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| **CIS 422 DBMS** | **LAB 04** | **Points: 20** |
| **Views** | | |

**Lab Questions**

***For each of the following question, provide the SQL statement and the screenshot for the result from the phpMyAdmin.***

1. Write a view to display detailed information about each employee, information such as employee id, first name, last name, manager name, department name, and job title?

CREATE VIEW detailed\_information AS

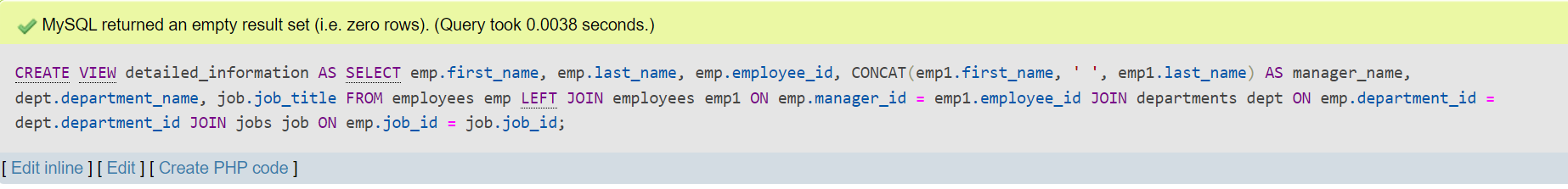
SELECT emp.first\_name, emp.last\_name, emp.employee\_id, CONCAT(emp1.first\_name, ' ', emp1.last\_name) AS manager\_name, dept.department\_name, job.job\_title

FROM employees emp

LEFT JOIN employees emp1 ON emp.manager\_id = emp1.employee\_id

JOIN departments dept ON emp.department\_id = dept.department\_id

JOIN jobs job ON emp.job\_id = job.job\_id;



1. Write a view to display a summary of each department, including the total number of employees, the average salary, and the location?

CREATE VIEW summary AS

SELECT

dept.department\_name,

dept.department\_id,

COUNT(emp.employee\_id) AS number,

AVG(emp.salary) AS average,

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FROM

employees emp

JOIN departments dept ON emp.department\_id = dept.department\_id

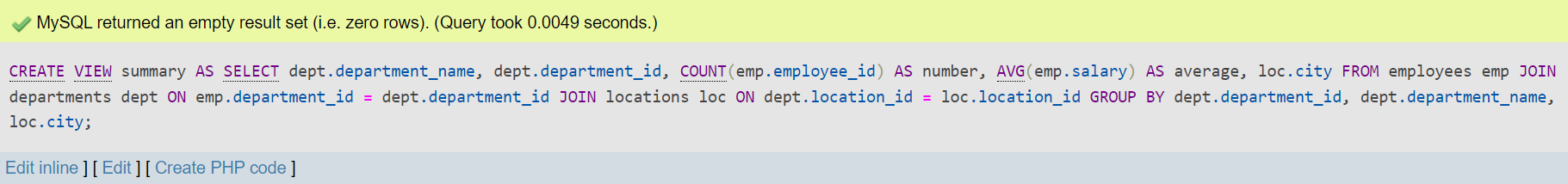
JOIN locations loc ON dept.location\_id = loc.location\_id

GROUP BY

dept.department\_id,

dept.department\_name,

loc.city;



1. Write a view to display information about each employee and their dependents, including the employee's department and job title?

CREATE VIEW information AS

SELECT

emp.employee\_id,

emp.first\_name,

emp.last\_name,

dept.department\_name,

job.job\_title,

dep.relationship

FROM

employees emp

JOIN

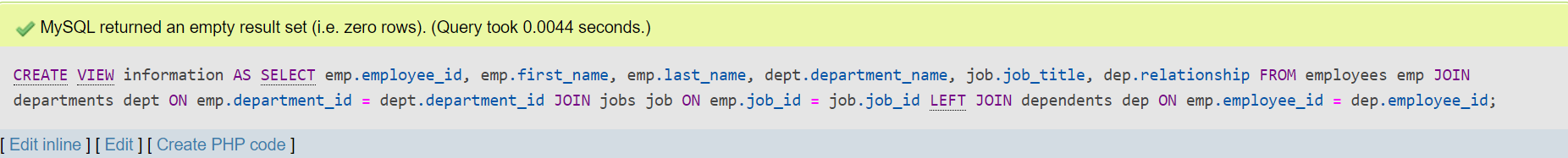
departments dept ON emp.department\_id = dept.department\_id

JOIN

jobs job ON emp.job\_id = job.job\_id

LEFT JOIN

dependents dep ON emp.employee\_id = dep.employee\_id;



1. Write a view to display the top 5 job titles with the highest average salary within each department?

CREATE VIEW top\_five\_jobs AS

SELECT

J.job\_title,

D.department\_name,

AVG(E.salary) AS avg\_salary

FROM

employees E

JOIN departments D ON E.department\_id = D.department\_id

JOIN jobs J ON E.job\_id = J.job\_id

GROUP BY

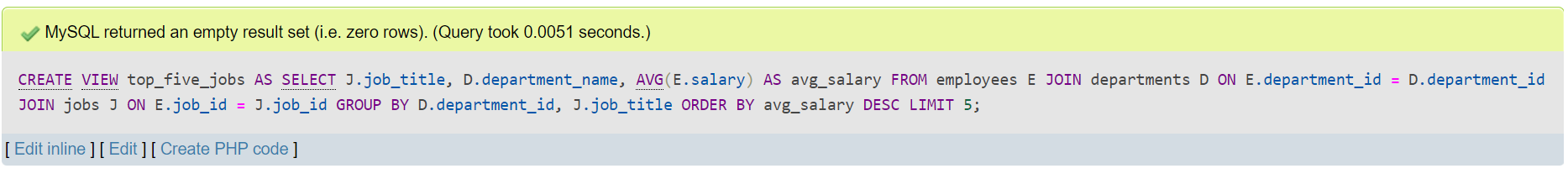
D.department\_id,

J.job\_title

ORDER BY

avg\_salary DESC

LIMIT 5;



1. Write a view to display information about each manager, including the total number of employees they manage, total salary, and average salary by department?

CREATE VIEW manager\_information AS

SELECT

mgr.employee\_id AS id,

mgr.first\_name,

mgr.last\_name,

COUNT(emp.employee\_id) AS total\_employees,

SUM(emp.salary) AS total\_salary,

AVG(emp.salary) AS average\_salary,

dept.department\_name

FROM

employees emp

JOIN employees mgr ON emp.manager\_id = mgr.employee\_id

JOIN departments dept ON emp.department\_id = dept.department\_id

GROUP BY

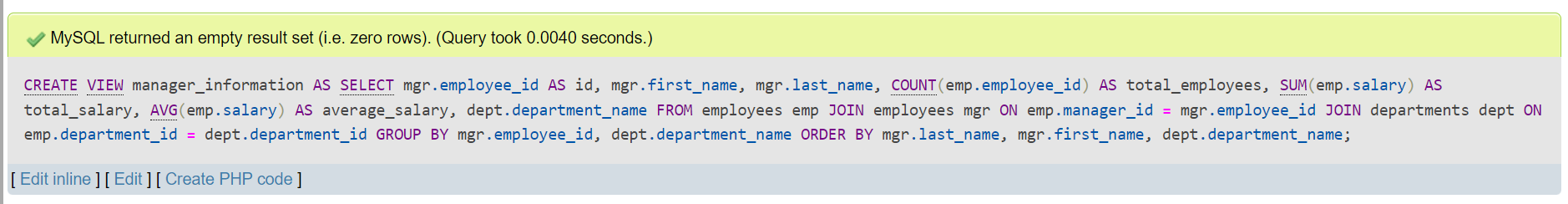
mgr.employee\_id,

dept.department\_name

ORDER BY

mgr.last\_name,

mgr.first\_name,

dept.department\_name;

1. Write a view to display salary statistics for each job title in each region, including the number of employees, minimum, maximum, average, and standard deviation of salaries?

CREATE VIEW job\_statistics AS

SELECT reg.region\_name, titles.job\_title,

COUNT(emp.employee\_id) AS number,

MIN(emp.salary) AS minimum,

MAX(emp.salary) AS maximum,

AVG(emp.salary) AS average,

STDDEV(emp.salary) AS deviation

FROM employees emp

JOIN jobs titles ON emp.job\_id = titles.job\_id

JOIN departments dept ON emp.department\_id = dept.department\_id

JOIN Regions reg ON dept.department\_id = reg.region\_id

GROUP BY reg.region\_name, titles.job\_title

ORDER BY reg.region\_name, titles.job\_title;

