

Muhammad Kaleem

56614



Lab#6

Q1.

Examples:

Inner Join:

SELECT e.employee_id, e.last_name, e.department_id, d.department_id, d.location_id FROM employees e JOIN departments d ON (e.department_id = d.department_id);

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```
SELECT e.employee_id, e.last_name, e.department_id, d.department_id, d.location_id
FROM employees e
JOIN departments d
ON (e.department_id = d.department_id);
```

Results Explain Describe Saved SQL History

EMPLOYEE_ID	LAST_NAME	DEPARTMENT_ID	DEPARTMENT_ID	LOCATION_ID
200	Whalen	10	10	1700
201	Hartstein	20	20	1800
202	Fay	20	20	1800
114	Raphaely	30	30	1700
115	Khoo	30	30	1700
116	Baida	30	30	1700
117	Tobias	30	30	1700
118	Himuro	30	30	1700
119	Colmenares	30	30	1700
203	Mavris	40	40	2400

More than 10 rows available. Increase rows selector to view more rows.

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Left Outer Join:

```
SELECT e.last_name, e.department_id, d.department_name FROM employees e LEFT OUTER JOIN departments d ON (e.department_id = d.department_id);
```

<pre>SELECT e.last_name, e.department_id, d.department_name FROM employees e LEFT OUTER JOIN departments d ON (e.department_id = d.department_id);</pre>				
Results	Explain	Describe	Saved SQL	History
EMPLOYEE_ID	LAST_NAME	DEPARTMENT_ID	DEPARTMENT_ID	LOCATION_ID
200	Whalen	10	10	1700
201	Hartstein	20	20	1800
202	Fay	20	20	1800
114	Raphaely	30	30	1700
115	Khoo	30	30	1700
116	Baida	30	30	1700
117	Tobias	30	30	1700
118	Himuro	30	30	1700
119	Colmenares	30	30	1700
203	Mavris	40	40	2400
More than 10 rows available. Increase rows selector to view more rows.				
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Right Inner Join:

```
SELECT e.last_name, e.department_id, d.department_name FROM employees e RIGHT OUTER JOIN departments d ON (e.department_id = d.department_id);
```

<pre>SELECT e.last_name, e.department_id, d.department_name FROM employees e RIGHT OUTER JOIN departments d ON (e.department_id = d.department_id);</pre>		
Results	Explain	Describe
Explain	Describe	Saved SQL
History		
LAST_NAME	DEPARTMENT_ID	DEPARTMENT_NAME
Whalen	10	Administration
Fay	20	Marketing
Hartstein	20	Marketing
Tobias	30	Purchasing
Colmenares	30	Purchasing
Baida	30	Purchasing
Raphaely	30	Purchasing
Khoo	30	Purchasing
Himuro	30	Purchasing
Mavris	40	Human Resources
More than 10 rows available. Increase rows selector to view more rows.		
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Full Join:

SELECT e.last_name, d.department_id, d.department_name FROM employees e FULL OUTER JOIN departments d ON (e.department_id = d.department_id);

<pre>SELECT e.last_name, d.department_id, d.department_name FROM employees e FULL OUTER JOIN departments d ON (e.department_id = d.department_id);</pre>		
Results Explain Describe Saved SQL History		
LAST_NAME	DEPARTMENT_ID	DEPARTMENT_NAME
King	90	Executive
Kochhar	90	Executive
De Haan	90	Executive
Hunold	60	IT
Ernst	60	IT
Austin	60	IT
Pataballa	60	IT
Lorentz	60	IT
Greenberg	100	Finance
Faviet	100	Finance
More than 10 rows available. Increase rows selector to view more rows.		
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Self Join:

SELECT e.last_name emp, m.last_name mgr FROM employees e , employees m where (e.manager_id = m.employee_id);

<pre>SELECT e.last_name emp, m.last_name mgr FROM employees e , employees m where (e.manager_id = m.employee_id);</pre>	
Results Explain Describe Saved SQL History	
EMP	MGR
Smith	Cambault
Ozer	Cambault
Kumar	Cambault
Fox	Cambault
Bloom	Cambault
Bates	Cambault
Hunold	De Haan
Vishney	Errazuriz
Marvins	Errazuriz
Lee	Errazuriz
More than 10 rows available. Increase rows selector to view more rows.	
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Additional Conditions to a Join:

SELECT e.employee_id, e.last_name, e.department_id, d.department_id, d.location_id FROM employees e JOIN departments d ON (e.department_id = d.department_id) AND e.manager_id = 149 ;

```
SELECT e.employee_id, e.last_name, e.department_id, d.department_id, d.location_id
FROM employees e
JOIN departments d
ON (e.department_id = d.department_id) AND e.manager_id = 149 ;
```

Results Explain Describe Saved SQL History

EMPLOYEE_ID	LAST_NAME	DEPARTMENT_ID	DEPARTMENT_ID	LOCATION_ID
174	Abel	80	80	2500
175	Hutton	80	80	2500
179	Johnson	80	80	2500
177	Livingston	80	80	2500
176	Taylor	80	80	2500

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Three-Way Joins with the ON Clause:

SELECT employee_id, city, department_name FROM employees e JOIN departments d ON d.department_id = e.department_id JOIN locations l ON d.location_id = l.location_id

```
SELECT employee_id, city, department_name
FROM employees e
JOIN departments d
ON d.department_id = e.department_id
JOIN locations l
ON d.location_id = l.location_id
```

Results Explain Describe Saved SQL History

EMPLOYEE_ID	LAST_NAME	DEPARTMENT_ID	DEPARTMENT_ID	LOCATION_ID
174	Abel	80	80	2500
175	Hutton	80	80	2500
179	Johnson	80	80	2500
177	Livingston	80	80	2500
176	Taylor	80	80	2500

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Cross Join:

SELECT last_name, department_name FROM employees CROSS JOIN departments;

```
SELECT last_name, department_name  
FROM employees  
CROSS JOIN departments;
```

Results Explain Describe Saved SQL History

EMPLOYEE_ID	LAST_NAME	DEPARTMENT_ID	DEPARTMENT_ID	LOCATION_ID
174	Abel	80	80	2500
175	Hutton	80	80	2500
179	Johnson	80	80	2500
177	Livingston	80	80	2500
176	Taylor	80	80	2500

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Q2.

select job_id, last_name, department_id

from employees

where job_id in (select job_id from jobs);

select job_id, last_name, department_id from employees where job_id in (select job_id from jobs);		
Results	Explain	Describe Saved SQL History
JOB_ID	LAST_NAME	DEPARTMENT_ID
AD_PRES	King	90
AD_VP	Kochhar	90
AD_VP	De Haan	90
IT_PROG	Hunold	60
IT_PROG	Ernst	60
IT_PROG	Austin	60
IT_PROG	Pataballa	60
IT_PROG	Lorentz	60
FI_MGR	Greenberg	100
FI_ACCOUNT	Faviet	100
More than 10 rows available. Increase rows selector to view more rows.		
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Q3.

select e.last_name as employee,

e.employee_id as emp#,

m.last_name as manager,

e.manager_id as mgr#

from employees e

left join employees m on e.manager_id = m.employee_id;

```

select e.last_name as employee,
e.employee_id as emp#,
m.last_name as manager,
e.manager_id as mgr#
from employees e
left join employees m on e.manager_id = m.employee_id;

```

Results Explain Describe Saved SQL History

EMPLOYEE	EMP#	MANAGER	MGR#
Kumar	173	Cambrault	148
Bates	172	Cambrault	148
Smith	171	Cambrault	148
Fox	170	Cambrault	148
Bloom	169	Cambrault	148
Ozer	168	Cambrault	148
Hunold	103	De Haan	102
Banda	167	Errazuriz	147
Ande	166	Errazuriz	147
Lee	165	Errazuriz	147
More than 10 rows available. Increase rows selector to view more rows.			

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Q4:

```

select e.first_name || ' ' || e.last_name as employee_name,
j.job_title,
d.department_name
from employees e
join job_history jh on e.employee_id = jh.employee_id
join jobs j on jh.job_id = j.job_id
join departments d on e.department_id = d.department_id;

```



```

select e.first_name || ' ' || e.last_name as employee_name,
j.job_title,
d.department_name
from employees e
join job_history jh on e.employee_id = jh.employee_id
join jobs j on jh.job_id = j.job_id
join departments d on e.department_id = d.department_id;

```

Results Explain Describe Saved SQL History

EMPLOYEE_NAME	JOB_TITLE	DEPARTMENT_NAME
Jennifer Whalen	Public Accountant	Administration
Jennifer Whalen	Administration Assistant	Administration
Michael Hartstein	Marketing Representative	Marketing
Den Raphaely	Stock Clerk	Purchasing
Payam Kaufling	Stock Clerk	Shipping
Jonathon Taylor	Sales Manager	Sales
Jonathon Taylor	Sales Representative	Sales
Lex De Haan	Programmer	Executive
Neena Kochhar	Public Accountant	Executive
Neena Kochhar	Accounting Manager	Executive

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Q5.

```
select e.first_name || ' ' || e.last_name as employee_name,
```

```
j.job_title,
```

```
d.department_name
```

```
from employees e
```

```
join jobs j on e.job_id = j.job_id
```

```
join departments d on e.department_id = d.department_id;
```

```

select e.first_name || ' ' || e.last_name as employee_name,
j.job_title,
d.department_name
from employees e
join jobs j on e.job_id = j.job_id
join departments d on e.department_id = d.department_id;

```

[Results](#)
[Explain](#)
[Describe](#)
[Saved SQL](#)
[History](#)

EMPLOYEE_NAME	JOB_TITLE	DEPARTMENT_NAME
Jennifer Whalen	Administration Assistant	Administration
Pat Fay	Marketing Representative	Marketing
Michael Hartstein	Marketing Manager	Marketing
Den Raphaely	Purchasing Manager	Purchasing
Karen Colmenares	Purchasing Clerk	Purchasing
Guy Himuro	Purchasing Clerk	Purchasing
Sigal Tobias	Purchasing Clerk	Purchasing
Alexander Khoo	Purchasing Clerk	Purchasing
Shelli Baida	Purchasing Clerk	Purchasing
Susan Mavris	Human Resources Representative	Human Resources
More than 10 rows available. Increase rows selector to view more rows.		

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