

## LAB04: View

### Submission:

- Submit a lab file named “int205\_**lab04**\_xxxxxxxxxxx.docx/.pdf” into the LEB2 system. xxxxxxxxxxxx = your student id

### Due Date & Time:

- Lecturer will inform the LAB04 due date and time in lab class.

### What is a View?

A view is a logical table based on a table or another view. A view contains no data of its own but is like a window through which data from tables can be viewed or changed. The tables on which a view is based are called **base tables**. The view is stored as a SELECT statement in the data dictionary.

**EMPLOYEES table**

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY
100	Steven	King	SKING	515.123.4567	17-JUN-87	AD_FRES	2400
101	Neena	Kochhar	NKOCHHAR	515.123.4568	21-SEP-89	AD_VP	1700
102	Lex	De Haan	LDEHAAN	515.123.4569	13-JAN-93	AD_VP	1700
103	Alexander	Hunold	AHUNOLD	590.423.4567	03-JAN-90	IT_PROG	9000
104	Bruce	Ernst	BERNST	590.423.4568	21-MAY-91	IT_PROG	6000
107	Diana	Lorentz	DLORENTZ	590.423.5567	07-FEB-99	IT_PROG	4200
124	Ivan	Mourgos	IMOURGOS	650.123.5234	16-NOV-99	ST_MAN	5800
141	Trenna	Rae	TRAE	650.121.8009	17-OCT-95	ST_CLERK	3500
142	Curtis	Davis	CDAVIES	650.121.2984	29-JAN-97	ST_CLERK	3100
143	Randall	Mates	RMATES	650.121.0074	10-MAR-90	ST_CLERK	2000
149	Zlotkey			10500	JUL-96	ST_CLERK	2500
174	Abel			11000	JAN-00	SA_MAN	10500
176	Taylor			06000	MAY-96	SA_REP	11000
176	Taylor			06000	MAR-98	SA_REP	8600
176	Kimberely	Grant	KGRANT	611.44.1044.429203	24-MAY-99	SA_REP	7000
200	Jennifer	Whalen	JWHALEN	515.123.4444	17-SEP-87	AD_ASST	4400
201	Michael	Hartstein	MHARTSTE	515.123.5555	17-FEB-96	MK_MAN	13000
202	Pat	Fay	PFAY	603.123.6666	17-AUG-97	MK_REP	6000
205	Shelley	Higgins	SHIGGINS	515.123.8080	07-JUN-94	AC_MGR	12000
206	William	Gietz	WGIEZT	515.123.8181	07-JUN-94	AC_ACCOUNT	8300

20 rows selected.

### Syntax for creating a view

```
CREATE [OR REPLACE]
VIEW view_name [(column_list)]
AS select_statement ;
```

### Updatable Views:

- A simple view is one that:
  - Derives data from only one table
  - Contains no functions or groups of data
  - Can perform DML operations through the view

### Non-updatable Views:

- A complex view is one that:
  - Derives data from many tables
  - Contains functions or groups of data
  - Does not always allow DML operations through the view

### The Syntax of CREATE VIEW statement:

Documentation: <https://dev.mysql.com/doc/refman/8.0/en/create-view.html>

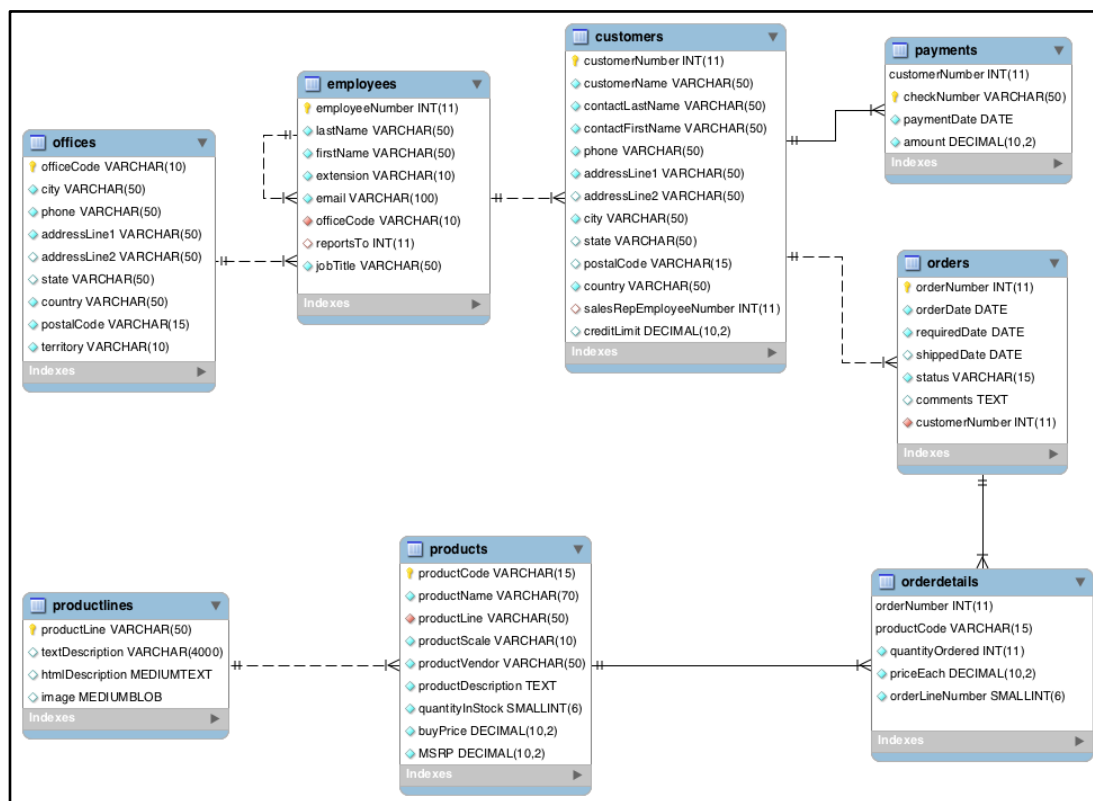
Note: The MySQL error code 1064 is a syntax error. This means the reason there's a problem is because MySQL doesn't understand what you're asking it to do.

### Switch to SQL Editor

- You should specify the classicmodels database before writing SQL statements using the following command:  
USE db\_name;

The USE statement tells MySQL to use the named database as the default (current) database for subsequent statements. This statement requires some privilege for the database or some object within it.

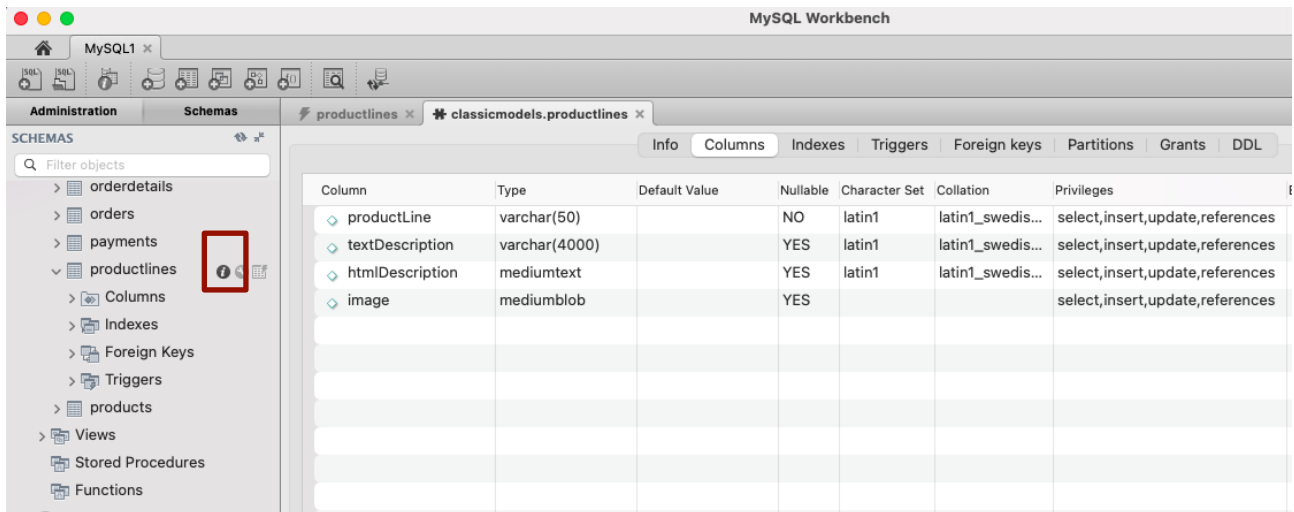
### The ER diagram for the classicmodels.



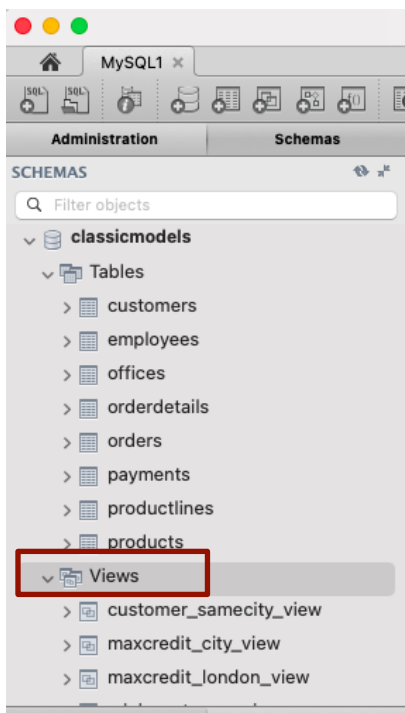
Note: The MSRP is “Manufacturer's suggested retail price” (ราคาขายปลีกแนะนำของผู้ผลิต).

## MySQL Workbench:

- You can see details of a table by clicking i button below:



- You can see the existing view by clicking “Views” menu below:



**Task 1: Using the “classicmodels” database and write SQL statements to answer the following questions.**

use classicmodels;

1. Create a view named "mini\_customer\_view" to display the customer name of all customers whose names start with the word “Mini”. Please verify by querying data from this view.
2. Create a view named "prod\_stock\_view" to display the product name and quantity in stock of the product that has the minimum quantities in stock. Please verify by querying data from this view.
3. Create a view named "totalamount\_orders\_view" to display the order number, order date and the total amount of sales of all orders and sort the results in descending order by the total amount of sales. Name three columns of the view to orderno, orderdate and total\_amount, respectively. Please verify by querying data from this view.
4. Create a view named "customer\_samecity\_view" to display the customer name and city of all customers who live in the same city of their sales rep employee’s office city. Name two view columns to cust\_name and cust\_city, respectively. Please verify by querying data from this view.
5. Create a view named "maxcredit\_city\_view" to display the city and the maximum credit limit of all customers in each city. Please verify by querying data from this view.
6. Create a view named "maxcredit\_london\_view" to display the city and the maximum credit limit of all customers who live in London city. You should create this view from the "maxcredit\_city\_view" view in [Question 5](#). Please verify by querying data from this view.
7. Create a table named "offices\_copy" with copying the structure and data from the "offices" table using the following commands:

```
create table offices_copy  
as select * from offices;
```

Create a view named "usa\_office\_view" to display office code, city and state of the country "USA" from the "offices\_copy" table. Please verify by querying data from this view.

8. Try to insert a new row into the "offices\_copy" table through the "usa\_office\_view" view created in [Question 7](#). What happens about the data insertion? Please explain.
9. To resolve the problem found in [Question 8](#), Please modify the "usa\_office\_view" view to ensure that you can insert a new row through this view (an updatable view). Please show the data insertion of the "offices\_copy" table.  
Hint: You can create a new row by yourself.
10. Please delete both the structure and data of the "offices\_copy" table. What happens to an existing view that references the "offices\_copy" table? Please explain.

