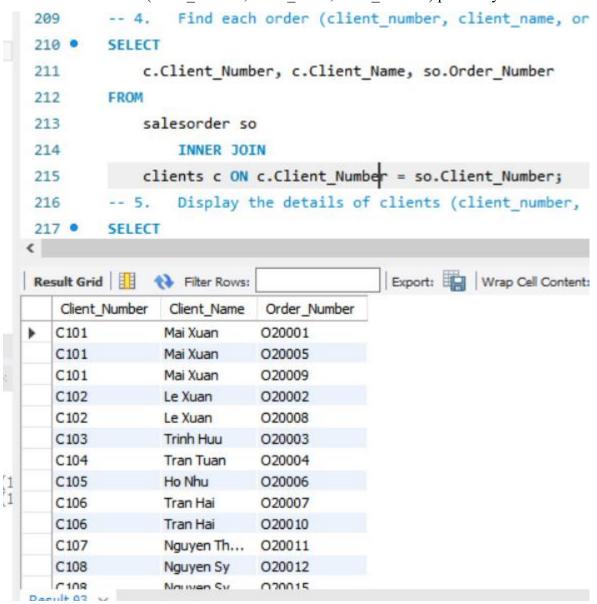
2. Display city, the client names and salesman names who are lives in "Thu Dau Mot" city.



3. Display client name, client number, order number, salesman number, and product number for each order.

```
Display Cilent Hame, Cilent Hamber, Order Hamber, Salesman H
199 •
          SELECT
            c.Client Name,
 200
201
            c.Client_Number,
            so.Order Number,
202
            so.Salesman_Number,
 203
204
            sod.Product Number
205
          FROM
206
            Clients c
            JOIN Salesorder so ON c.Client Number = so.Client Number
 207
            JOIN Salesorderdetails sod ON so.Order_Number = sod.Order_Number;
 208
                   Find each order (client number, client name, order number) p
 209
<
Result Grid
                                               Export: Wrap Cell Content: TA
                Filter Rows:
    Client Name
                Client Number
                              Order Number
                                             Salesman Number
                                                              Product Number
   Mai Xuan
                C101
                              020001
                                            S003
                                                             P1001
   Mai Xuan
                C101
                              020001
                                            S003
                                                             P1002
                                            5003
   Mai Xuan
                C101
                              020005
                                                             P1001
   Mai Xuan
                C101
                              020005
                                            S003
                                                             P1008
   Mai Xuan
                C101
                              O20005
                                            S003
                                                             P1002
   Mai Xuan
                C101
                                            S004
                              020009
                                                             P1008
                                            S003
   Le Xuan
                C102
                              020002
                                                             P1007
   Le Xuan
                C102
                              020008
                                            S006
                                                             P1004
   Trinh Huu
                C103
                              020003
                                            5002
                                                             P1003
   Tran Tuan
                C104
                              020004
                                            S003
                                                             P1004
   Ho Nhu
                C105
                              020006
                                            S005
                                                             P1002
                C106
                                            S001
   Tran Hai
                              020007
                                                             P1005
   Tran Hai
                CINE
                              C20010
                                            SUUVE
                                                             DIANA
Result 92 V
```

(1 (1 4. Find each order (client number, client name, order number) placed by each client.



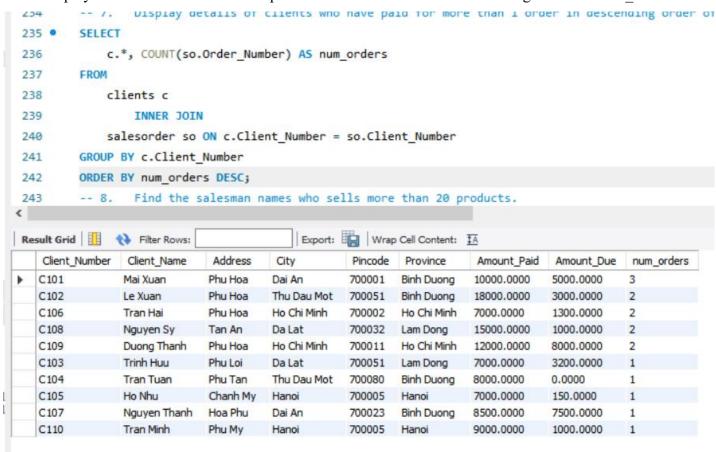
5. Display the details of clients (client_number, client_name) and the number of orders which is paid by them.

```
217 •
         SELECT
218
             c.client number, c.client name, COUNT(so.Order Number)
219
         FROM
             clients c
220
221
                 JOIN
             salesorder so ON c.Client Number = so.Client Number
222
             where Order Status LIKE 'Successful'
223
         GROUP BY client number , client name;
224
         -- 6. Display the details of clients (client number, client
225
Result Grid
                                            Export: Wrap Cell Content: TA
              Filter Rows:
   dient number
                dient name
                               COUNT(so.Order Number)
  C101
               Mai Xuan
                              2
  C103
                              1
               Trinh Huu
  C104
               Tran Tuan
                              1
  C106
               Tran Hai
                              2
  C108
               Nguyen Sy
                              2
  C110
               Tran Minh
                              1
```

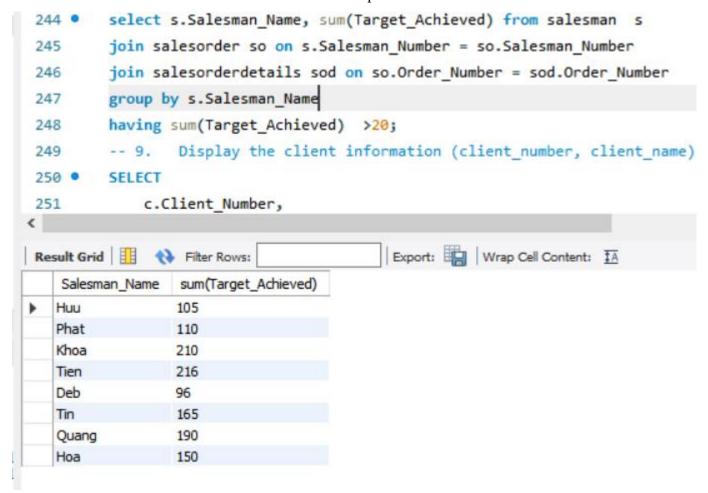
6. Display the details of clients (client number, client name) who have paid for more than 2 orders.

```
SELECT
226
             c.Client Number, c.Client Name, COUNT(so.Order Number) as num orders
227
         FROM
228
             clients c
229
                 JOIN
230
             salesorder so ON c.Client Number = so.Client Number
231
         GROUP BY client number , client name
232
         having COUNT(so.Order Number)>2;
233
Result Grid
                                          Export: Wrap Cell Content: TA
             Filter Rows:
   Client Number
                           num orders
                Client Name
  C101
               Mai Xuan
                           3
```

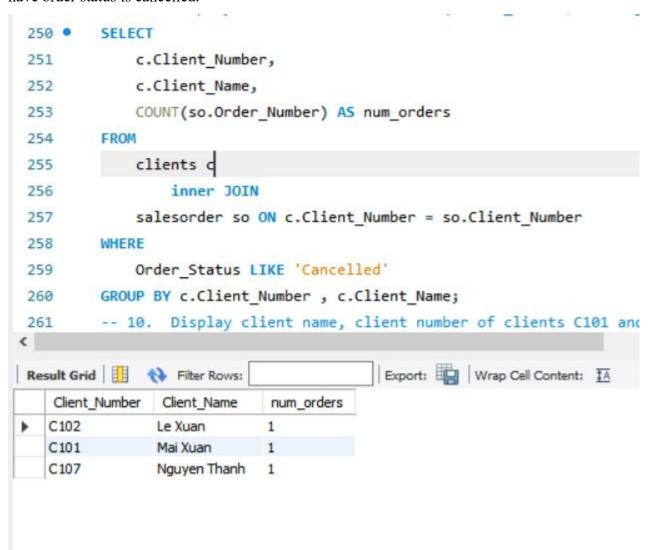
7. Display details of clients who have paid for more than 1 order in descending order of client number.



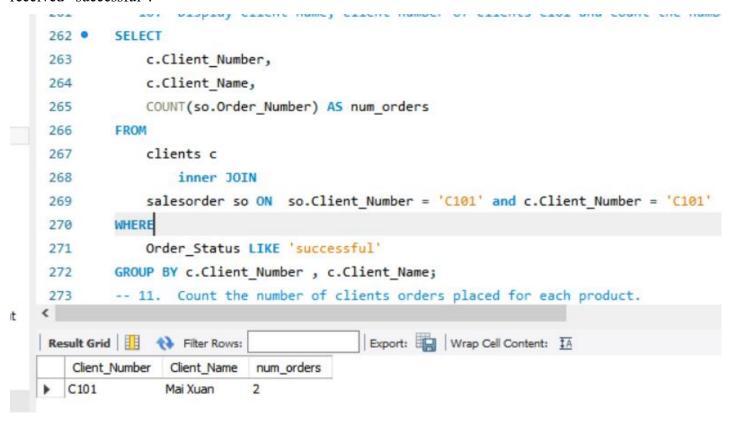
8. Find the salesman names who sells more than 20 products.



9. Display the client information (client_number, client_name) and order number of those clients who have order status is cancelled.



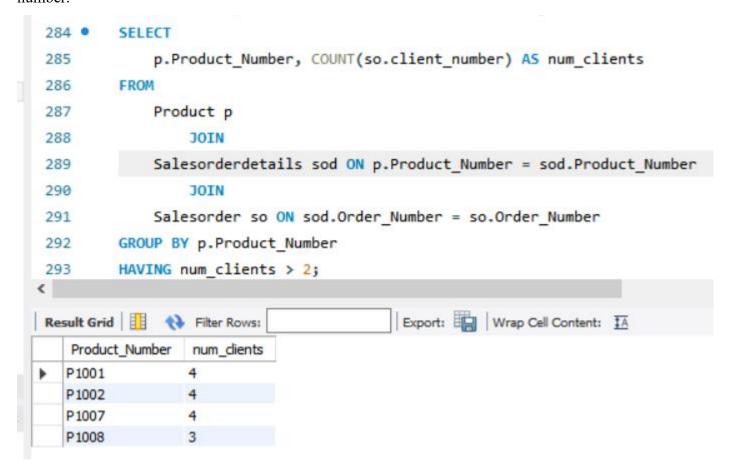
10. Display client name, client number of clients C101 and count the number of orders which were received "successful".



11. Count the number of clients orders placed for each product.

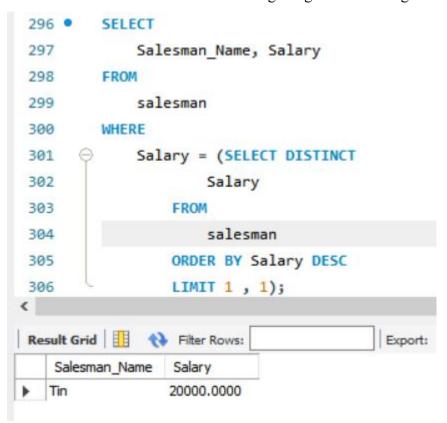
```
274 •
            SELECT
    275
                p.Product_Name,
                p.Product Number,
    276
                COUNT(sod.Order_Number) AS num_clients
    277
    278
            FROM
                product p
    279
    280
                    JOIN
    281
                salesorderdetails sod ON p.Product_Number = sod.Product_Number
            GROUP BY p.Product Name , p.Product Number;
    282
            -- 12. Find product numbers that were ordered by more than two clients t
    283
    284 •
            SELECT
                p.Product_Number, COUNT(so.client_number) AS num_clients
    285
   <
                                           Export: Wrap Cell Content: IA
   Product_Name Product_Number
                                 num_dients
      AC
                                2
                  P1003
                                3
      Headset
                  P1008
      Keyboard
                  P1007
                                4
      Laptop
                  P1002
                                4
      Modem
                  P1004
                                2
                                2
      Mouse
                  P1006
                                2
      Pen
                  P1005
(1
      TV
                  P1001
                                4
```

12. Find product numbers that were ordered by more than two clients then order in descending by product number.

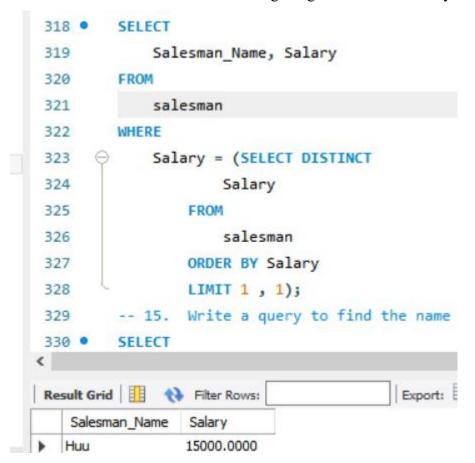


b) Using nested query with operator (IN, EXISTS, ANY and ALL)

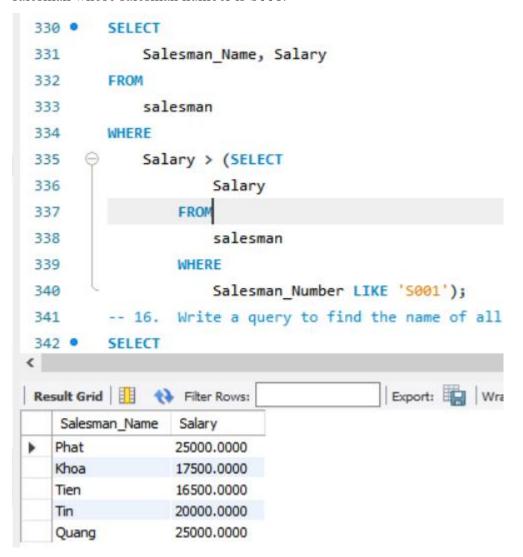
13. Find the salesman's names who is getting the second highest salary.



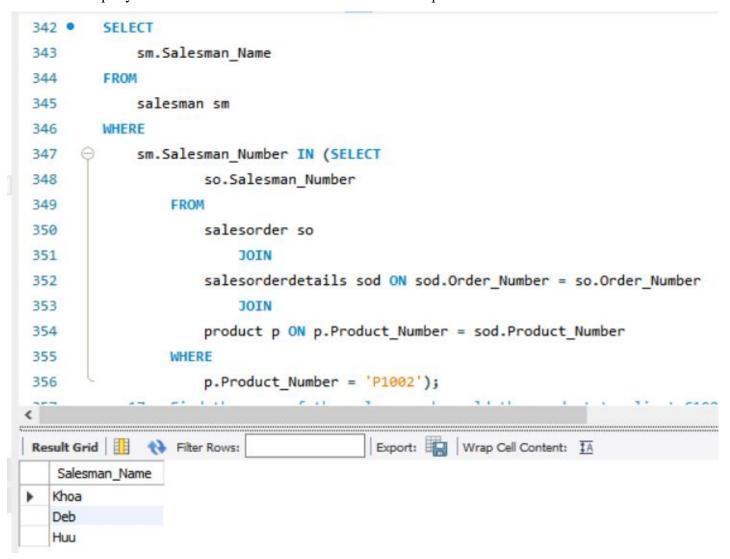
14. Find the salesman's names who is getting second lowest salary.



15. Write a query to find the name and the salary of the salesman who have a higher salary than the salesman whose salesman number is S001.



16. Write a query to find the name of all salesman who sold the product has number: P1002.



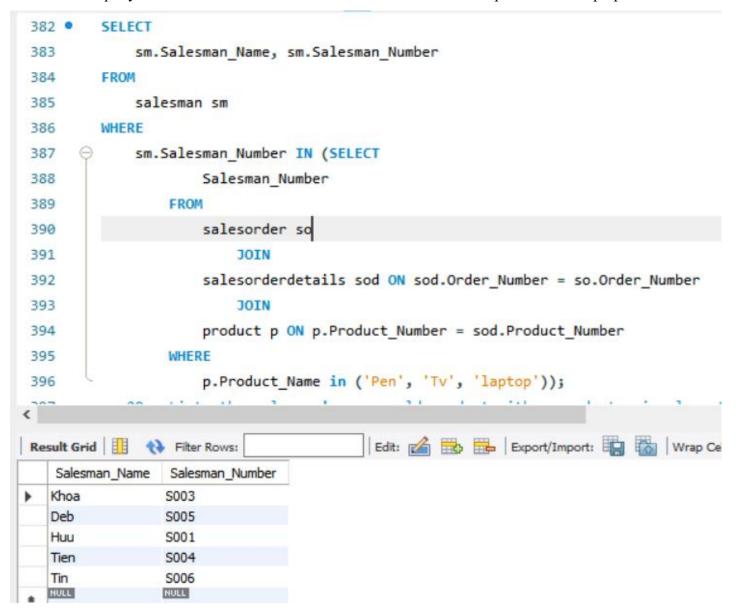
17. Find the name of the salesman who sold the product to client C108 with delivery status is "delivered".

```
358
        SELECT
            sm.Salesman Name
359
360
        FROM
361
             salesman sm
362
        WHERE
             sm.Salesman Number IN (SELECT
363
                     Salesman Number
364
365
                 FROM
                     salesorder so
366
367
                         JOIN
                     clients c ON c.Client_Number = so.Client_Number
368
369
                WHERE
                     so.Client Number = 'C108'
370
                         AND so.Delivery_Status = 'Delivered');
371
         -- 18. Display lists the ProductName in ANY records in the sale O
372
                                         Export: Wrap Cell Content: TA
Result Grid
             Filter Rows:
   Salesman_Name
```

18. Display lists the ProductName in ANY records in the sale Order Details table has Order Quantity equal to 5.



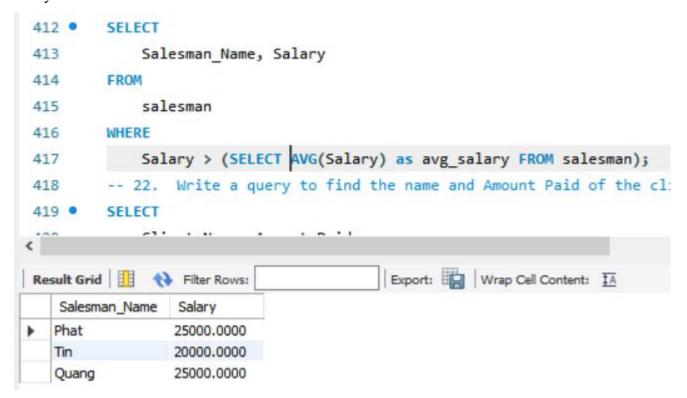
19. Write a query to find the name and number of the salesman who sold pen or TV or laptop.



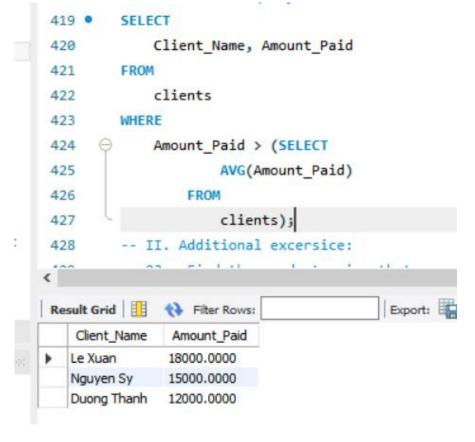
20. Lists the salesman's name sold product with a product price less than 800 and Quantity_On_Hand more than 50.

```
398 •
        SELECT distinct
             salesman.Salesman Name, product.Product Name
399
400
        FROM
             salesman
401
                 INNER JOIN
402
             salesorder ON salesman_Salesman_Number = salesorder.Salesman_Number
403
404
                 INNER JOIN
             salesorderdetails ON salesorder.Order_Number = salesorderdetails.Order_Number
405
                 INNER JOIN
406
             product ON product.Product Number = salesorderdetails.Product Number
407
        WHERE
408
             product.Cost_Price < 800
409
                 AND product.Quantity_On_Hand > 50;
410
411
         -- 21.
                 Write a query to find the name and salary of the salesman whose salary is g
Result Grid Filter Rows:
                                          Export: Wrap Cell Content: IA
   Salesman_Name
                 Product_Name
  Khoa
                Headset
                Headset
  Tien
  Quang
                Headset
```

21. Write a query to find the name and salary of the salesman whose salary is greater than the average salary.



22. Write a query to find the name and Amount Paid of the clients whose amount paid is greater than the average amount paid.

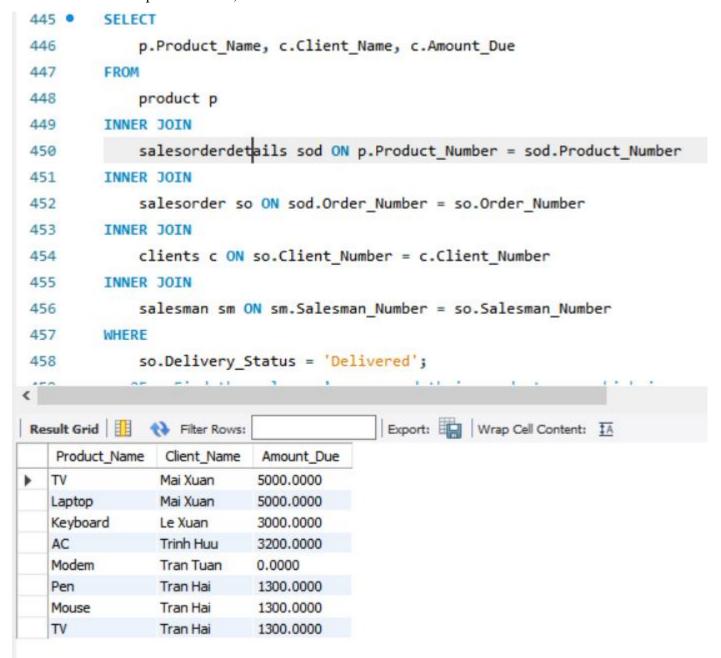


II. Additional excersice:

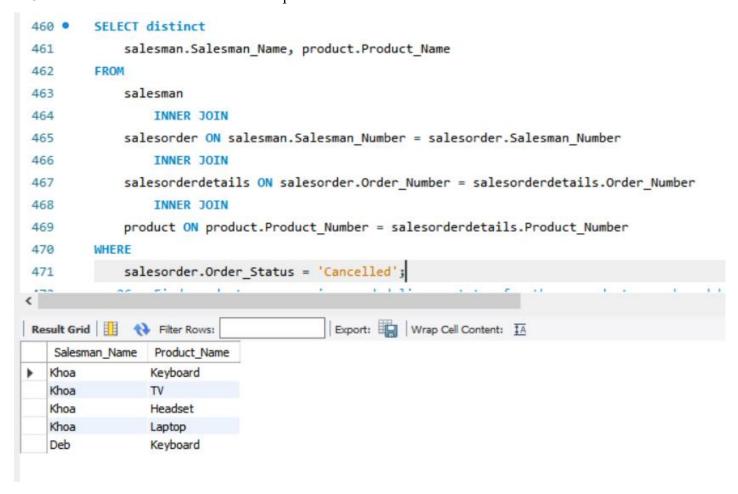
23. Find the product price that was sold to Le Xuan.

```
430 •
        SELECT
            p.Product Name, p.Sell Price
431
432
        FROM
433
            product p
        INNER JOIN
434
435
            salesorderdetails sod ON p.Product Number = sod.Product Number
436
        INNER JOIN
            salesorder so ON sod.Order Number = so.Order Number
437
438
        INNER JOIN
            clients c ON so.Client Number = c.Client Number
439
440
        INNER JOIN
            salesman sm ON sm.Salesman Number = so.Salesman Number
441
442
        WHERE
            c.Client Name LIKE 'Le Xuan';
443
444
        -- 24. Determine the product name, client name and amount due that wa
                                         Export: Wrap Cell Content: TA
Result Grid
             Filter Rows:
   Product_Name
                Sell_Price
  Keyboard
               120.0000
  Modem
               250.0000
```

24. Determine the product name, client name and amount due that was delivered.



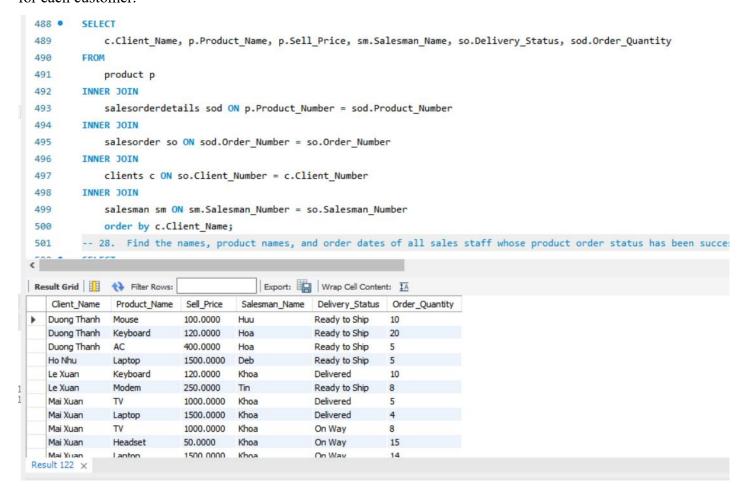
25. Find the salesman's name and their product name which is cancelled.



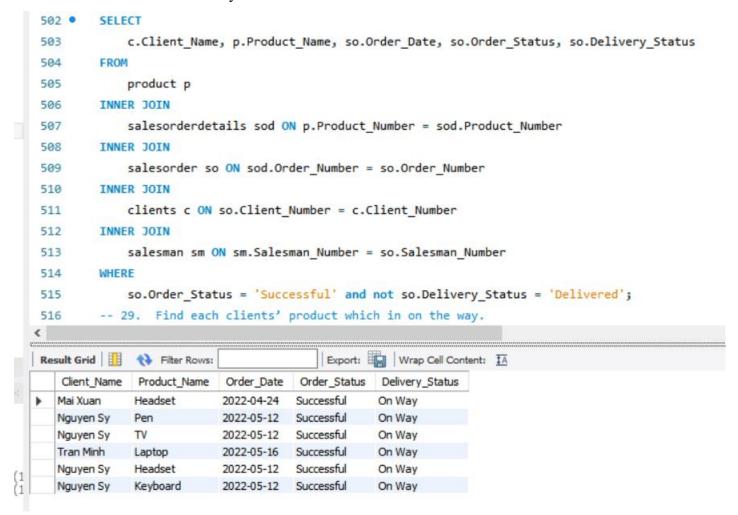
26. Find product names, prices and delivery status for those products purchased by Nguyen Thanh.

```
473 •
        SELECT
474
             p.Product Name, p.Sell Price, so.Delivery Status
475
        FROM
             product p
476
        INNER JOIN
477
             salesorderdetails sod ON p.Product Number = sod.Product Number
478
479
        INNER JOIN
480
             salesorder so ON sod.Order Number = so.Order Number
        INNER JOIN
481
             clients c ON so.Client_Number = c.Client_Number
482
        INNER JOIN
483
             salesman sm ON sm.Salesman Number = so.Salesman Number
484
485
        WHERE
             c.Client Name LIKE 'Nguyen Thanh';
486
         -- 27. Display the product name, sell price, salesperson name, delive
487
                                          Export: Wrap Cell Content: TA
Result Grid
             Filter Rows:
   Product Name
                Sell Price
                         Delivery Status
  Keyboard
               120.0000
                        Ready to Ship
```

27. Display the product name, sell price, salesperson name, delivery status, and order quantity information for each customer.



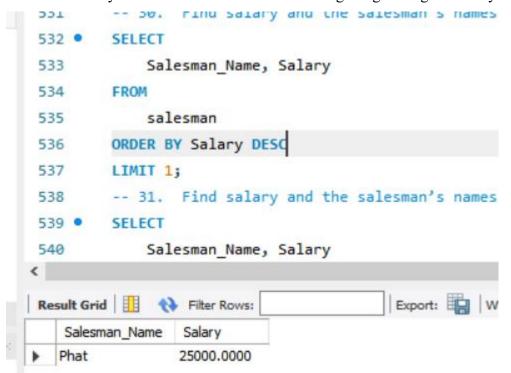
28. Find the names, product names, and order dates of all sales staff whose product order status has been successful but the items have not yet been delivered to the client.



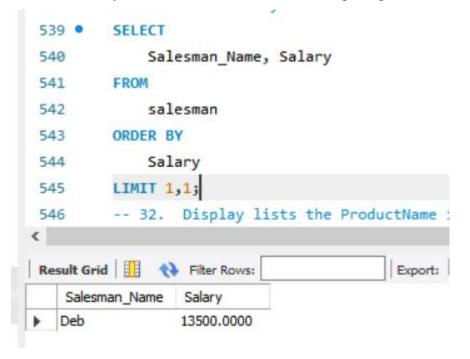
29. Find each clients' product which in on the way.

```
517 •
         SELECT
             c.Client Name, p.Product Name , so.Delivery Status
518
519
         FROM
             product p
520
         INNER JOIN
521
522
             salesorderdetails sod ON p.Product Number = sod.Product Number
523
         INNER JOIN
             salesorder so ON sod.Order Number = so.Order Number
524
525
         INNER JOIN
             clients c ON so.Client_Number = c.Client_Number
526
527
         INNER JOIN
528
             salesman sm ON sm.Salesman Number = so.Salesman Number
529
         WHERE
             so.Delivery_Status = 'on way';
530
         -- 30. Find salary and the salesman's names who is getting the highest salary.
531
532 •
         SELECT
<
                                          Export: Wrap Cell Content: TA
Client_Name
              Product_Name
                           Delivery_Status
   Mai Xuan
              TV
                           On Way
              Headset
   Mai Xuan
                           On Way
   Mai Xuan
              Laptop
                           On Way
   Mai Xuan
              Headset
                           On Way
   Nguyen Sy
              Pen
                           On Way
   Nguyen Sy
              TV
                           On Way
   Tran Minh
              Laptop
                           On Way
              Headset
                           On Way
   Nguyen Sy
   Nguyen Sy
              Keyboard
                           On Way
```

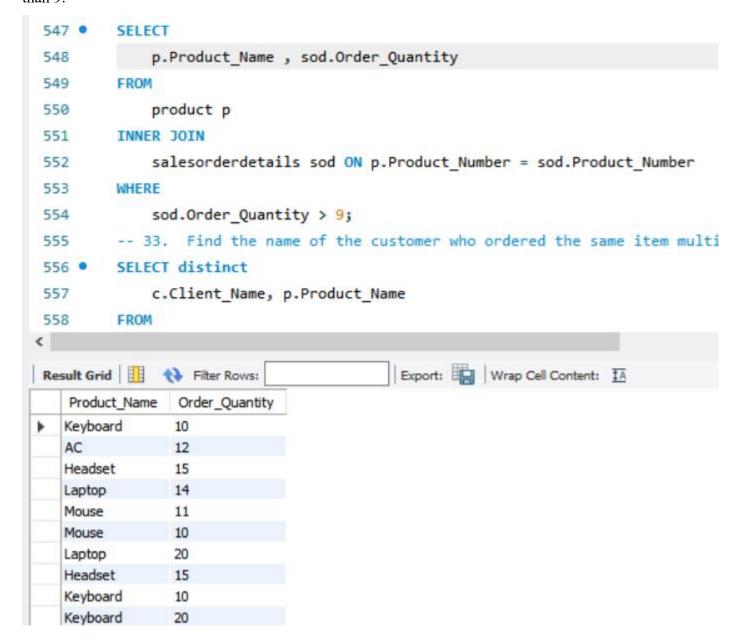
30. Find salary and the salesman's names who is getting the highest salary.



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



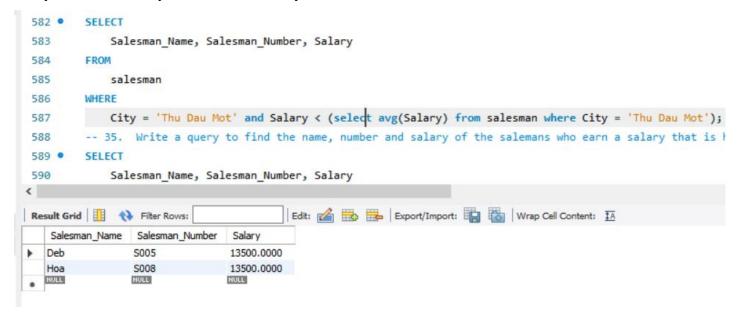
32. Display lists the ProductName in ANY records in the sale Order Details table has Order Quantity more than 9.



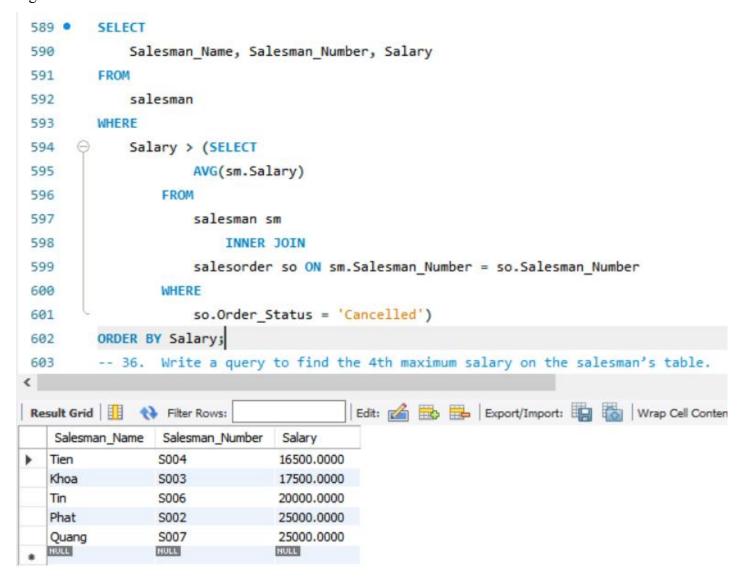
33. Find the name of the customer who ordered the same item multiple times.

```
569 •
         SELECT
570
             c.Client Name
571
        FROM
             clients c
572
573
                 JOIN
574
             (SELECT
575
                 so.Client Number, sod.Product Number
576
             FROM
577
                 salesorder so
578
             JOIN salesorderdetails sod ON so.Order Number = sod.Order Number
             GROUP BY so.Client Number, sod.Product Number
579
             HAVING COUNT(*) > 1) sub ON c.Client Number = sub.Client Number;
580
581
         -- 34. Write a query to find the name, number and salary of the saleman
582 •
        SELECT
                                          Export: Wrap Cell Content: TA
Result Grid
              Filter Rows:
   Client Name
  Mai Xuan
  Mai Xuan
  Mai Xuan
```

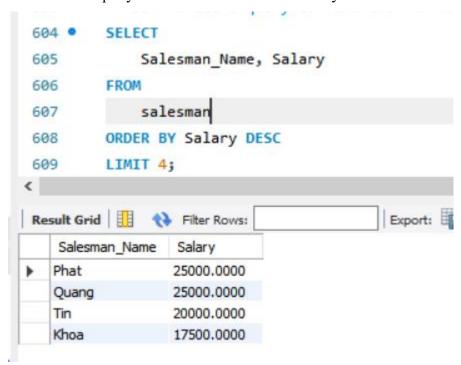
34. Write a query to find the name, number and salary of the salemans who earns less than the average salary and works in any of Thu Dau Mot city.



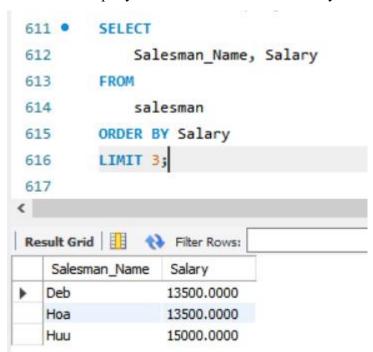
35. Write a query to find the name, number and salary of the salemans who earn a salary that is higher than the salary of all the salesman have (Order_status = 'Cancelled'). Sort the results of the salary of the lowest to highest.



36. Write a query to find the 4th maximum salary on the salesman's table.



37. Write a query to find the 3th minimum salary in the salesman's table.



Link github: https://github.com/kaito7love/CSE301.git