**SQL Assessment**

1. Create a SQL statement to list all managers and their titles.

SELECT dm.emp\_no, e.first\_name, e.last\_name, t.title

FROM dept\_manager dm

LEFT JOIN employees e ON dm.emp\_no=e.emp\_no

LEFT JOIN titles t on e.emp\_no=t.emp\_no;

Process:

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I left joined department managers table on employees table to see that there were 8 managers. I then left joined employees table on title to keep the 8 managers including those without a title.

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Had I done an inner join from employees on titles, I would have lost 4 of the managers as they don’t have a title and the join would only take the employees who have a record and employee number in the titles table. Hence I did two left joins.

**Final Output:**

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1. Create a SQL statement to show the salary of all employees and their department name.

SELECT e.first\_name, e.last\_name, s.salary, d.dept\_name

FROM employees e

LEFT JOIN dept\_emp de ON e.emp\_no=de.emp\_no

LEFT JOIN departments d ON de.dept\_no=d.dept\_no

LEFT JOIN dept\_manager dm ON dm.emp\_no=e.emp\_no

LEFT JOIN salaries s ON s.emp\_no=e.emp\_no

LEFT JOIN titles t ON t.emp\_no=e.emp\_no

Final Output:

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I used left joins to combine the columns of all the table to include all the employees and the null values for those who don’t have a department name, department number, a recorded salary, or an employee number. I then changed the select statement to only include the rows that I wanted to display which was the full name, salaries, and department names.

1. Create a SQL statement to show the hire date and birth date who belongs to HR department.

SELECT e.first\_name, e.last\_name, e.hire\_date, e.birth\_date

FROM employees e

LEFT JOIN dept\_emp de ON e.emp\_no=de.emp\_no

LEFT JOIN dept\_manager dm ON e.emp\_no=dm.emp\_no

LEFT JOIN departments d ON de.dept\_no=d.dept\_no

WHERE d.dept\_name= ‘Human Resources’ OR dm.dept\_no= ‘d003’;

Process:

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I saw that the two managers in the department managers table did not have a department number but were part of d003. Therefore, added a where statement to include the department employee that was part of human resources and a statement to include the employees who were part of d003 from the department manager table.

Final Output:

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1. Create a SQL statement to show all departments and their department’s managers.

SELECT d.dept\_name, e.first\_name, e.last\_name

FROM departments d

LEFT JOIN dept\_manager dm ON d.dept\_no=dm.dept\_no

LEFT JOIN employees e ON dm.emp\_no=e.emp\_no;

Process:

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Final Output:

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1. Create a SQL statement to show a list of HR’s employees who were hired after 1986.

SELECT e.first\_name, e.last\_name, e.hire\_date

FROM employees e

LEFT JOIN dept\_emp de ON e.emp\_no=de.emp\_no

LEFT JOIN departments d ON de.dept\_no=d.dept\_no

LEFT JOIN dept\_manager dm ON e.emp\_no=dm.emp\_no

WHERE d.dept\_name= ‘Human Resources’ OR dm.dept\_no= ‘d003’ AND e.hire\_date >=1986;

Process:

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Final Output:

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1. Create a database view to list the full names of all departments’ managers, and their salaries.

CREATE VIEW dept\_manager\_salary

SELECT d.dept\_name, e.first\_name, e.last\_name, s.salary

FROM departments d

LEFT JOIN dept\_manager dm ON d.dept\_no=dm.dept\_no

LEFT JOIN employees e ON dm.emp\_no=e.emp\_no

LEFT JOIN salaries s ON e.emp\_no=s.emp\_no AND s.from\_date >= dm.to\_date;

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I then added a clause to ensure the salary from date was after the employees became managers and related to their manager salary as some employees had been working and receiving a salary before becoming manager.

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Final Output:

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1. Create a database view to list all departments and their department’s managers, who were hired between 1980 and 1990.

CREATE VIEW manager\_1980\_1990 AS

SELECT d.dept\_name, e.first\_name, e.last\_name, e.hire\_date

FROM departments d

LEFT JOIN dept\_manager dm ON d.dept\_no=dm.dept\_no

LEFT JOIN employees e ON e.emp\_no=dm.emp\_no AND YEAR(e.hire\_date)>=1980 AND YEAR(e.hire\_date)<=1990;

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Final Output:

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Description automatically generated

1. Create a SQL statement to increase salaries of all department’s managers up to 10% who are working since 1990.

SELECT d.dept\_name, e.first\_name, e.last\_name, s.salary

FROM departments d

LEFT JOIN dept\_manager dm ON d.dept\_no=dm.dept\_no

LEFT JOIN employees e ON dm.emp\_no=e.emp\_no

LEFT JOIN salaries s ON e.emp\_no=s.emp\_no AND s.from\_date >= dm.to\_date

WHERE YEAR(dm.from\_date)>=1990;

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Final Output:

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