EASTERN INTERNATIONAL UNIVERSITY Practice Assignment – Quarter 1, 2024-2025

SCHOOL OF COMPUTING Course Name: Database

AND INFORMATION TECHNOLOGY Course Code: CSE 301

Y₀ □ m Student's Full Name:

Practice Assignment 6 Student ID:

Instruction:

I. Use salemanagement database and do following tasks:

A. Add, delete, update value for the columns in table related to calculate new values and constraint.

Note: executing the UPDATE command: In MySQL Workbench if announcement is 1175 error.

- 1. Go to Edit --> Preferences
- 2. Click "SQL Editor" tab and uncheck "Safe Updates" check box
- 3. Query --> Reconnect to Server // logout and then login
- 4. Now execute your SQL query

Or SET SQL SAFE UPDATES = 0;

1. How to check constraint in a table?

Example:

 ${\tt SELECT\ CONSTRAINT_NAME,\ CONSTRAINT_TYPE}$

 $FROM\ INFORMATION_SCHEMA.TABLE_CONSTRAINTS$

^{*} Students are allowing 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.

WHERE TABLE NAME =

'salesman';

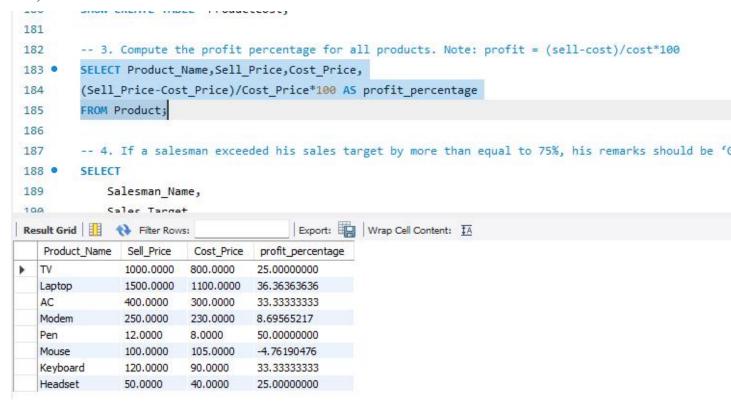
```
148
         -- lab 6
         -- A. Add, delete, update value for the columns in table related to calculate new values and constraint.
149
         -- 1. How to check constraint in a table?
150
         -- use to check all constraint in the table
151
         SELECT CONSTRAINT NAME, CONSTRAINT TYPE
152 0
         FROM INFORMATION SCHEMA. TABLE CONSTRAINTS
153
         WHERE TABLE NAME = 'salesman';
154
155
156 •
        Select *
         EDOM THEODMATTON SCHEMA TARLE CONSTRATHE
Export: Wrap Cell Content: IA
   CONSTRAINT_NAME CONSTRAINT_TYPE
 Phone
                    UNIQUE
  PRIMARY
                    PRIMARY KEY
  salesman_chk_1
                    CHECK
  salesman_chk_2
                    CHECK
  salesman_chk_3
                    CHECK
  Phone
                    UNIQUE
  PRIMARY
                    PRIMARY KEY
  salesman_chk_1
                    CHECK
  salesman_chk_2
                    CHECK
  salesman_chk_3
                    CHECK
  Phone
                    UNIQUE
  PRIMARY
                    PRIMARY KEY
  salesman_chk_1
                    CHECK
  salesman_chk_2
                    CHECK
  salesman_chk_3
                    CHECK
  Phone
                    UNIQUE
  PRIMARY
                    PRIMARY KEY
  salesman chk 1
                    CHECK
  salesman_chk_2
                    CHECK
  salesman_chk_3
                    CHECK
```

2. Create a separate table name as "ProductCost" from "Product" table, which contains the information about product name and its buying price.

```
173
         -- 2. Create a separate table name as "ProductCost" from "Product" table, which contains the information about product name and its buying price.
174 ● ☐ CREATE TABLE ProductCost ( -- drop table ProductCost
175
             Product_Name VARCHAR(25) NOT NULL UNIQUE,
             Cost_Price DECIMAL(15,4) NOT NULL,
176
177
             PRIMARY KEY (Product_Name),
             FOREIGN KEY (Product_Name) REFERENCES Product(Product_Name)
178
179
         SHOW CREATE TABLE ProductCost;
180 •
181
182
         -- 3. Compute the profit percentage for all products. Note: profit = (sell-cost)/cost*100
183 • SELECT Product_Name, Sell Price, Cost Price,
184
         (Sell_Price-Cost_Price)/Cost_Price*100 AS profit_percentage
185
         FROM Product:
186
127
         -- A If a calesman exceeded his cales target his more than equal to 75% his comarks should be 'Good'
Result Grid | III Filter Rows:
                                      Export: Wrap Cell Content: IA
              Create Table
ProductCost | CREATE TABLE `productcost` ( `Product Nam...
```

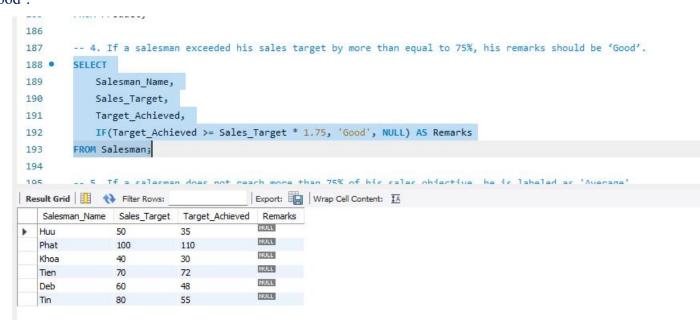
3. Compute the profit percentage for all products. Note: profit = (sell-

cost)/cost*100



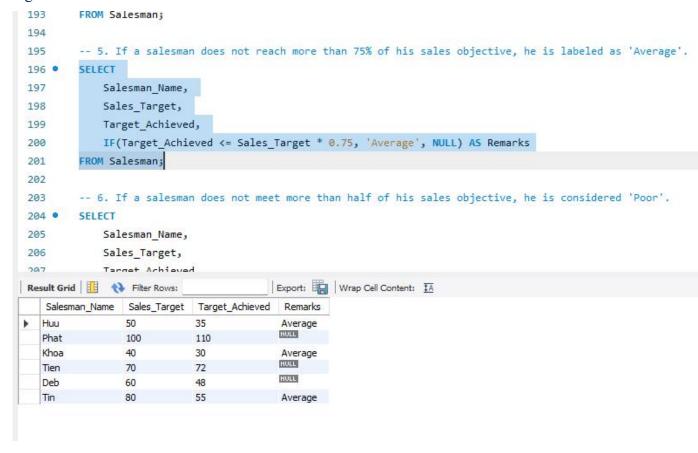
4. If a salesman exceeded his sales target by more than equal to 75%, his remarks should be

'Good'.



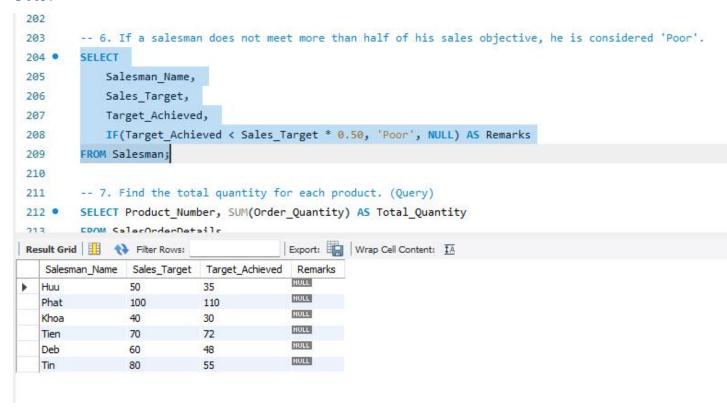
5. If a salesman does not reach more than 75% of his sales objective, he is labeled as

'Average'.



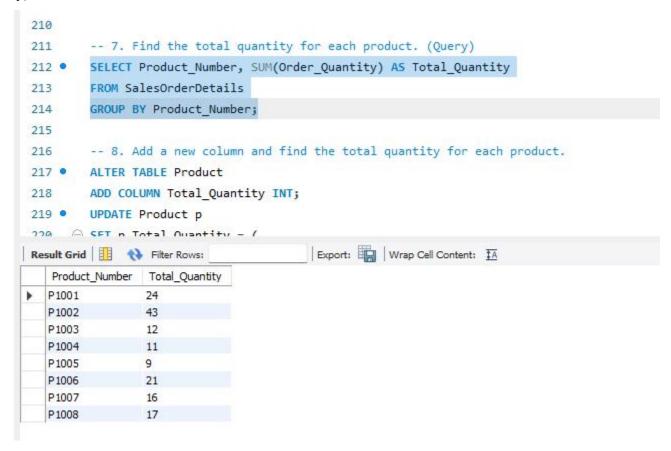
6. If a salesman does not meet more than half of his sales objective, he is considered

'Poor'.



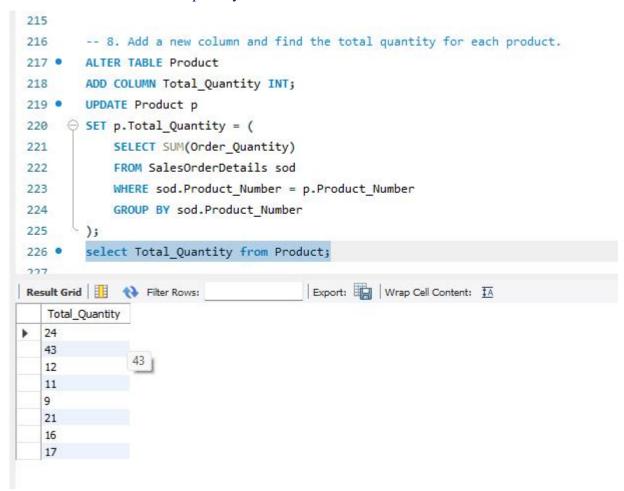
7. Find the total quantity for each product.

(Query)



8. Add a new column and find the total quantity for each

product.



9. If the Quantity on hand for each product is more than 10, change the discount rate to 10 otherwise set to 5.

```
-- 9. If the Quantity on hand for each product is more than 10, change the discount rate to 10 otherwise set to 5

ALTER TABLE Product ADD COLUMN Discount_Rate INT DEFAULT 0;

UPDATE Product

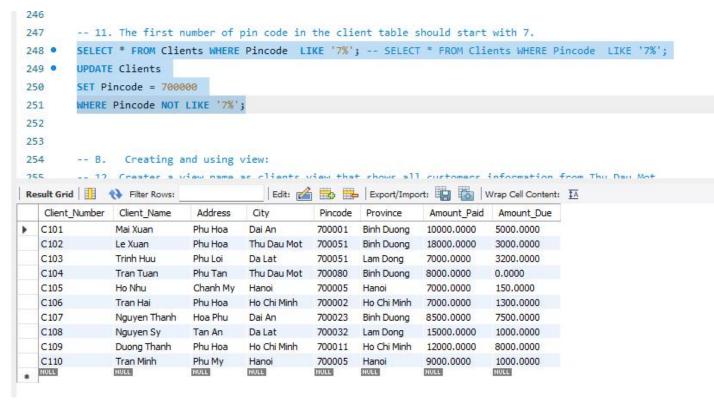
SET Discount_Rate = IF(Quantity_On_Hand > 10, 10, 5);

| 52 01:25:20 UPDATE Product SET Discount_Rate = IF(Quantity_On_Hand > 10, 10, 5)
```

10. If the Quantity on hand for each product is more than equal to 20, change the discount rate to 10, if it is between 10 and 20 then change to 5, if it is more than 5 then change to 3 otherwise set to 0.

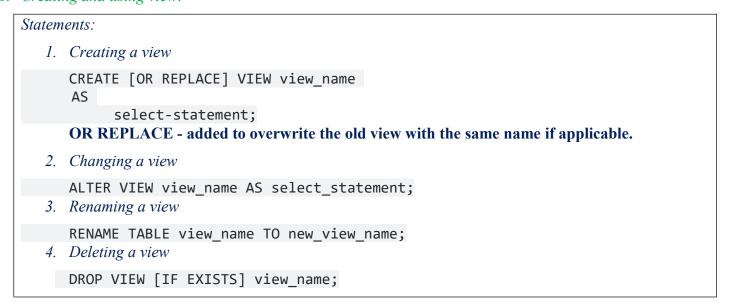
11. The first number of pin code in the client table should start with

7.



12.

B. Creating and using view:



```
256
        -- 12.
257
        -- Create a View
258 •
        CREATE VIEW view_name AS
259
        SELECT * FROM table_name;
260
        -- 2. Changing a view
        ALTER VIEW view_name AS SELECT column1, column2
261 •
262
        FROM table name;
        -- 3.Renaming a view
263
        RENAME TABLE view_name TO new_view_name;
264 •
        -- Deleting a view
        DROP VIEW IF EXISTS view name;
266 ●
267
```

13. Creates a view name as clients view that shows all customers information from Thu Dau

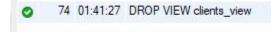
```
Mot.
 268
          -- 13. Creates a view name as clients_view that shows all customers information from Thu Dau Mot.
 269
          CREATE VIEW clients_view AS -- DROP VIEW clients_view;
          SELECT * FROM Clients
 271
          WHERE City = 'Thu Dau Mot';
 272
          SELECT * FROM clients_view ;
 273 •
 274
          -- 14. Drop the "client_view".
 275
 276 •
         DROP VIEW clients view;
Export: Wrap Cell Content: IA
    Client_Number
               Client_Name
                            Address
                                    City
                                               Pincode
                                                       Province
                                                                 Amount_Paid
                                                                             Amount_Due
   C102
                Le Xuan
                           Phu Hoa
                                               700051
                                                       Binh Duong
                                                                 18000,0000
                                                                            3000.0000
                                   Thu Dau Mot
   C104
                Tran Tuan
                           Phu Tan Thu Dau Mot 700080 Binh Duong
                                                                 8000.0000
                                                                            0.0000
```

274

275 -- 14. Drop the "client_view".

276 • DROP VIEW clients_view;

14. Drop the "client view". 277

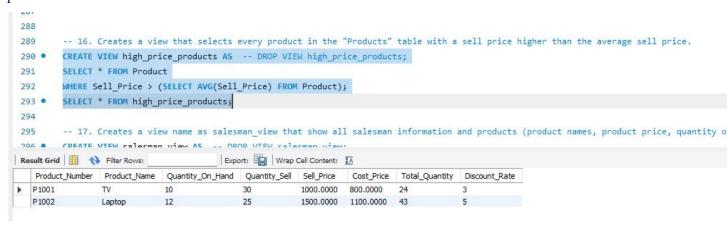


15. Creates a view name as clients_order that shows all clients and their order details from Thu Dau Mot.

```
278
        -- 15. Creates a view name as clients_order that shows all clients and their order details from Thu Dau Mot.
279
        CREATE VIEW clients_order AS -- DROP VIEW clients_order;
280 •
        SELECT c.Client Number, c.Client Name, so.Order Number, so.Order Date, so.Order Status
        FROM Clients c
282
        JOIN SalesOrder so ON c.Client_Number = so.Client_Number
283
        WHERE c.City = 'Thu Dau Mot';
284
        SELECT * FROM clients order;
285 •
286
287
289
        -- 16. Creates a view that selects every product in the "Products" table with a sell price higher than the average se
200 • CDEATE VIEW high price products AS -- DDOD VIEW high price products
Export: Wrap Cell Content: TA
   Client_Number Client_Name Order_Number Order_Date Order_Status
  C102
                         O20002
                                     2022-01-25 Cancelled
              Le Xuan
  C102
             Le Xuan O20008
                                   2022-04-16 In Process
  C104
              Tran Tuan 020004
                                     2022-02-10 Successful
```

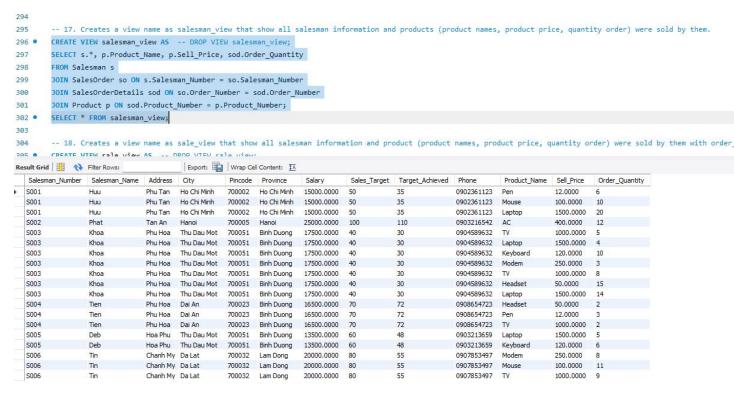
16. Creates a view that selects every product in the "Products" table with a sell price higher than the average sell

price.



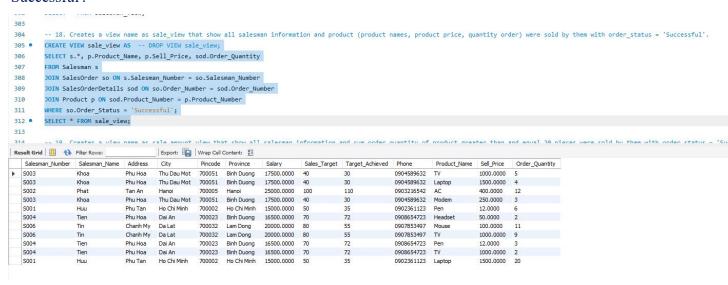
17. Creates a view name as salesman_view that show all salesman information and products (product names, product price, quantity order) were sold by

them.



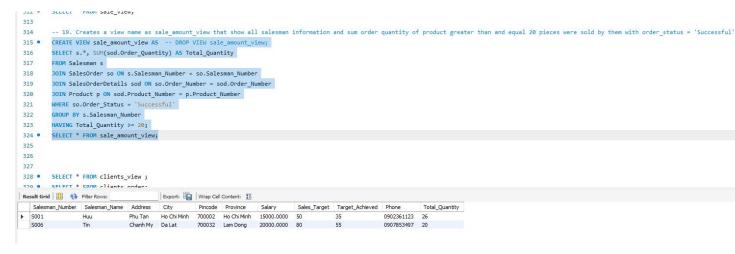
18. Creates a view name as sale_view that show all salesman information and product (product names, product price, quantity order) were sold by them with order_status =

'Successful'.



19. Creates a view name as sale_amount_view that show all salesman information and sum order quantity of product greater than and equal 20 pieces were sold by them with order status =

'Successful'.



II. Additional assignments about Constraint

20. Amount paid and amounted due should not be negative when you are inserting the data.

```
-- Extra assignment
-- 20.Amount paid and amounted due should not be negative when you are inserting the data.

SHOW COLUMNS FROM SalesOrder;

ALTER TABLE SalesOrder

ADD CONSTRAINT chk_amount_paid_due

CHECK (Amount Paid >= 0 AND Amount Due >= 0); -- avoid negative
```

21. Do not enforce the check constraint for

pincode.

```
-- 21.Do not enforce the check constraint for pincode.

344 • ALTER TABLE Clients

DROP CHECK chk_pincode; -- if there is already an created constraint for pincode in client

346
```

22. How to alter a check constraint enforcement

```
7 -- 22.How to alter a check constraint enforcement state?
3 -- enable
3 • ALTER TABLE Clients
state?
```

23. Remove the constraint from

```
56 -- 23.Remove the constraint from pincode; ( same as 20)
57 • ALTER TABLE Clients
pincode; 58

DROP CHECK chk_pincode;
```

24. The sell price and cost price should be

```
360 -- 24. The sell price and cost price should be unique.

361 • ALTER TABLE Product

362 ADD CONSTRAINT unique_price UNIQUE (Sell_Price, Cost_Price);
unique.
```

25. The sell price and cost price should not be

```
4 -- 25.The sell price and cost price should not be unique. (change above code)
5 • ALTER TABLE Product
6 DROP INDEX unique_price;
unique.7
```

26. Update the delivery status to "Delivered" for the product number

27. Change address and city to 'Phu Hoa' and 'Thu Dau Mot' where client number is

```
C104.
```

```
72
73 -- 27.Change address and city to 'Phu Hoa' and 'Thu Dau Mot' where client number is C104.
74 • UPDATE Clients
75 SET Address = 'Phu Hoa', City = 'Thu Dau Mot'
76 WHERE Client_Number = 'C104';
77
```

28. Add a new column to "Product" table named as "Exp Date", data type is

Date.

```
-- 28.Add a new column to "Product" table named as "Exp_Date", data type is Date.

379 • ALTER TABLE Product

380 ADD COLUMN Exp_Date DATE;

381
```

29. Add a new column to "Clients" table named as "Phone", data type is varchar and size is

```
15.

81

82 -- 29.Add a new column to "Clients" table named as "Phone", data type is varchar and size is 15.

83 • ALTER TABLE Clients

84 ADD COLUMN Phone VARCHAR(15);
```

30. Update remarks as "Good" for all

```
-- 30.Update remarks as "Good" for all salesman.

UPDATE Salesman

SET Remarks = 'Good';
salesman.
```

31. Change remarks to "bad" whose salesman number is

```
390 -- 31.Change remarks to "bad" whose salesman number is "S004".

391 • UPDATE Salesman

392 SET Remarks = 'Bad'

393 WHERE Salesman_Number = 'S004';
"S004".394
```

32. Modify the data type of "Phone" in "Clients" table with varchar from size 15 to size is

10.

```
-- 32.Modify the data type of "Phone" in "Clients" table with varchar from size 15 to size is 10.

ALTER TABLE Clients

MODIFY Phone VARCHAR(10);
```

33. Delete the "Phone" column from "Clients"

```
398
399 -- 33.Delete the "Phone" column from "Clients" table.
400 • ALTER TABLE Clients
401 DROP COLUMN Phone;
table.
```

34. alter table Clients drop column

```
402
403 -- 34.alter table Clients drop column Phone; (same as 32)
404 • ALTER TABLE Clients
405 DROP COLUMN Phone;
406
Phone;
407
```

35. Change the sell price of Mouse to

```
406
407 -- 35.Change the sell price of Mouse to 120.
408 • UPDATE Product
409 SET Sell_Price = 120
410 WHERE Product_Name = 'Mouse';
120. 411
```

36. Change the city of client number C104 to "Ben

```
2 -- 36.Change the city of client number C104 to "Ben Cat".
3 • UPDATE Clients
4    SET City = 'Ben Cat'
5    WHERE Client_Number = 'C104';
Cat".6
```

37. If Order_Quantity greater than 5, then 10% discount. If Order_Quantity greater than 10, then 15% discount. Othrwise, no discount.

```
416
417 -- 37.If Order_Quantity greater than 5, then 10% discount. If Order_Quantity greater than 10, then 15% discount. Othrwise, no discount
418 • UPDATE SalesOrderDetails
419 SET Discount = IF(Order_Quantity > 10, 15, IF(Order_Quantity > 5, 10, 0));
420
```