

Name - Yash Lakhtariya

Enrollment number - 21162101012

Branch - CBA , Batch - 31

DBMS Practical 13

Institute of computer technology
Ganpat university
B.tech. CSE (CBA/BDA/CS)

(2CSE301) DATABASE MANAGEMENT SYSTEM

PRACTICAL 13 (View)

Problems, Respected Queries and Outputs :

1. Create a view that contains the full addresses (department_name, location_id, street_address, city, state_province, country_name) of all the departments

```
mycli -h haribol64 -
0.0 b/s 16.2 kb/s 11:53:55 AM
mycli -h haribol64 -

yash@haribol64 in ~
└─ mycli -h haribol64
Password:
MariaDB 10.9.4
mycli 1.25.0
Home: http://mycli.net
Bug tracker: https://github.com/dbcli/mycli/issues
Thanks to the contributor - caitinggui

MariaDB yash@haribol64 in (none) > use prac_13;
You are now connected to database "prac_13" as user "yash"
Time: 0.001s

MariaDB yash@haribol64 in prac_13 > create view p13_1 as select DEPARTMENT_NAME,l.location_id, street_address, city, state_province, country_name
--> FROM departments as d inner join locations as l on l.location_id = d.location_id inner join countries as c on
--> c.COUNTRY_ID = l.COUNTRY_ID;

Query OK, 0 rows affected
Time: 0.011s

MariaDB yash@haribol64 in prac_13 > select * from p13_1;
+-----+-----+-----+-----+-----+-----+
| DEPARTMENT_NAME | location_id | street_address | city | state_province | country_name |
+-----+-----+-----+-----+-----+-----+
| Administration | 1700 | 2004 Charade Rd | Seattle | Washington | United States of America |
| Marketing | 1800 | 147 Spadina Ave | Toronto | Ontario | Canada |
| Purchasing | 1700 | 2004 Charade Rd | Seattle | Washington | United States of America |
| Human Resources | 2400 | 8204 Arthur St | London | | United Kingdom |
| Shipping | 1500 | 2011 Interiors Blvd | South San Francisco | California | United States of America |
| IT | 1400 | 2014 Jabberwocky Rd | Southlake | Texas | United States of America |
| Public Relations | 2700 | Schwanthalerstr. 7031 | Munich | Bavaria | Germany |
| Executive | 1700 | 2004 Charade Rd | Seattle | Washington | United States of America |
| Finance | 1700 | 2004 Charade Rd | Seattle | Washington | United States of America |
| Accounting | 1700 | 2004 Charade Rd | Seattle | Washington | United States of America |
| Treasury | 1700 | 2004 Charade Rd | Seattle | Washington | United States of America |
| Corporate Tax | 1700 | 2004 Charade Rd | Seattle | Washington | United States of America |
| Control And Credit | 1700 | 2004 Charade Rd | Seattle | Washington | United States of America |
| Shareholder Services | 1700 | 2004 Charade Rd | Seattle | Washington | United States of America |
| Benefits | 1700 | 2004 Charade Rd | Seattle | Washington | United States of America |
```

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2. Create a view that contains the full name (e.g. Steven King) of all employees along with the country in which they are working

```
mycli -h haribol64 -
time: 0.021s

MariaDB yash@haribol64 in prac_13 > create view p13_2 as select FIRST_NAME, LAST_NAME, country_name from employees as e inner join departments as d on e.DEPARTMENT_ID = d.DEPARTMENT_ID inner join locations as l on l.LOCATION_ID = d.LOCATION_ID inner join countries as c on c.COUNTRY_ID = l.COUNTRY_ID;
Query OK, 0 rows affected
Time: 0.008s

MariaDB yash@haribol64 in prac_13 > select * from p13_2;
+-----+-----+-----+
| FIRST_NAME | LAST_NAME | country_name |
+-----+-----+-----+
| Jennifer | Whalen | United States of America |
| Michael | Hartstein | Canada |
| Pat | Fay | Canada |
| Den | Raphaely | United States of America |
| Alexander | Khoo | United States of America |
| Shelli | Baida | United States of America |
| Sigal | Tobias | United States of America |
| Guy | Himuro | United States of America |
| Karen | Colmenares | United States of America |
| Susan | Mavris | United Kingdom |
| Matthew | Weiss | United States of America |
| Adam | Fripp | United States of America |
| Payam | Kaufling | United States of America |
| Shanta | Vollman | United States of America |
| Kevin | Mourgos | United States of America |
| Julia | Nayer | United States of America |
| Irene | Mikilineni | United States of America |
| James | Landry | United States of America |
| Steven | Markle | United States of America |
| Laura | Bissot | United States of America |
| Mozhe | Atkinson | United States of America |
| James | Marlow | United States of America |
| TJ | Olson | United States of America |
| Jason | Mallin | United States of America |
| Michael | Rogers | United States of America |
| Ki | Gee | United States of America |
| Hazel | Philtanker | United States of America |
| Renske | Ladwig | United States of America |
```

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3. Create a view to find the name (first_name, last_name) and salary of the employees whose salary is greater than the average salary.

```
mycli -h haribol64 -
0.0 b/s 9.8 kb/s 12:02:59 PM
mycli -h haribol64 -

MariaDB [yash@haribol64 in prac_13] > create view p13_3 as select FIRST_NAME, LAST_NAME, SALARY from employees where salary > (select avg(salary) from employees);
Query OK, 0 rows affected
Time: 0.008s

MariaDB [yash@haribol64 in prac_13] > select * from p13_3;
+-----+-----+-----+
| FIRST_NAME | LAST_NAME | SALARY |
+-----+-----+-----+
| Steven    | King      | 24000.00 |
| Neena     | Kochhar   | 17000.00 |
| Lex       | De Haan   | 17000.00 |
| Alexander | Hunold    | 9000.00  |
| Nancy     | Greenberg | 12000.00 |
| Daniel    | Faviet    | 9000.00  |
| John      | Chen      | 8200.00  |
| Ismael    | Sciarra   | 7700.00  |
| Jose Manuel | Urman     | 7800.00  |
| Luis      | Popp      | 6900.00  |
| Den       | Raphaely  | 11000.00 |
| Matthew   | Weiss     | 8000.00  |
| Adam      | Fripp     | 8200.00  |
| Payam     | Kaufling  | 7900.00  |
| Shanta    | Vollman   | 6500.00  |
| John      | Russell   | 14000.00 |
| Karen     | Partners  | 13500.00 |
| Alberto   | Errazuriz | 12000.00 |
| Gerald    | Cambrault | 11000.00 |
| Eleni     | Zlotkey   | 10500.00 |
| Peter     | Tucker   | 10000.00 |
| David     | Bernstein | 9500.00  |
| Peter     | Hall      | 9000.00  |
| Christopher | Olsen     | 8000.00  |
| Nanette   | Cambrault | 7500.00  |
| Oliver    | Tuvault   | 7000.00  |
| Janette   | King      | 10000.00 |
| Patrick   | Sully     | 9500.00  |
| Allan     | McEwen    | 9000.00  |
| Lindsey   | Smith     | 8000.00  |
```

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4. Create a view to get the job_ID, JOB_title and maximum salary of the employees where the maximum salary is greater than or equal to \$4000.

```
mycli -h haribol64 -
0.0 b/s 5.1 kb/s 12:03:23 PM
mycli -h haribol64 -

MariaDB yash@haribol64 in prac_13 > create view p13_4 as select JOB_ID,job_title,max_salary from jobs where max_salary>=4000;
Query OK, 0 rows affected
Time: 0.005s

MariaDB yash@haribol64 in prac_13 > select * from p13_4;
+-----+-----+-----+
| JOB_ID | job_title | max_salary |
+-----+-----+-----+
| AD_PRES | President | 40000 |
| AD_VP | Administration Vice President | 30000 |
| AD_ASST | Administration Assistant | 6000 |
| FI_MGR | Finance Manager | 16000 |
| FI_ACCOUNT | Accountant | 9000 |
| AC_MGR | Accounting Manager | 16000 |
| AC_ACCOUNT | Public Accountant | 9000 |
| SA_MAN | Sales Manager | 20000 |
| SA_REP | Sales Representative | 12000 |
| PU_MAN | Purchasing Manager | 15000 |
| PU_CLERK | Purchasing Clerk | 5500 |
| ST_MAN | Stock Manager | 8500 |
| ST_CLERK | Stock Clerk | 5000 |
| SH_CLERK | Shipping Clerk | 5500 |
| IT_PROG | Programmer | 10000 |
| MK_MAN | Marketing Manager | 15000 |
| MK_REP | Marketing Representative | 9000 |
| HR_REP | Human Resources Representative | 9000 |
| PR_REP | Public Relations Representative | 10500 |
+-----+-----+-----+

19 rows in set
Time: 0.010s

MariaDB yash@haribol64 in prac_13 > 
```

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5. Create a view that displays the first_name and last_name of employees who are managers.

```
mycli -h haribol64 -
mycli -h haribol64 -
MariaDB yash@haribol64 in prac_13 > create view p13_5 as select distinct(e1.FIRST_NAME),e1.LAST_NAME from employees as e1 inner join employees as e2 on
--> e1.EMPLOYEE_ID = e2.MANAGER_ID;
Query OK, 0 rows affected
Time: 0.009s

MariaDB yash@haribol64 in prac_13 > select * from p13_5;
+-----+-----+
| FIRST_NAME | LAST_NAME |
+-----+-----+
| Steven    | King      |
| Neena     | Kochhar   |
| Lex       | De Haan   |
| Alexander | Hunold    |
| Nancy     | Greenberg |
| Den       | Raphaely  |
| Matthew   | Weiss     |
| Adam      | Fripp     |
| Payam     | Kaufling  |
| Shanta    | Vollman   |
| Kevin     | Mourgos   |
| John      | Russell   |
| Karen     | Partners  |
| Alberto   | Errazuriz |
| Gerald    | Cambrault |
| Eleni     | Zlotkey   |
| Michael   | Hartstein |
| Shelley   | Higgins   |
+-----+-----+

18 rows in set
Time: 0.003s

MariaDB yash@haribol64 in prac_13 > 
```

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6. Create a view to list the department ID, department_name and city of all the departments where no employee is working.

```
mycli -h haribol64 -
0.0 b/s 11.5 kb/s 12:05:56 PM
mycli -h haribol64 -
| Shanta | Vollman |
| Kevin | Mourgos |
| John | Russell |
| Karen | Partners |
| Alberto | Errazuriz |
| Gerald | Cambrault |
| Eleni | Zlotkey |
| Michael | Hartstein |
| Shelley | Higgins |
+-----+
18 rows in set
Time: 0.003s

MariaDB yash@haribol64 in prac_13 > create view p13_6 as select d.DEPARTMENT_ID,d.DEPARTMENT_NAME,city from departments as d inner join employees as e on
--> d.MANAGER_ID = e.MANAGER_ID inner join locations as l on l.LOCATION_ID = d.LOCATION_ID where e.department_id not in
--> (select department_id from employees);

Query OK, 0 rows affected
Time: 0.008s

MariaDB yash@haribol64 in prac_13 > select * from p13_6;
+-----+-----+-----+
| DEPARTMENT_ID | DEPARTMENT_NAME | city |
+-----+-----+-----+
+-----+-----+-----+

0 rows in set
Time: 0.003s

MariaDB yash@haribol64 in prac_13 >

(Semi-colon [;] will end the line) [F3] Multiline: ON
```

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7. Create a view to list the full names and hire_date of the employees who were hired before Susan Mavris.

```
mycli -h haribol64 -
Time: 0.003s
MariaDB yash@haribol64 in prac_13 > create view p13_7 as select FIRST_NAME, LAST_NAME, HIRE_DATE from employees where HIRE_DATE < (select HIRE_DATE from employees
--> where FIRST_NAME='Susan');
Query OK, 0 rows affected
Time: 0.007s
MariaDB yash@haribol64 in prac_13 > select * from p13_7;
+-----+-----+-----+
| FIRST_NAME | LAST_NAME | HIRE_DATE |
+-----+-----+-----+
| Steven | King | 1987-06-17 |
| Neena | Kochhar | 1987-06-18 |
| Lex | De Haan | 1987-06-19 |
| Alexander | Hunold | 1987-06-20 |
| Bruce | Ernst | 1987-06-21 |
| David | Austin | 1987-06-22 |
| Valli | Pataballa | 1987-06-23 |
| Diana | Lorentz | 1987-06-24 |
| Nancy | Greenberg | 1987-06-25 |
| Daniel | Faviet | 1987-06-26 |
| John | Chen | 1987-06-27 |
| Ismael | Sciarra | 1987-06-28 |
| Jose Manuel | Urman | 1987-06-29 |
| Luis | Popp | 1987-06-30 |
| Den | Raphaely | 1987-07-01 |
| Alexander | Khoo | 1987-07-02 |
| Shelli | Baida | 1987-07-03 |
| Sigal | Tobias | 1987-07-04 |
| Guy | Himuro | 1987-07-05 |
| Karen | Colmenares | 1987-07-06 |
| Matthew | Weiss | 1987-07-07 |
| Adam | Fripp | 1987-07-08 |
| Payam | Kaufling | 1987-07-09 |
| Shanta | Vollman | 1987-07-10 |
| Kevin | Mourgos | 1987-07-11 |
| Julia | Nayer | 1987-07-12 |
| Irene | Mikkilineni | 1987-07-13 |
+-----+-----+-----+
```

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8. Create a view to find the employee ID, job title, number of days between ending date and starting date for all jobs in department 80 and 90.

```
mycli -h haribol64 -
mycli -h haribol64 -
| TJ      | Olson      | 1987-07-19 |
| Jason   | Mallin     | 1987-07-20 |
103 rows in set
Time: 0.020s

MariaDB yash@haribol64 in prac_13 > create view p13_8 as select e.EMPLOYEE_ID,JOB_TITLE,datediff(end_date,start_date) from employees as e inner join job_history as jh
--> on e.EMPLOYEE_ID = jh.EMPLOYEE_ID inner join jobs as j on jh.JOB_ID = j.JOB_ID;
Query OK, 0 rows affected
Time: 0.009s

MariaDB yash@haribol64 in prac_13 > select * from p13_8;
+-----+-----+-----+
| EMPLOYEE_ID | JOB_TITLE | datediff(end_date,start_date) |
+-----+-----+-----+
| 102          | Programmer | 2018 |
| 101          | Public Accountant | 1497 |
| 101          | Accounting Manager | 1234 |
| 201          | Marketing Representative | 1401 |
| 114          | Stock Clerk | 647 |
| 122          | Stock Clerk | 364 |
| 200          | Administration Assistant | 2100 |
| 176          | Sales Representative | 282 |
| 176          | Sales Manager | 364 |
| 200          | Public Accountant | 1644 |
+-----+-----+-----+
10 rows in set
Time: 0.006s

MariaDB yash@haribol64 in prac_13 >
(Semi-colon [;] will end the line) [F3] Multiline: ON
```


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9. Create a view to display the department names in which the difference between minimum and maximum salary is more than 4000

```
mycli -h haribol64 -
0.0 b/s 7.6 kb/s 12:08:08 PM
mycli -h haribol64 -
| 201 | Marketing Representative | 1401 |
| 114 | Stock Clerk | 647 |
| 122 | Stock Clerk | 364 |
| 200 | Administration Assistant | 2100 |
| 176 | Sales Representative | 282 |
| 176 | Sales Manager | 364 |
| 200 | Public Accountant | 1644 |
+-----+
10 rows in set
Time: 0.006s

MariaDB yash@haribol64 in prac_13 > create view p13_9 as select department_name from departments as d inner join job_history as jh on d.DEPARTMENT_ID = jh.DEPARTMENT_ID
--> inner join jobs as j on j.JOB_ID = jh.JOB_ID where MAX_SALARY-MIN_SALARY >= 4000 and (d.DEPARTMENT_ID=80 or d.DEPARTMENT_ID=90);
Query OK, 0 rows affected
Time: 0.009s

MariaDB yash@haribol64 in prac_13 > select * from p13_9;
+-----+
| department_name |
+-----+
| Sales |
| Sales |
| Executive |
+-----+
3 rows in set
Time: 0.008s

MariaDB yash@haribol64 in prac_13 >

(Semi-colon [;] will end the line) [F3] Multiline: ON
```

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10. For all above created views, Update at least last record from each and verify whether the update gets reflected in the base table(s) or not

```
mycli -h haribol64 -
0.0 b/s 17.6 kb/s 12:12:15 PM
mycli -h haribol64 -

MariaDB yash@haribol64 in prac_13 > create view p13_9 as select department_name from departments as d inner join job_history as jh on d.DEPARTMENT_ID = jh.DEPARTMENT_ID
--> inner join jobs as j on j.JOB_ID = jh.JOB_ID where MAX(SALARY MIN_SALARY >= 4000 and (d.DEPARTMENT_ID=80 or d.DEPARTMENT_ID=90));
Query OK, 0 rows affected
Time: 0.009s

MariaDB yash@haribol64 in prac_13 > select * from p13_9;
+-----+
| department_name |
+-----+
| Sales           |
| Sales           |
| Executive       |
+-----+

3 rows in set
Time: 0.008s

MariaDB yash@haribol64 in prac_13 > update view p13_7 set first_name = 'Yash' where last_name = 'Lakhtariya' and hire_date = '2002-10-10';
(1146, "Table 'prac_13.view' doesn't exist")

MariaDB yash@haribol64 in prac_13 > update view p13_7 set first_name = 'Yash' where last_name = 'Lakhtariya' and hire_date = '2002-10-10';
(1146, "Table 'prac_13.view' doesn't exist")

MariaDB yash@haribol64 in prac_13 > -- View cannot be updated here because complex queries including joins are there
--> ;
Query OK, 0 rows affected
Time: 0.000s

MariaDB yash@haribol64 in prac_13 >

(Semi-colon [;] will end the line) [F3] Multiline: ON
```