

SQL ASSIGNMENT 1

1. Write a query to display the names (first_name, last_name) using alias name "First Name", "Last Name".

`select first_name as 'First Name', last_name as 'Last Name' from employees;`

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
1 select * from employees;
2 select first_name as 'First Name', last_name as 'Last Name' from employees;
3
```

The result grid displays the output of the second query, showing the first and last names of employees with aliases:

First Name	Last Name
Steven	King
Neena	Kochhar
Lex	De Haan
Alexander	Hunold
Bruce	Ernst
David	Austin
Valli	Pataballa
Diana	Lorentz
Nancy	Greenberg
Daniel	Faviet
John	Chen

2. Write a query to get unique department ID from employee table

`select distinct(department_id) from employees;`

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
1 select * from employees;
2 select distinct(department_id) from employees;
3
4
```

The result grid displays the output of the second query, showing the unique department IDs:

department_id
10
20
30
40
50
60
70
80
90
100
110

3. Write a query to get all employee details from the employee table order by first name, descending
select * from employees order by first_name desc;

The screenshot shows the MySQL Workbench interface. The 'Query' tab is active, displaying the following SQL query:

```
1 select * from employees;  
2 select * from employees order by first_name desc;  
3
```

The 'Result Grid' shows the results of the second query, ordered by first_name in descending order. The columns are: employee_id, first_name, last_name, email, phone_number, hire_date, job_id, salary, commission_pct, manager_id, and department_id.

employee_id	first_name	last_name	email	phone_number	hire_date	job_id	salary	commission_pct	manager_id	department_id
180	Winston	Taylor	WTAYLOR	650.507.9876	1998-01-24	SH_CLERK	3200.00	0.15	120	50
171	William	Smith	WSMITH	011.44.1343.629268	1999-02-23	SA_REP	7400.00	0.15	148	80
206	William	Gietz	WGIEZT	519.5.123.8181	1994-06-07	AC_ACCOUNT	8300.00	0.15	205	110
195	Vance	Jones	VJONES	650.501.4876	1999-03-17	SH_CLERK	2800.00	0.15	123	50
106	Valli	Pataballa	VPATABAL	590.423.4560	1998-02-05	IT_PROG	4800.00	0.15	103	60
141	Trenna	Rajs	TRAJIS	650.121.8009	1995-10-17	ST_CLERK	3500.00	0.15	124	50
132	TJ	Olson	TJOLSON	650.124.8234	1999-04-10	ST_CLERK	2100.00	0.15	121	50
190	Timothy	Gates	TGATES	650.505.3876	1998-07-11	SH_CLERK	2900.00	0.15	122	50
170	Taylor	Fox	TFOX	011.44.1343.729268	1998-01-24	SA_REP	9600.00	0.20	148	80
203	Susan	Mavris	SMAVRIS	515.123.7777	1994-06-07	HR_REP	6500.00	0.15	101	40
173	Sundita	Kumar	SKUMAR	011.44.1343.329268	2000-04-21	SA_REP	6100.00	0.10	148	80
166	Sundar	Ande	SANDE	011.44.1346.629268	2000-03-24	SA_REP	6400.00	0.10	147	80

4. Write a query to get the names (first_name, last_name), salary, PF of all the employees (PF is calculated as 15% of salary)

select first_name, last_name,salary, (salary/100*15) as PF from employees;

The screenshot shows the MySQL Workbench interface. The 'Query' tab is active, displaying the following SQL query:

```
1 select * from employees;  
2 select first_name, last_name,salary, (salary/100*15)  
3 as PF from employees;
```

The 'Result Grid' shows the results of the second query. The columns are: first_name, last_name, salary, and PF.

first_name	last_name	salary	PF
Steven	King	24000.00	3600.000000
Neena	Kochhar	17000.00	2550.000000
Lex	De Haan	17000.00	2550.000000
Alexander	Hunold	9000.00	1350.000000
Bruce	Ernst	6000.00	900.000000
David	Austin	4800.00	720.000000
Valli	Pataballa	4800.00	720.000000
Diane	Lorentz	4200.00	630.000000
Nancy	Greenberg	12000.00	1800.000000
Daniel	Faviet	9000.00	1350.000000
John	Chen	8200.00	1230.000000
Ismael	Scorra	7700.00	1155.000000

5. Write a query to get the employee ID, names (first_name, last_name), salary in ascending order of salary.

select employee_id, concat(first_name, ' ', last_name) as names,
salary from employees order by salary;

The screenshot shows the MySQL Workbench interface. The 'Query' tab is active, displaying the following SQL query:

```
1 select * from employees;  
2 • select employee_id, concat(first_name, ' ', last_name) as names,  
3 salary from employees order by salary;
```

The 'Result Grid' shows the results of the query, sorted by salary in ascending order. The columns are employee_id, names, and salary.

employee_id	names	salary
132	TJ Olson	2100.00
128	Steven Markle	2200.00
136	Hazel Philtanker	2200.00
127	James Landry	2400.00
135	Ki Gee	2400.00
119	Karen Colmenares	2500.00
131	James Marlow	2500.00
140	Joshua Patel	2500.00
144	Peter Vargas	2500.00
182	Merthe Sullivan	2500.00
191	Randal Perkins	2500.00
118	Guy Himuro	2600.00

6. Write a query to get the total salaries payable to employees
select sum(salary) from employees;

The screenshot shows the MySQL Workbench interface. The 'Query' tab is active, displaying the following SQL query:

```
1 select * from employees;  
2 • select sum(salary) from employees;
```

The 'Result Grid' shows the results of the query. The columns are sum(salary) and the result is 691400.00.

sum(salary)
691400.00

7. Write a query to get the maximum and minimum salary from employees table
select min(salary) as min_salary, max(salary) as max_salary from employees;

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with the 'hr' database selected. The 'employees' table is highlighted under the 'Tables' folder. The main editor window shows a SQL query with two statements: a select statement to view all data from the 'employees' table, and a second statement to calculate the minimum and maximum salary. The 'Result Grid' at the bottom shows the output of the second query, displaying two columns: 'min_salary' with a value of 2100.00 and 'max_salary' with a value of 24000.00. The status bar at the bottom indicates 'Query Completed'.

```
1 select * from employees;
2 select min(salary) as min_salary, max(salary) as max_salary from employees;
```

min_salary	max_salary
2100.00	24000.00

8. Write a query to get the average salary and number of employees in the employees table.
select avg(salary) as avg_salary, count(employee_id) as 'no of employees' from employees;

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with the 'hr' database selected. The 'employees' table is highlighted under the 'Tables' folder. The main editor window shows a SQL query with three statements: a select statement to view all data from the 'employees' table, a second statement to calculate the average salary and employee count, and a third statement to alias the count as 'no of employees'. The 'Result Grid' at the bottom shows the output of the third query, displaying two columns: 'avg_salary' with a value of 6461.682243 and 'no of employees' with a value of 107. The status bar at the bottom indicates 'Query Completed'.

```
1 select * from employees;
2 select avg(salary) as avg_salary, count(employee_id)
3 as 'no of employees' from employees;
```

avg_salary	no of employees
6461.682243	107

9. Write a query to get the number of employees working with the company
select count(employee_id) as 'no of employees' from employees;

The screenshot shows the MySQL Workbench interface. The 'Query 1' editor contains the following SQL code:

```
1 select * from employees;  
2 select count(employee_id) as 'no of employees' from employees;
```

The 'Result Grid' at the bottom shows the results of the second query:

no of employees
107

The left sidebar shows the 'SCHEMAS' panel with the 'hr' database selected. The 'Table: employees' is highlighted, and its columns are listed: employee_id (int), first_name (varchar), last_name (varchar), email (varchar), phone_number (varchar), and hire_date (date).

10. Write a query to get the number of jobs available in the employees table .
select count(distinct (job_id))from employees;

The screenshot shows the MySQL Workbench interface. The 'Query 1' editor contains the following SQL code:

```
1 select * from employees;  
2 select count( distinct (job_id) )from employees;  
3  
4
```

The 'Result Grid' at the bottom shows the results of the second query:

count(distinct (job_id))
19

The left sidebar shows the 'SCHEMAS' panel with the 'hr' database selected. The 'Table: jobs' is highlighted, and its columns are listed: job_id (varchar(10), PK), job_title (varchar(35)), min_salary (decimal(8,0), UN), and max_salary (decimal(8,0), UN).

11. Write a query get all first name from employees table in upper case
select upper(first_name) from employees;

The screenshot shows the MySQL Workbench interface. The 'Query 1' editor contains the following SQL code:

```
1 • select * from employees;  
2 • select upper(first_name) from employees;  
3  
4
```

The 'Result Grid' displays the results of the second query, showing the first names in uppercase:

upper(first_name)
STEVEN
NEENA
LEX
ALEXANDER
BRUCE
DAVID
VALLI
DIANA
NANCY
DANIEL
JOHN
ISMAEL

12. Write a query to get the first 3 characters of first name from employees table
select substr(first_name,1,3) from employees;

The screenshot shows the MySQL Workbench interface. The 'Query 1' editor contains the following SQL code:

```
1 • select * from employees;  
2 • select substr(first_name,1,3) from employees;  
3  
4
```

The 'Result Grid' displays the results of the second query, showing the first 3 characters of the first names:

substr(first_name,1,3)
Ste
Nee
Lex
Ale
Bru
Dev
Val
Dia
Nan
Dan
Joh
Isa

13. Write a query to get first name from employees table after removing white spaces from both side
select trim(first_name) from employees;

The screenshot shows the MySQL Workbench interface. The 'Query' tab is active, displaying the following SQL code:

```
1 • select * from employees;
2 • select trim(first_name) from employees;
3
4
```

The 'Result Grid' is visible below the query editor, showing the results of the second query. The first column is labeled 'trim(first_name)' and contains the following values:

trim(first_name)
Steven
Neena
Lex
Alexander
Bruce
David
Valli
Diana
Nancy
Daniel
John
Janaad

The left sidebar shows the 'SCHEMAS' tree with the 'hr' database selected. The 'Table: jobs' is also visible in the 'Information' pane.

14. Write a query to get the length of the employee names (first_name, last_name) from employees table
select length(first_name) as 'first name',length(last_name) as 'last name' from employees;

The screenshot shows the MySQL Workbench interface. The 'Query' tab is active, displaying the following SQL code:

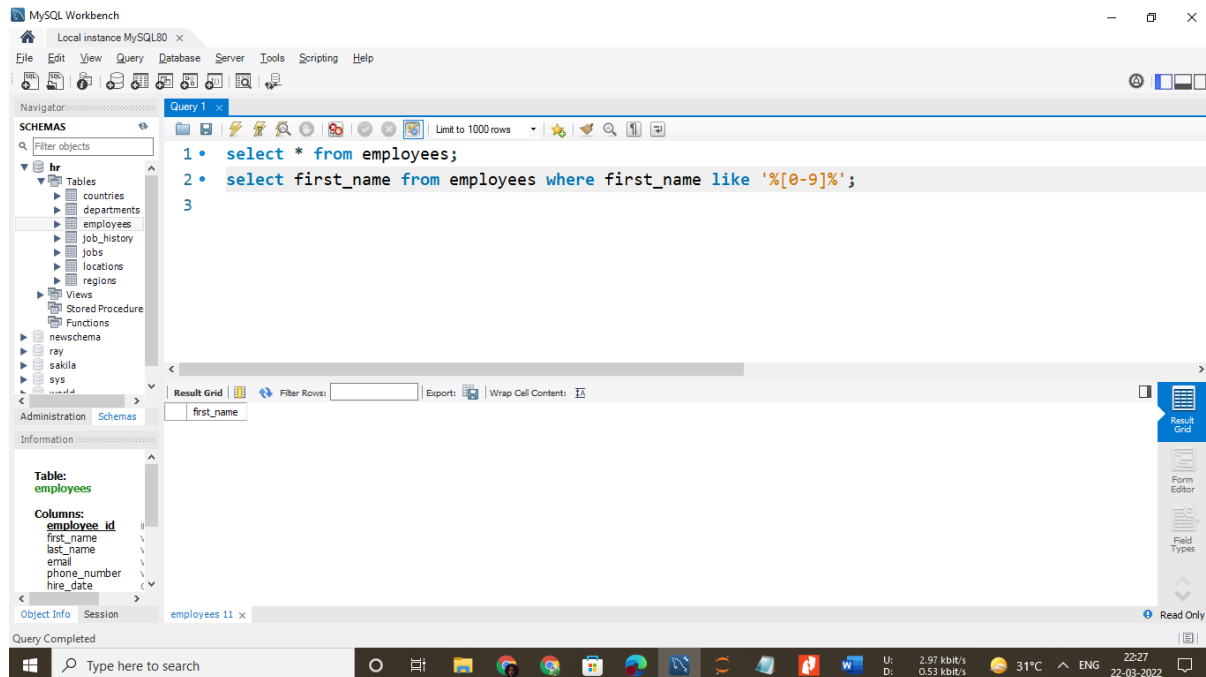
```
1 • select * from employees;
2 • select length(first_name) as 'first name',length(last_name) as 'last name' from employees;
3
```

The 'Result Grid' is visible below the query editor, showing the results of the second query. The first column is labeled 'first name' and the second column is labeled 'last name'. The results are as follows:

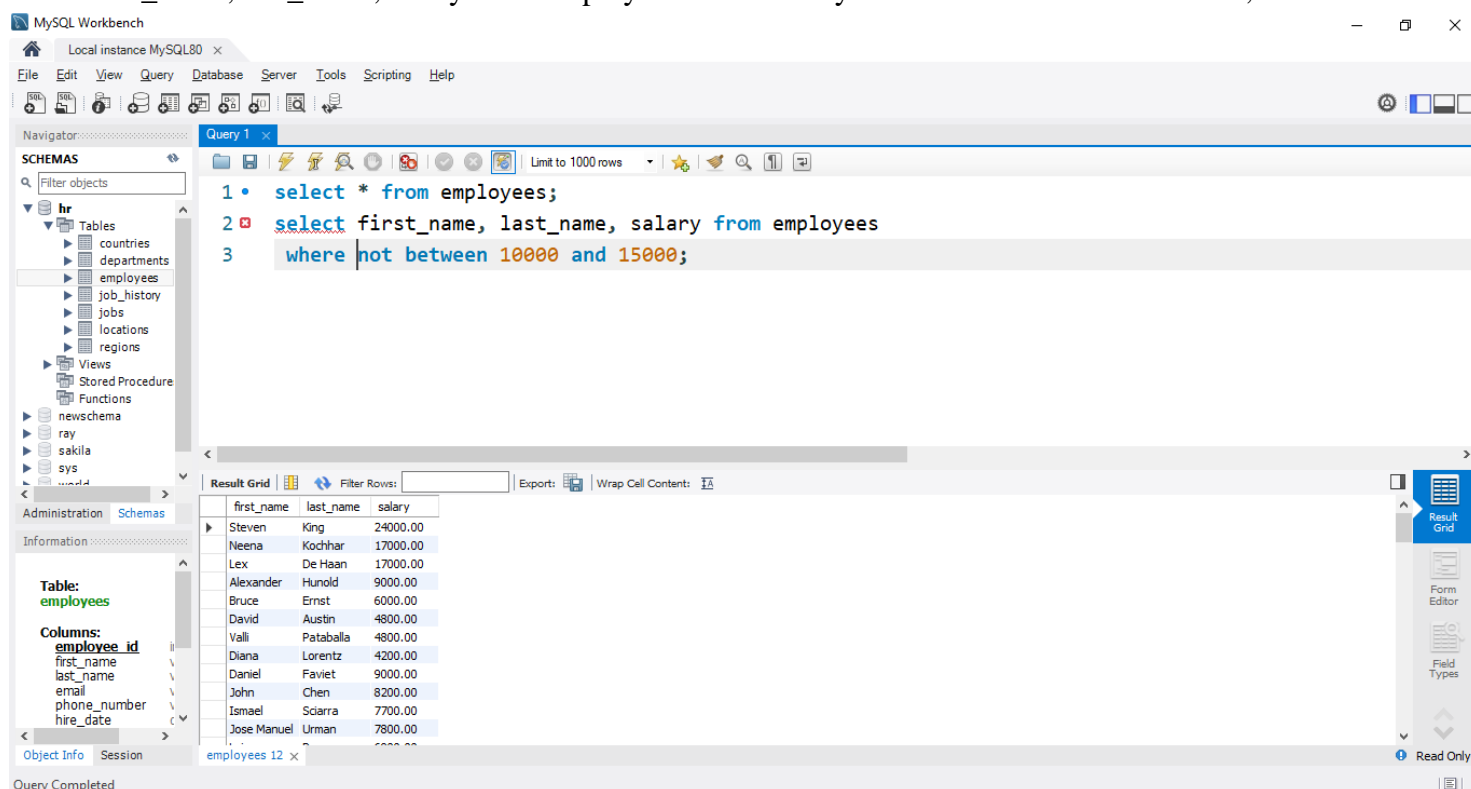
first name	last name
6	4
5	7
3	7
9	6
5	5
5	6
5	9
5	7
5	9
6	6
4	4
6	7

The left sidebar shows the 'SCHEMAS' tree with the 'hr' database selected. The 'Table: jobs' is also visible in the 'Information' pane.

15. Write a query to check if the first_name fields of the employees table contains numbers.
select first_name from employees where first_name like '%[0-9]%';

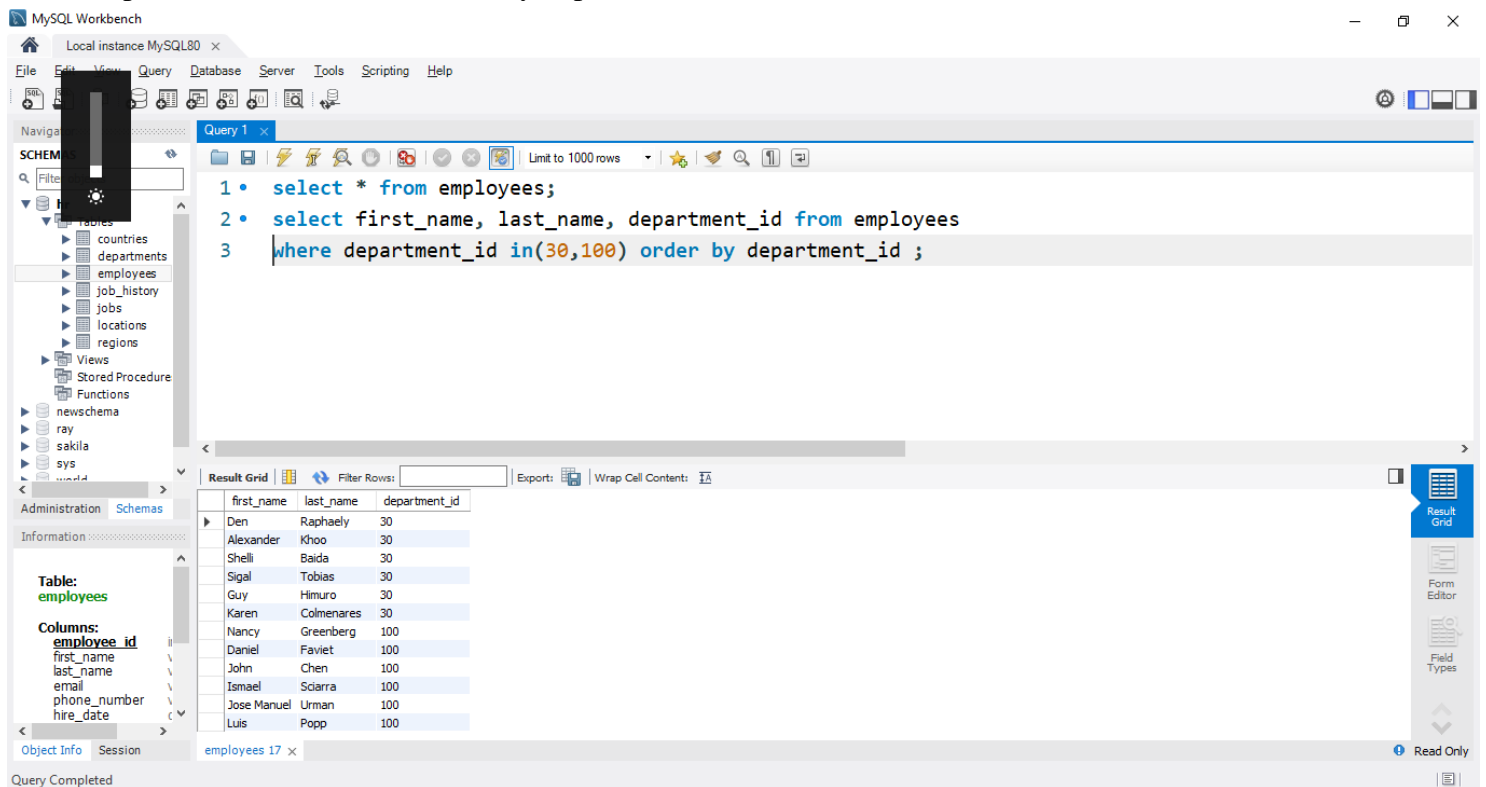


16. Write a query to display the name (first_name, last_name) and salary for all employees whose salary is not in the range \$10,000 through \$15,000.
select first_name, last_name, salary from employees where salary not between 10000 and 15000;



17. Write a query to display the name (first_name, last_name) and department ID of all employees in departments 30 or 100 in ascending order

select first_name, last_name, department_id from employees
where department_id in(30,100) order by department_id ;



The screenshot shows the MySQL Workbench interface. The 'Query Editor' window contains the following SQL query:

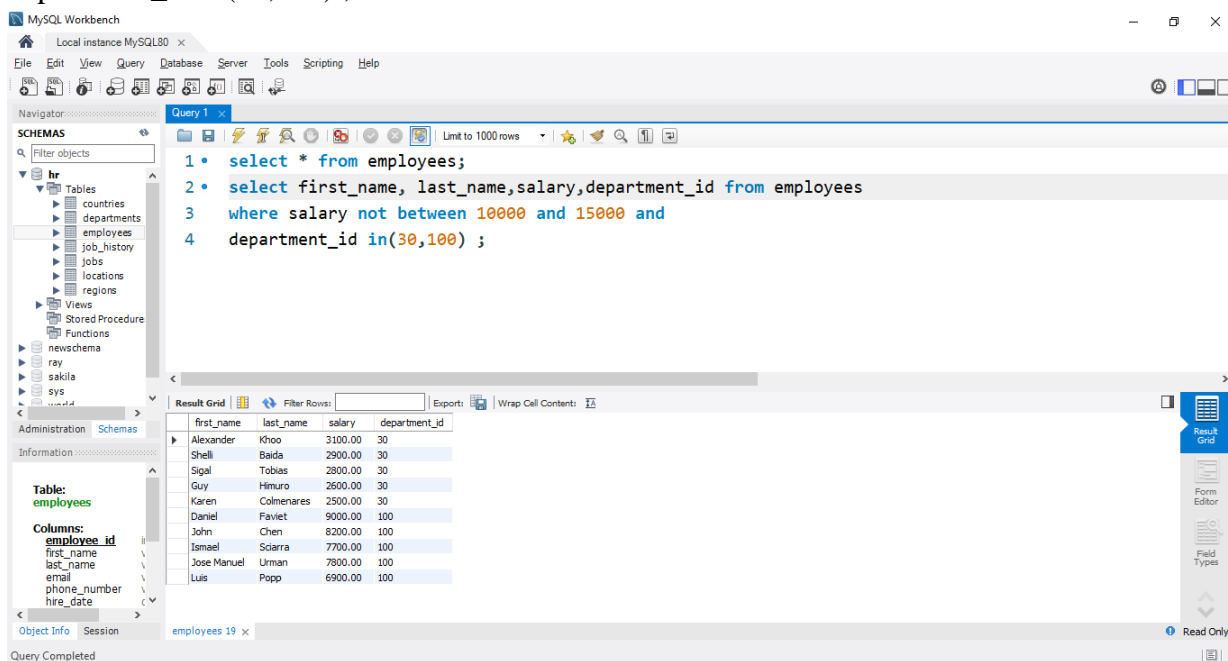
```
1 • select * from employees;  
2 • select first_name, last_name, department_id from employees  
3 where department_id in(30,100) order by department_id ;
```

The 'Result Grid' window displays the results of the query, showing the first_name, last_name, and department_id for all employees in departments 30 and 100, ordered by department_id.

first_name	last_name	department_id
Den	Raphaely	30
Alexander	Khoo	30
Shelli	Baida	30
Sigal	Tobias	30
Guy	Himuro	30
Karen	Colmenares	30
Nancy	Greenberg	100
Daniel	Faviet	100
John	Chen	100
Ismael	Sciarra	100
Jose Manuel	Urman	100
Luis	Popp	100

18. Write a query to display the name (first_name, last_name) and salary for all employees whose salary is not in the range \$10,000 through \$15,000 and are in department 30 or 100

select first_name, last_name,salary,department_id from employees where salary not between 10000 and 15000
and
department_id in(30,100) ;



The screenshot shows the MySQL Workbench interface. The 'Query Editor' window contains the following SQL query:

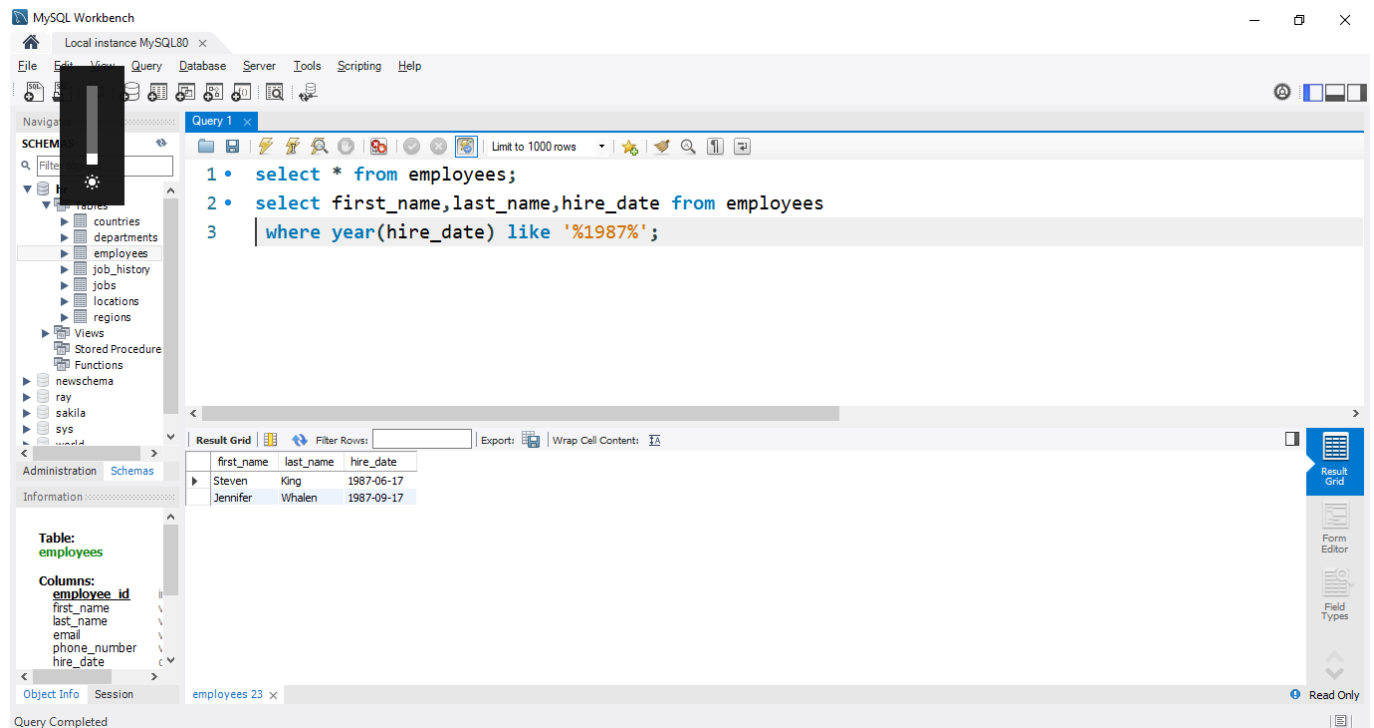
```
1 • select * from employees;  
2 • select first_name, last_name,salary,department_id from employees  
3 where salary not between 10000 and 15000 and  
4 department_id in(30,100) ;
```

The 'Result Grid' window displays the results of the query, showing the first_name, last_name, salary, and department_id for all employees whose salary is not between 10,000 and 15,000 and who are in departments 30 or 100.

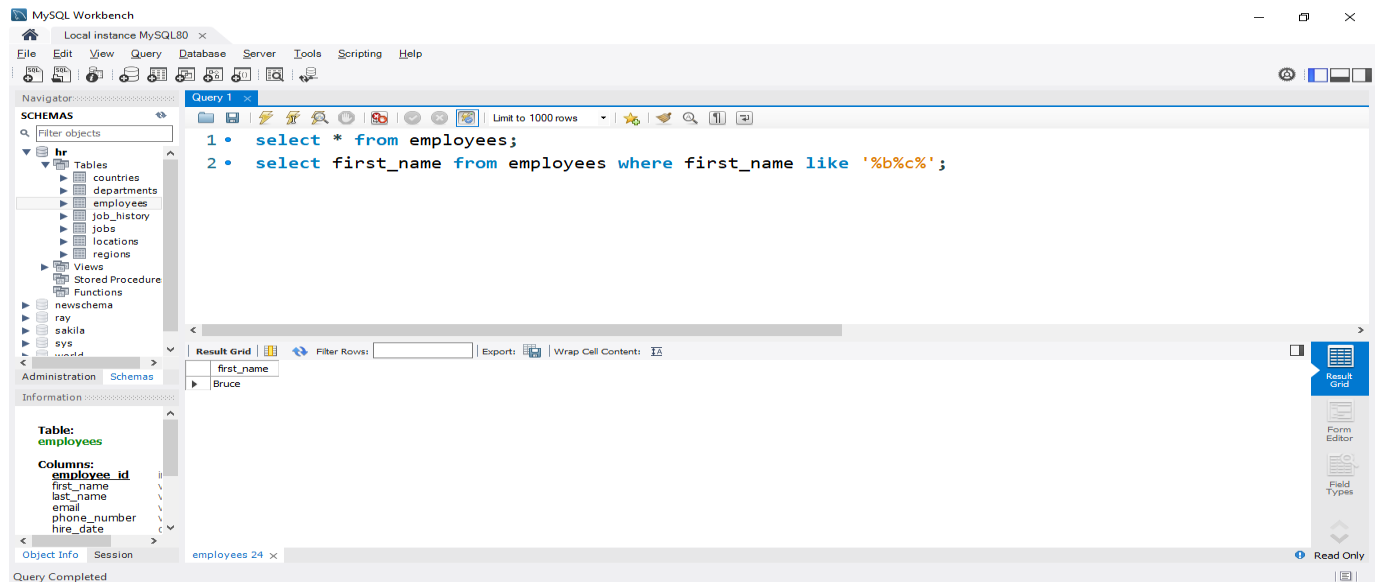
first_name	last_name	salary	department_id
Alexander	Khoo	3100.00	30
Shelli	Baida	2900.00	30
Sigal	Tobias	2800.00	30
Guy	Himuro	2600.00	30
Karen	Colmenares	2500.00	30
Daniel	Faviet	9000.00	100
John	Chen	8200.00	100
Ismael	Sciarra	7700.00	100
Jose Manuel	Urman	7800.00	100
Luis	Popp	6900.00	100

19. Write a query to display the name (first_name, last_name) and hire date for all employees who were hired in 1987.

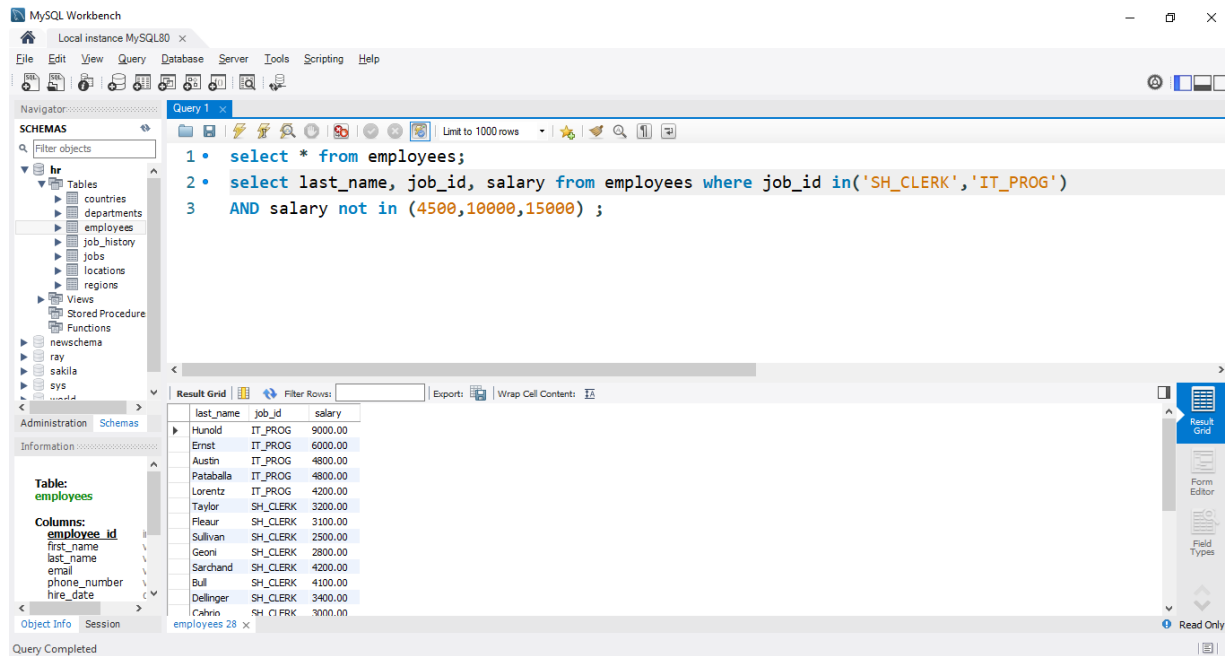
select first_name,last_name,hire_date from employees where year(hire_date) like '%1987%';



20. Write a query to display the first_name of all employees who have both "b" and "c" in their first name
select first_name from employees where first_name like '%b%c%';



21. Write a query to display the last name, job, and salary for all employees whose job is that of a Programmer or a Shipping Clerk, and whose salary is not equal to \$4,500, \$10,000, or \$15,000



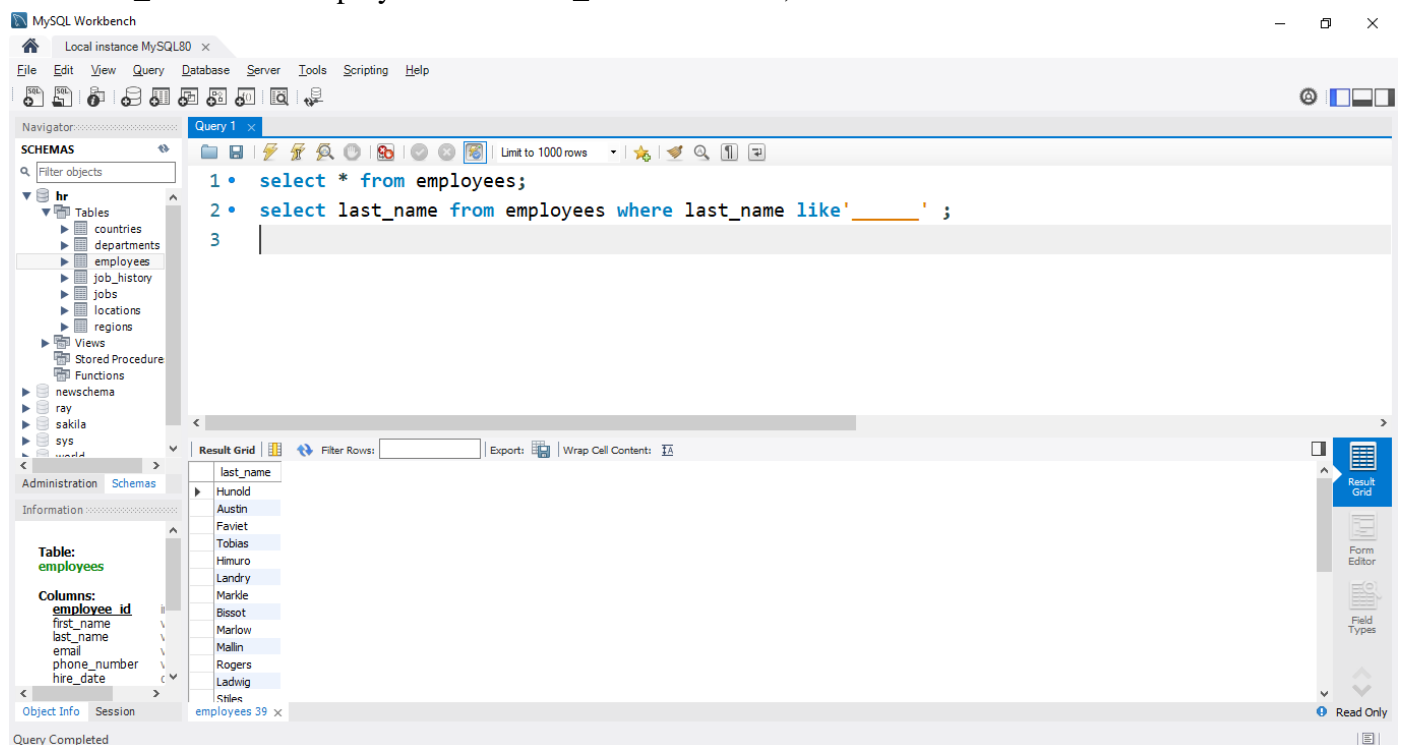
The screenshot shows the MySQL Workbench interface. The 'Query Editor' contains the following SQL query:

```
1 • select * from employees;
2 • select last_name, job_id, salary from employees where job_id in('SH_CLERK','IT_PROG')
3   AND salary not in (4500,10000,15000) ;
```

The 'Result Grid' displays the following data:

last_name	job_id	salary
Hunold	IT_PROG	9000.00
Ernst	IT_PROG	6000.00
Austin	IT_PROG	4800.00
Pataballa	IT_PROG	4800.00
Lorentz	IT_PROG	4200.00
Taylor	SH_CLERK	3200.00
Fleaur	SH_CLERK	3100.00
Sullivan	SH_CLERK	2500.00
Geoni	SH_CLERK	2800.00
Sarchand	SH_CLERK	4200.00
Bull	SH_CLERK	4100.00
Delinger	SH_CLERK	3400.00
Cavrio	SH_CLERK	3000.00

22. Write a query to display the last name of employees whose names have exactly 6 characters
select last_name from employees where last_name like '_____';



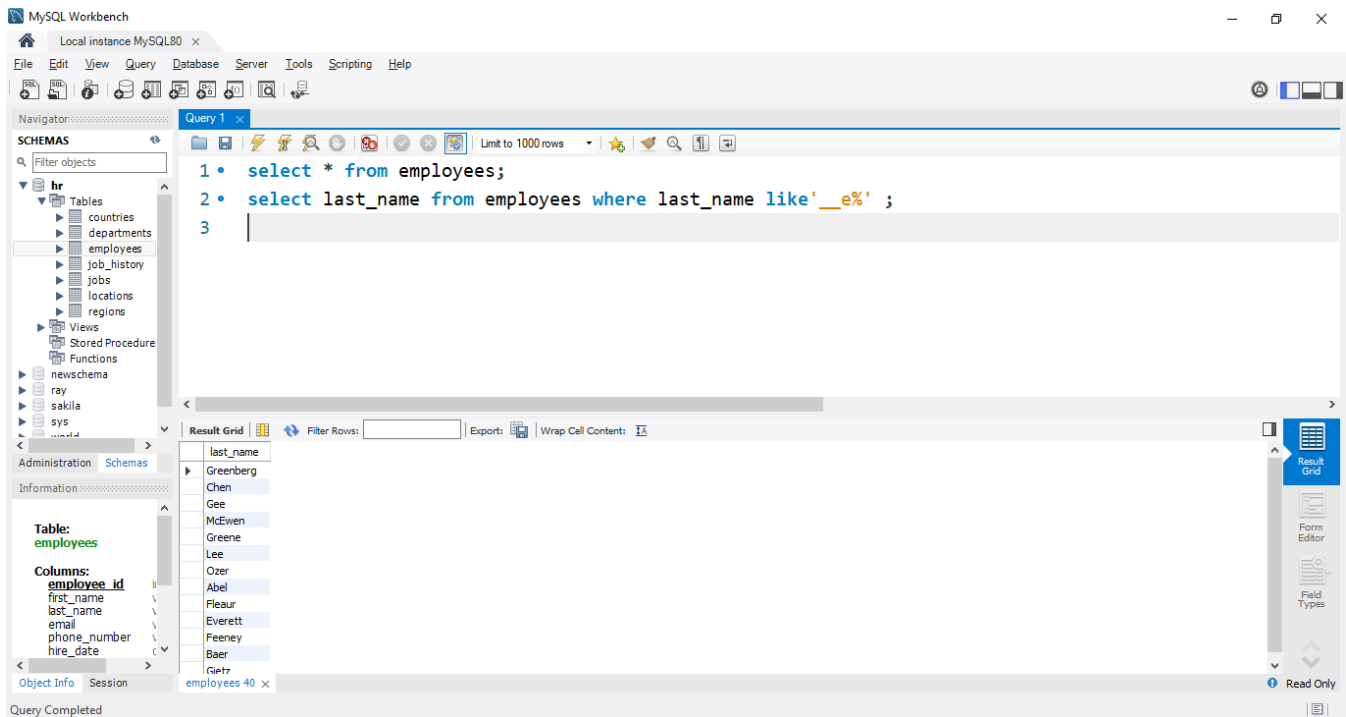
The screenshot shows the MySQL Workbench interface. The 'Query Editor' contains the following SQL query:

```
1 • select * from employees;
2 • select last_name from employees where last_name like '_____';
3
```

The 'Result Grid' displays the following data:

last_name
Hunold
Austin
Faviet
Tobias
Himuro
Landry
Maride
Bissot
Marlow
Mallin
Rogers
Ladwig
Stiles

23. Write a query to display the last name of employees having 'e' as the third character
 select last_name from employees where last_name like '__e%';

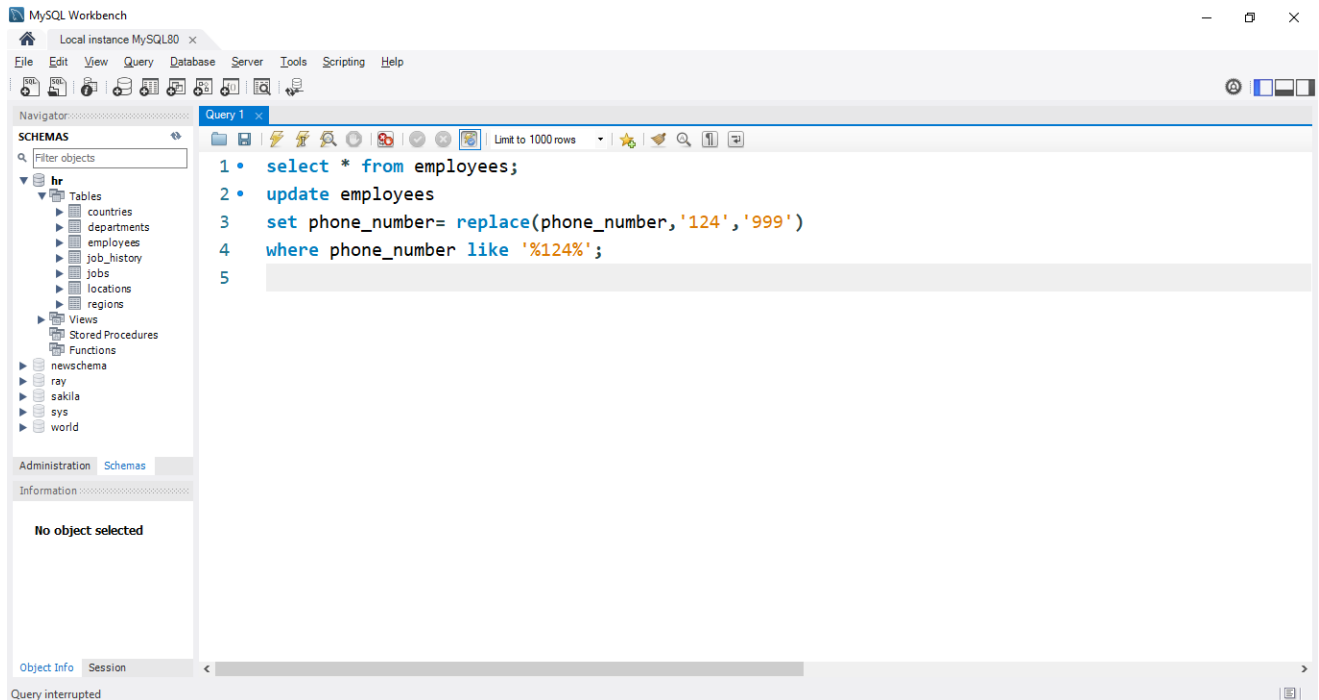


24. Write a query to get the job_id and related employee's id
 Partial output of the query :

job_id	Employees ID
AC_ACCOUNT	206
AC_MGR	205
AD_ASST	200
AD_PRES	100
AD_VP	101 ,102
FI_ACCOUNT	110 ,113 ,111 ,109 ,112

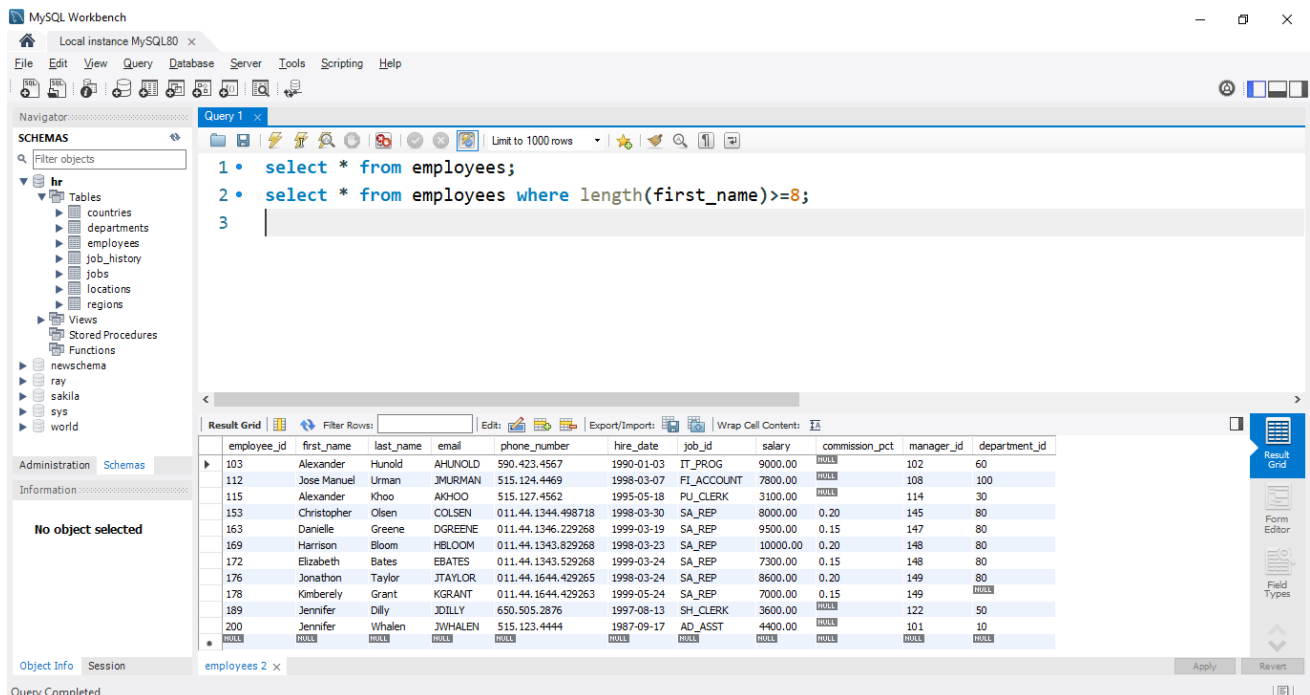
```
select job_id, group_concat(employee_id) as emp_id
from employees group by job_id ;
```

25. Write a query to update the portion of the phone_number in the employees table, within the phone number the substring '124' will be replaced by '999'

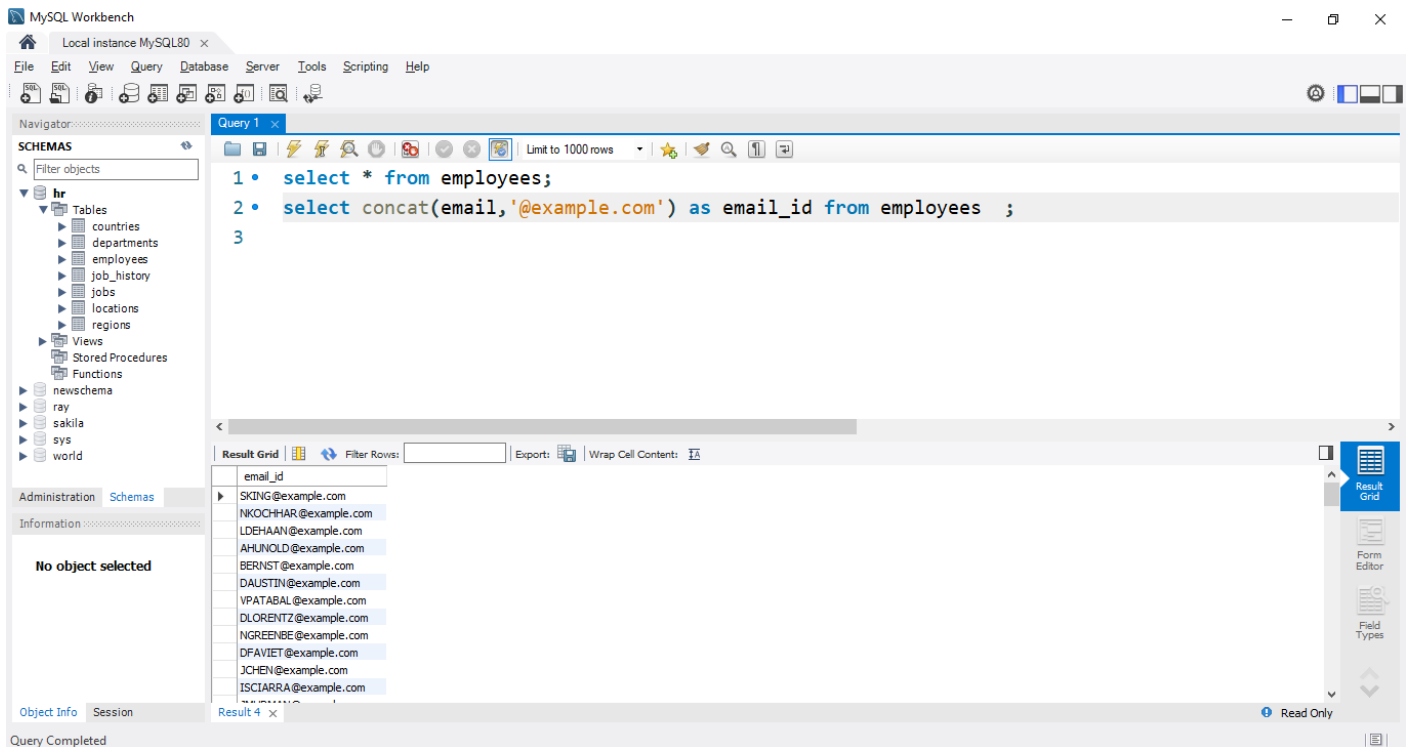


26. Write a query to get the details of the employees where the length of the first name greater than or equal to 8

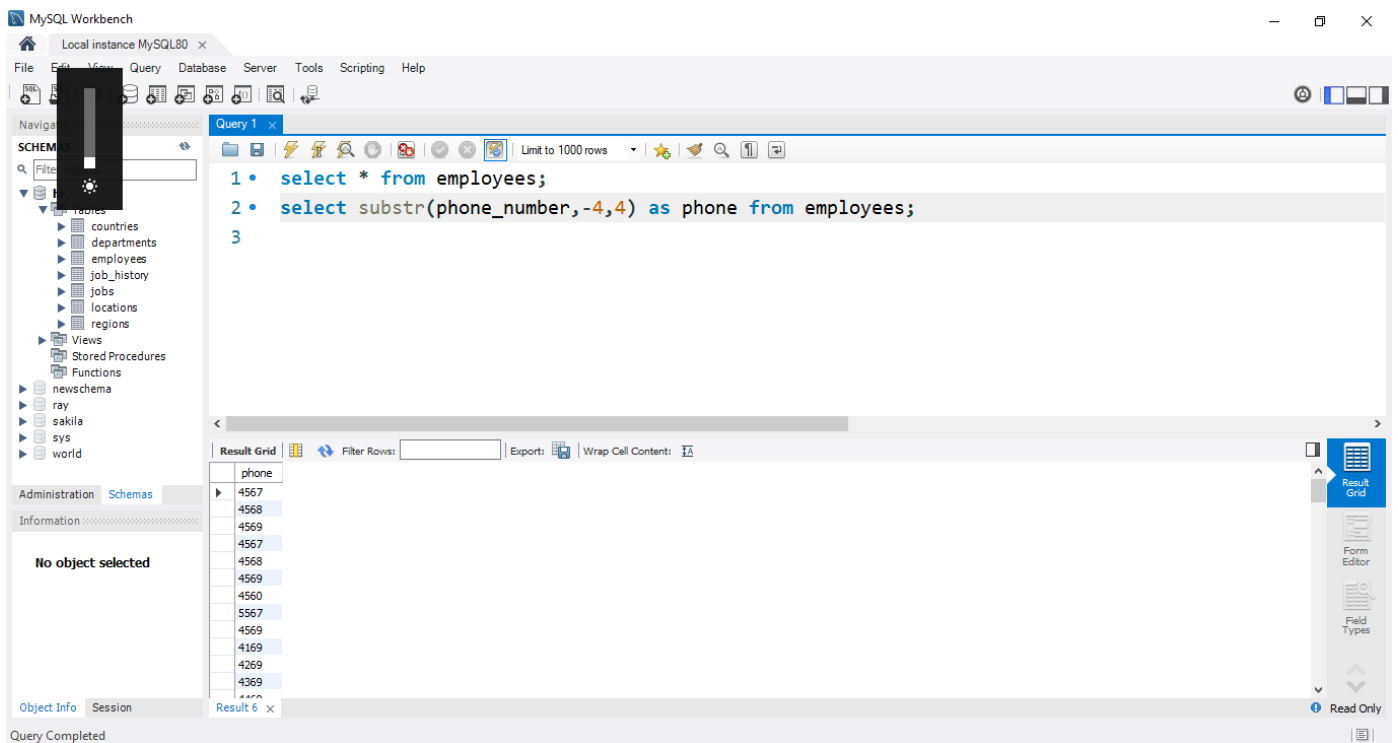
select * from employees where length(first_name)>=8;



27. Write a query to append '@example.com' to email field
select concat(email,'@example.com') as email_id from employees;



28. Write a query to extract the last 4 character of phone numbers
select substr(phone_number,-4,4) as phone from employees;



29. Write a query to get the last word of the street address

`select street_address,substring_index(street_address,' ',-1) as last_word from locations;`

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
1 • select * from employees;
2 • select * from locations;
3 • select street_address,substring_index(street_address,' ',-1 ) as last_word from locations;
4
```

The result grid displays the following data:

street_address	last_word
1297 Via Cola di Rie	Rie
93091 Calle della Testa	Testa
2017 Shinguku-ku	Shinguku-ku
9450 Kamiya-cho	Kamiya-cho
2014 Jabberwocky Rd	Rd
2011 Interiors Blvd	Blvd
2007 Zagora St	St
2004 Charade Rd	Rd
147 Spadina Ave	Ave
6092 Boxwood St	St
40-5-12 Laogianggen	Laogianggen
1298 Vileparle (E)	(E)
12-98 Victoria Street	Street

30. Write a query to get the locations that have minimum street length

`select * from locations where length(street_address)<=(select min(length(street_address)) from locations);`

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
1 • select * from employees;
2 • select * from locations;
3 • select * from locations
4 • where length(street_address)<=(select min(length(street_address)) from locations);
5
```

The result grid displays the following data:

location_id	street_address	postal_code	city	state_province	country_id
1600	2007 Zagora St	50090	South Brunswick	New Jersey	US
2400	8204 Arthur St	NULE	London	NULE	UK
*	NULE	NULE	NULE	NULE	NULE

31. Write a query to display the first word from those job titles which contains more than one words
 SELECT job_title,SUBSTR(job_title,1, POSITION(' ' IN job_title))as first_word
 FROM jobs;.

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
1 • select * from employees;
2 • select * from locations;
3 • select * from jobs;
4 • SELECT job_title,SUBSTR(job_title,1, POSITION(' ' IN job_title))as first_word
5 FROM jobs;
6
7
8
```

The Results window displays the output of the query, showing two columns: job_title and first_word. The data is as follows:

job_title	first_word
Public Accountant	Public
Accounting Manager	Accounting
Administration Assistant	Administration
President	
Administration Vice President	Administration
Accountant	
Finance Manager	Finance
Human Resources Representative	Human
Programmer	
Marketing Manager	Marketing
Marketing Representative	Marketing
Public Relations Representative	Public
Purchasing Clerk	Purchasing

32. Write a query to display the length of first name for employees where last name contain character 'c' after 2nd position
 select first_name, length(first_name) as len_first,last_name from employees where last_name like
 '___c%';

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

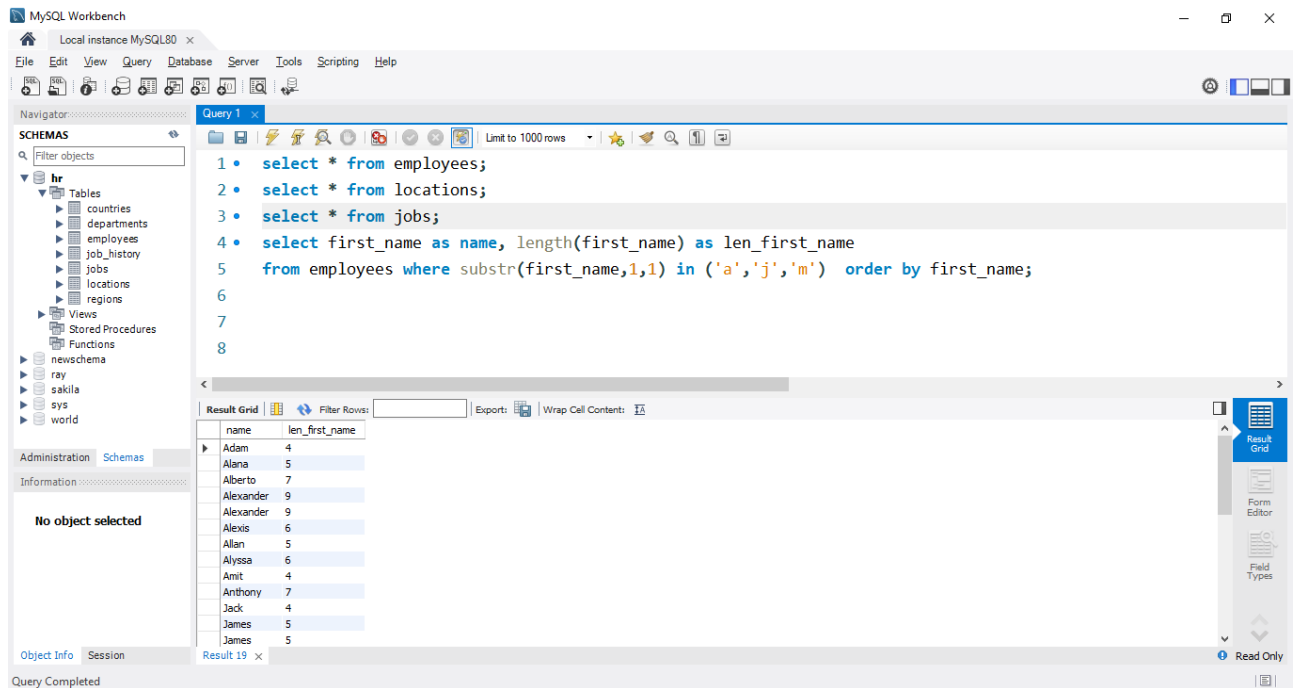
```
1 • select * from employees;
2 • select * from locations;
3 • select * from jobs;
4 • select first_name, length(first_name) as len_first,last_name from employees where last_name like '___c%';
5
6
7
```

The Results window displays the output of the query, showing three columns: first_name, len_first, and last_name. The data is as follows:

first_name	len_first	last_name
Neena	5	Kochhar
Peter	5	Tucker
Samuel	6	McCa

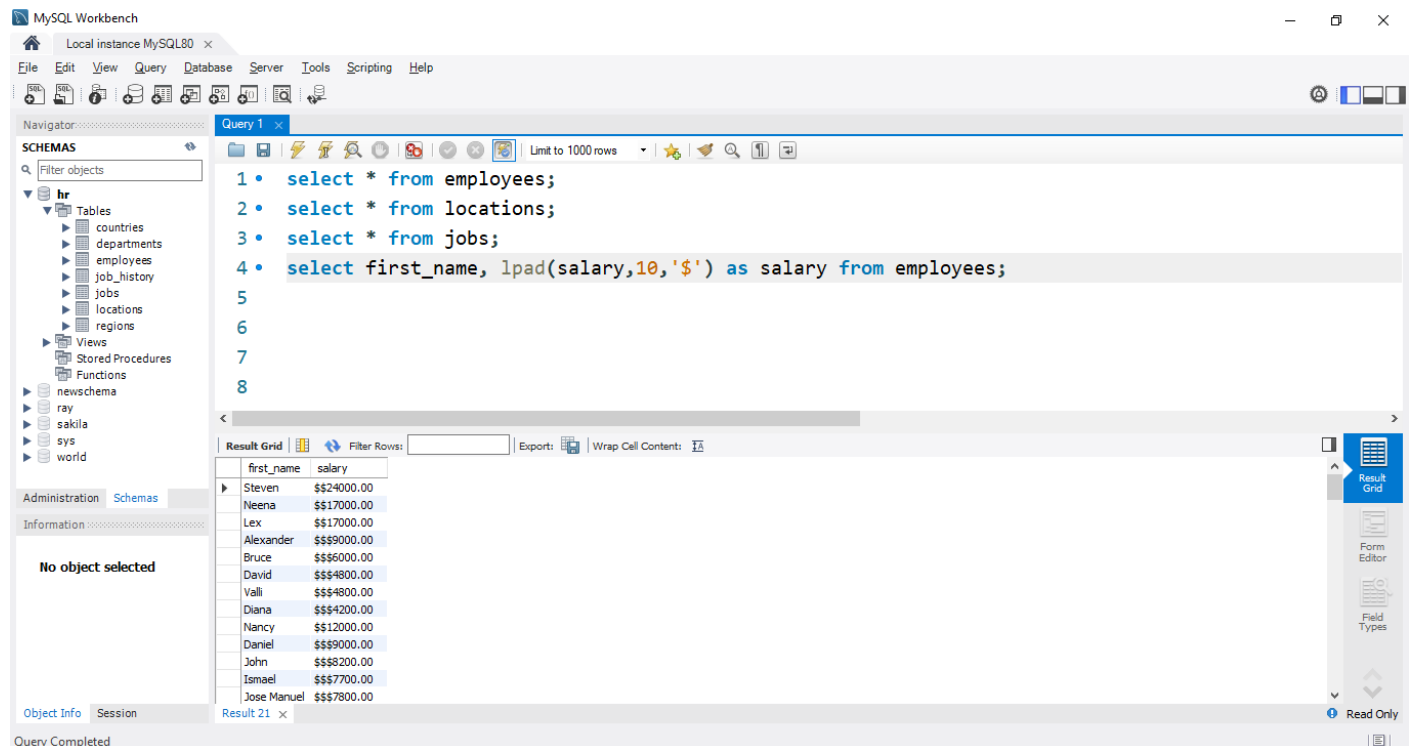
33. Write a query that displays the first name and the length of the first name for all employees whose name starts with the letters 'A', 'J' or 'M'. Give each column an appropriate label. Sort the results by the employees' first names.

```
select first_name as name, length(first_name) as len_first_name
from employees where substr(first_name,1,1) in ('a','j','m') order by first_name;
```



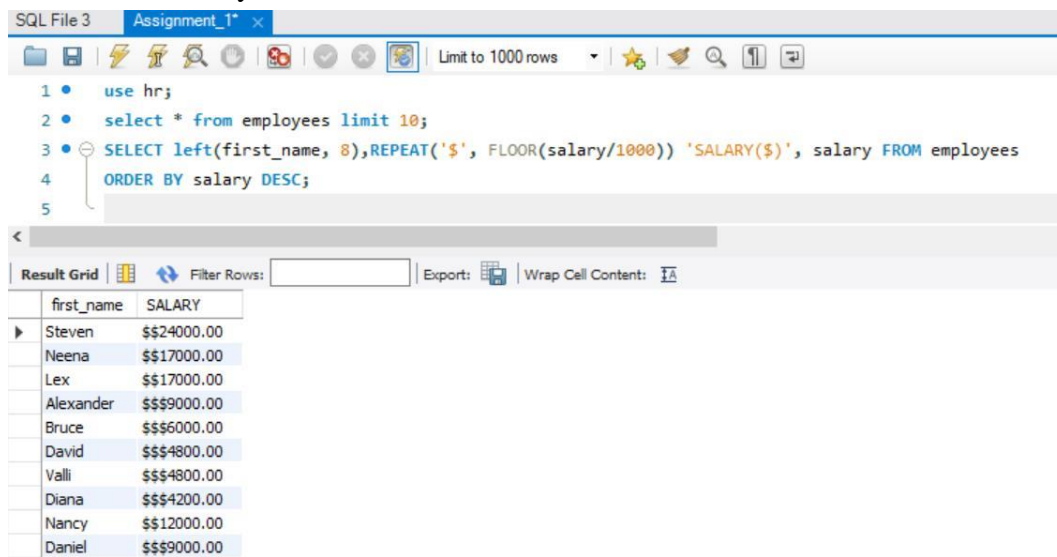
34. Write a query to display the first name and salary for all employees. Format the salary to be 10 characters long, left-padded with the \$ symbol. Label the column SALARY

```
select first_name, lpad(salary,10,'$') as salary from employees;
```



35. Write a query to display the first eight characters of the employees' first names and indicates the amounts of their salaries with '\$' sign. Each '\$' sign signifies a thousand dollars. Sort the data in descending order of salary

```
SELECT left(first_name, 8),  
REPEAT('$', FLOOR(salary/1000))  
'SALARY($)', salary  
FROM employees  
ORDER BY salary DESC;
```



The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

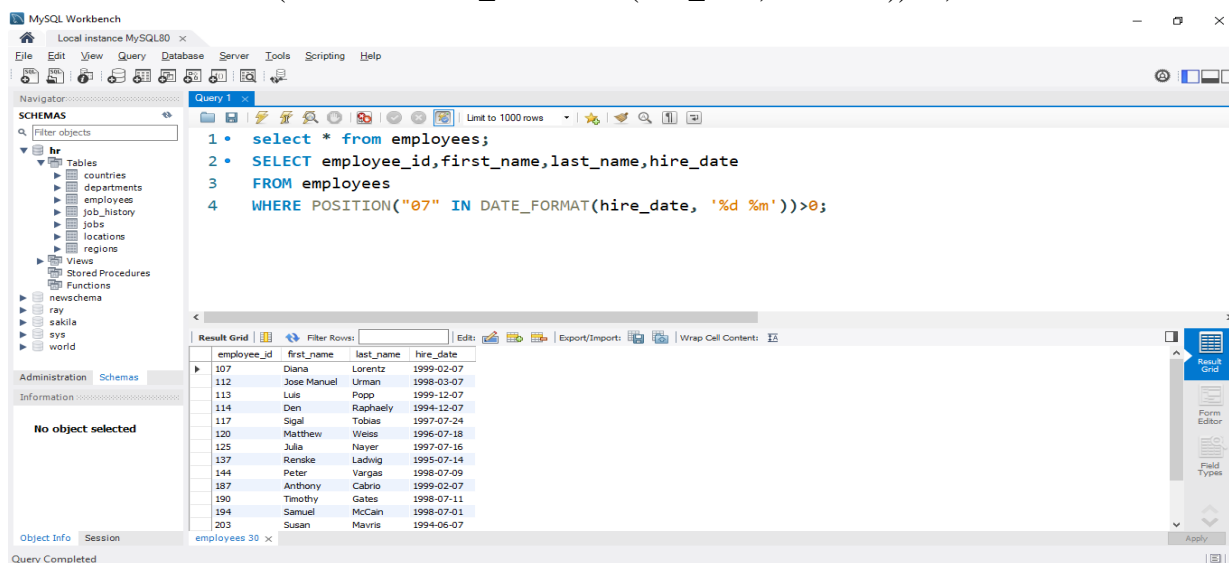
```
1 • use hr;  
2 • select * from employees limit 10;  
3 • SELECT left(first_name, 8), REPEAT('$', FLOOR(salary/1000)) 'SALARY($)', salary FROM employees  
4 • ORDER BY salary DESC;  
5
```

The results are displayed in the Result Grid, showing the first 10 employees sorted by salary in descending order. The columns are first_name and SALARY.

first_name	SALARY
Steven	\$\$\$24000.00
Neena	\$\$\$17000.00
Lex	\$\$\$17000.00
Alexander	\$\$\$9000.00
Bruce	\$\$\$6000.00
David	\$\$\$4800.00
Valli	\$\$\$4800.00
Diana	\$\$\$4200.00
Nancy	\$\$\$12000.00
Daniel	\$\$\$9000.00

36. Write a query to display the employees with their code, first name, last name and hire date who hired either on seventh day of any month or seventh month in any year

```
SELECT employee_id, first_name, last_name, hire_date FROM employees  
WHERE POSITION("07" IN DATE_FORMAT(hire_date, '%d %m'))>0;
```



The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
1 • select * from employees;  
2 • SELECT employee_id, first_name, last_name, hire_date  
3 FROM employees  
4 WHERE POSITION("07" IN DATE_FORMAT(hire_date, '%d %m'))>0;
```

The results are displayed in the Result Grid, showing the first 20 employees who were hired on the 7th day of any month or the 7th month of any year. The columns are employee_id, first_name, last_name, and hire_date.

employee_id	first_name	last_name	hire_date
107	Diana	Lorentz	1999-02-07
112	Jose Manuel	Urman	1998-03-07
113	Luis	Popp	1999-12-07
114	Den	Raphaely	1994-12-07
117	Sigal	Tobias	1997-07-24
120	Matthew	Weiss	1996-07-18
125	Julia	Nayer	1997-07-16
137	Renske	Ladwig	1995-07-14
144	Peter	Vargas	1998-07-09
187	Anthony	Cabrio	1999-02-07
190	Timothy	Gates	1998-07-11
194	Samuel	McCain	1998-07-01
203	Susan	Mavis	1994-06-07

Northwind Database Exercises-

1. Write a query to get Product name and quantity/unit
select productName ,quantityPerUnit from products;

The screenshot shows the MySQL Workbench interface. The 'Query 1' tab is active, displaying the following SQL query:

```
1 • use northwind;  
2 • select * from products;  
3 • select productName ,quantityPerUnit from products;
```

The 'Navigator' pane on the left shows the 'northwind' database schema with tables like categories, customers, employees, orders, products, shippers, and suppliers. The 'Table: products' is selected, and its columns are listed: ProductID (int AI), ProductName (varchar), SupplierID (int), CategoryID (int), QuantityPerUnit (varchar), and UnitPrice (decim). The 'Result Grid' on the right shows the output of the query, displaying columns 'productName' and 'quantityPerUnit' with 7 rows of data.

productName	quantityPerUnit
Chai	10 boxes x 20 bags
Chang	24 - 12 oz bottles
Aniseed Syrup	12 - 550 ml bottles
Chef Anton's Cajun Seasoning	48 - 6 oz jars
Chef Anton's Gumbo Mix	36 boxes
Grandma's Boysenberry Spread	12 - 8 oz jars
Uncle Bob's Organic Dried Pears	12 - 1 lb pkgs.

2. Write a query to get current Product list (Product ID and name)
select productId,productName from products;

The screenshot shows the MySQL Workbench interface. The 'Query 1' tab is active, displaying the following SQL query:

```
1 • use northwind;  
2 • select * from products;  
3 • select productId,productName from products;
```

The 'Navigator' pane on the left shows the 'northwind' database schema with tables like categories, customers, employees, orders, products, shippers, and suppliers. The 'Table: products' is selected, and its columns are listed: ProductID (int AI), ProductName (varchar), SupplierID (int), CategoryID (int), QuantityPerUnit (varchar), and UnitPrice (decim). The 'Result Grid' on the right shows the output of the query, displaying columns 'productId' and 'productName' with 7 rows of data.

productId	productName
1	Chai
2	Chang
3	Aniseed Syrup
4	Chef Anton's Cajun Seasoning
5	Chef Anton's Gumbo Mix
6	Grandma's Boysenberry Spread
7	Uncle Bob's Organic Dried Pears

3. Write a query to get discontinued Product list (Product ID and name)
select productId,productName from products where discontinued=1;

The screenshot shows the MySQL Workbench interface. The 'Query 1' editor contains the following SQL code:

```
1 • use northwind;
2 • select * from products;
3 • select productId,productName from products where discontinued=1;
```

The 'Result Grid' displays the results of the query, showing 7 rows of discontinued products. The columns are 'productId' and 'productName'.

productId	productName
5	Chef Anton's Gumbo Mix
9	Mishi Kobe Niku
17	Alice Mutton
24	Guaraná Fantástica
28	Rössle Sauerkraut
29	Thüringer Rostbratwurst
42	Singaporean Hokkien Fried Mee

The 'Table: products' section on the left shows the columns: ProductID (int AI), ProductName (varchar), SupplierID (int), CategoryID (int), QuantityPerUnit (varchar), and UnitPrice (decimal).

4. Write a query to get most expensive and least expensive Product list (name and unit price)
SELECT ProductName, UnitPrice FROM Products ORDER BY UnitPrice DESC;

The screenshot shows the MySQL Workbench interface. The 'Query 1' editor contains the following SQL code:

```
1 • use northwind;
2 • select * from products;
3 • SELECT ProductName, UnitPrice FROM Products ORDER BY UnitPrice DESC;
```

The 'Result Grid' displays the results of the query, showing 10 rows of products ordered by unit price in descending order. The columns are 'ProductName' and 'UnitPrice'.

ProductName	UnitPrice
Côte de Blaye	263.5000
Thüringer Rostbratwurst	123.7900
Mishi Kobe Niku	97.0000
Sir Rodney's Marmalade	81.0000
Carnarvon Tigers	62.5000
Radette Courdavault	55.0000
Manjimup Dried Apples	53.0000

The 'Table: products' section on the left shows the columns: ProductID (int AI), ProductName (varchar), SupplierID (int), CategoryID (int), QuantityPerUnit (varchar), and UnitPrice (decimal).

5. Write a query to get Product list (id, name, unit price) where current products cost less than \$20

```
SELECT ProductID, ProductName, UnitPrice FROM Products
WHERE (((UnitPrice)<20) AND ((Discontinued)=False));
```

The screenshot shows the MySQL Workbench interface. The 'Query 1' tab is active, displaying the following SQL query:

```
1 • use northwind;
2 • select * from products;
3 • SELECT ProductID, ProductName, UnitPrice
4 FROM Products
5 WHERE (((UnitPrice)<20) AND ((Discontinued)=False));
6
7
```

The 'Result Grid' shows the results of the query, limited to 1000 rows. The results are as follows:

ProductID	ProductName	UnitPrice
1	Chai	18.0000
2	Chang	19.0000
3	Aniseed Syrup	10.0000
13	Karbu	6.0000
15	Genen Shouyu	15.5000
16	Pavlova	17.4500
19	Teatime Chocolate Biscuits	9.2000

6. Write a query to get Product list (id, name, unit price) where products cost between \$15 and \$25

```
SELECT ProductID, ProductName, UnitPrice
FROM Products
WHERE (((UnitPrice) between 15 and 25 ) AND ((Discontinued)=False));
```

The screenshot shows the MySQL Workbench interface. The 'Query 1' tab is active, displaying the following SQL query:

```
1 • use northwind;
2 • select * from products;
3 • SELECT ProductID, ProductName, UnitPrice
4 FROM Products
5 WHERE (((UnitPrice) between 15 and 25 ) AND ((Discontinued)=False));
6
7
```

The 'Result Grid' shows the results of the query, limited to 1000 rows. The results are as follows:

ProductID	ProductName	UnitPrice
1	Chai	18.0000
2	Chang	19.0000
4	Chef Anton's Cajun Seasoning	22.0000
6	Grandma's Boysenberry Spread	25.0000
11	Queso Cabrales	21.0000
14	Tofu	23.2500
15	Genen Shouyu	15.5000

7. Write a query to get Product list (name, unit price) of above average price.

```
select * from products;
```

```
SELECT ProductName, UnitPrice from products
```

```
where UnitPrice>(SELECT avg(UnitPrice) FROM Products);
```

The screenshot shows the MySQL Workbench interface. The 'Query' tab is active, displaying the following SQL query:

```
1 • use northwind;
2 • select * from products;
3 • SELECT ProductName, UnitPrice from products
4 • where UnitPrice>(SELECT avg(UnitPrice) FROM Products);
5
6
7
8
```

The 'Result Grid' at the bottom shows the results of the query, listing products with their names and unit prices. The results are sorted by unit price in descending order.

ProductName	UnitPrice
Uncle Bob's Organic Dried Pears	30.0000
Northwoods Cranberry Sauce	40.0000
Mishi Kobe Niku	97.0000
Iliara	31.0000
Queso Manchego La Pastora	38.0000
Alice Mutton	39.0000
Carnarvon Tigers	62.5000

8. Write a query to get Product list (name, unit price) of ten most expensive products

```
SELECT ProductName, UnitPrice from products order by UnitPrice desc limit 10;
```

The screenshot shows the MySQL Workbench interface. The 'Query' tab is active, displaying the following SQL query:

```
1 • use northwind;
2 • select * from products;
3 • SELECT ProductName, UnitPrice from products order by UnitPrice desc limit 10;
4
5
6
7
8
```

The 'Result Grid' at the bottom shows the results of the query, listing the top 10 most expensive products with their names and unit prices.

ProductName	UnitPrice
Côte de Blaye	263.5000
Thüringer Rostbratwurst	123.7900
Mishi Kobe Niku	97.0000
Sir Rodney's Marmalade	81.0000
Carnarvon Tigers	62.5000
Radette Courdavault	55.0000
Manjimup Dried Apples	53.0000

9. Write a query to count current and discontinued products

`SELECT count(*) 'current' from products group by discontinued ;`

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
1 • use northwind;
2 • select * from products;
3 • SELECT count(*) 'current' from products group by discontinued ;
4
5
6
7
8
```

The left sidebar shows the 'Schemas' pane with the 'northwind' database selected. The 'Table: products' is highlighted, and its columns are listed: ProductID, ProductName, SupplierID, CategoryID, QuantityPerUnit, and UnitPrice. The 'Result Grid' at the bottom shows the results of the query:

current
69
8

The status bar at the bottom indicates 'Query Completed'.

10. Write a query to get Product list (name, units on order , units in stock) of stock is less than the quantity on order

`SELECT ProductName, UnitsOnOrder , UnitsInStock`

`FROM Products`

`WHERE (((Discontinued)=False) AND ((UnitsInStock)<UnitsOnOrder));`

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
1 • use northwind;
2 • select * from products;
3 • SELECT ProductName, UnitsOnOrder , UnitsInStock
4 FROM Products
5 WHERE (((Discontinued)=False) AND ((UnitsInStock)<UnitsOnOrder));
6
7
8
9
10
```

The left sidebar shows the 'Schemas' pane with the 'northwind' database selected. The 'Table: products' is highlighted, and its columns are listed: ProductID, ProductName, SupplierID, CategoryID, QuantityPerUnit, and UnitPrice. The 'Result Grid' at the bottom shows the results of the query:

ProductName	UnitsOnOrder	UnitsInStock
Chang	40	17
Aniseed Syrup	70	13
Queso Cabrales	30	22
Sir Rodney's Scones	40	3
Gorgonzola Telino	70	0
Mascarpone Fabioli	40	9
Gravad lax	50	11

The status bar at the bottom indicates 'Query Completed'.