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**Assignment**

**Assignment No. – 05**

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**Course Title- DBMS (Lab)**

**Course Code: CSE-2424**

Submited to-

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1. **Write a query for the HR department to produce the addresses of all the departments. Use the LOCATIONS and COUNTRIES tables. Show the location ID, street address, city, state or province, and country in the output. Use a NATURAL JOIN to produce the results.**

SELECT location\_id, street\_address, city, state\_province, country\_name

FROM locations

NATURAL JOIN countries;

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **LOCATION\_ID** | **STREET\_ADDRESS** | **CITY** | **STATE\_PROVINCE** | **COUNTRY\_NAME** |
| 2200 | 12-98 Victoria Street | Sydney | New South Wales | Australia |
| 2800 | Rua Frei Caneca 1360 | Sao Paulo | Sao Paulo | Brazil |
| 1800 | 147 Spadina Ave | Toronto | Ontario | Canada |
| 1900 | 6092 Boxwood St | Whitehorse | Yukon | Canada |
| 2900 | 20 Rue des Corps-Saints | Geneva | Geneve | Switzerland |
| 3000 | Murtenstrasse 921 | Bern | BE | Switzerland |
| 2000 | 40-5-12 Laogianggen | Beijing | - | China |
| 2700 | Schwanthalerstr. 7031 | Munich | Bavaria | Germany |
| 2100 | 1298 Vileparle (E) | Bombay | Maharashtra | India |
| 1000 | 1297 Via Cola di Rie | Roma | - | Italy |
| 1100 | 93091 Calle della Testa | Venice | - | Italy |
| 1200 | 2017 Shinjuku-ku | Tokyo | Tokyo Prefecture | Japan |
| 1300 | 9450 Kamiya-cho | Hiroshima | - | Japan |
| 3200 | Mariano Escobedo 9991 | Mexico City | Distrito Federal, | Mexico |
| 3100 | Pieter Breughelstraat 837 | Utrecht | Utrecht | Netherlands |
| 2300 | 198 Clementi North | Singapore | - | Singapore |
| 2400 | 8204 Arthur St | London | - | United Kingdom |
| 2500 | Magdalen Centre, The Oxford Science Park | Oxford | Oxford | United Kingdom |
| 2600 | 9702 Chester Road | Stretford | Manchester | United Kingdom |
| 1400 | 2014 Jabberwocky Rd | Southlake | Texas | United States of America |
| 1500 | 2011 Interiors Blvd | South San Francisco | California | United States of America |
| 1600 | 2007 Zagora St | South Brunswick | New Jersey | United States of America |
| 1700 | 2004 Charade Rd | Seattle | Washington | United States of America |
| 23 rows returned |

1. **The HR department needs a report of all employees. Write a query to display the last name, department number, and department name for all employees.**

SELECT last\_name, department\_id, department\_name

FROM employees

JOIN departments

USING (department\_id);

|  |  |  |  |
| --- | --- | --- | --- |
| **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 |
| Hartstein | 20 | | Marketing |
| Fay | 20 | | Marketing |
| Mavris | 40 | | Human Resources |
| Baer | 70 | | Public Relations |
| Higgins | 110 | | Accounting |
| Gietz | 110 | | Accounting |
| 106 rows returned | |

1. **The HR department needs a report of employees in Toronto. Display the last name, job, department number, and department name for all employees who work in Toronto.**

SELECT e.last\_name, e.job\_id, e.department\_id, d.department\_name

FROM employees e JOIN departments d

ON (e.department\_id = d.department\_id)

JOIN locations l

ON (d.location\_id = l.location\_id)

WHERE LOWER(l.city) = 'toronto';

|  |  |  |  |
| --- | --- | --- | --- |
| **LAST\_NAME** | **JOB\_ID** | **DEPARTMENT\_ID** | **DEPARTMENT\_NAME** |
| Hartstein | MK\_MAN | 20 | Marketing |
| Fay | MK\_REP | 20 | Marketing |
| 2 rows returned |

1. **Create a report to display employees’ last name and employee number along with their manager’s last name and manager number. Label the columns Employee, Emp#, Manager, and Mgr#, respectively. Place your SQL statement in a text file named lab\_05\_04.sql.**

SELECT w.last\_name "Employee", w.employee\_id "EMP#",

m.last\_name "Manager", m.employee\_id "Mgr#"

FROM employees w join employees m

ON (w.manager\_id = m.employee\_id);

|  |  |  |  |
| --- | --- | --- | --- |
| **Employee** | **EMP#** | **Manager** | **Mgr#** |
| Kochhar | 101 | King | 100 |
| De Haan | 102 | King | 100 |
| Hunold | 103 | De Haan | 102 |
| Ernst | 104 | Hunold | 103 |
| Austin | 105 | Hunold | 103 |
| Pataballa | 106 | Hunold | 103 |
| Lorentz | 107 | Hunold | 103 |

106 rows returned

1. **Modify lab\_05\_04.sql to display all employees including King, who has no manager. Order the results by the employee number. Place your SQL statement in a text file named lab\_05\_05.sql. Run the query in lab\_05\_05.sql.**

SELECT w.last\_name "Employee", w.employee\_id "EMP#",

m.last\_name "Manager", m.employee\_id "Mgr#"

FROM employees w

LEFT OUTER JOIN employees m

ON (w.manager\_id = m.employee\_id);

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Employee** | **EMP#** | | **Manager** | **Mgr#** |
| King | 100 | | - | - |
| Kochhar | 101 | | King | 100 |
| De Haan | 102 | | King | 100 |
| Hunold | 103 | | De Haan | 102 |
| Ernst | 104 | | Hunold | 103 |
| Austin | 105 | | Hunold | 103 |
| Pataballa | 106 | | Hunold | 103 |
| 107 rows returned | |

1. **Create a report for the HR department that displays employee last names, department numbers, and all the employees who work in the same department as a given employee. Give each column an appropriate label. Save the script to a file named lab\_05\_06.sql.**

SELECT e.department\_id department, e.last\_name employee,

c.last\_name colleague

FROM employees e JOIN employees c

ON (e.department\_id = c.department\_id)

WHERE e.employee\_id <> c.employee\_id

ORDER BY e.department\_id, e.last\_name, c.last\_name;

|  |  |  |
| --- | --- | --- |
| **DEPARTMENT** | **EMPLOYEE** | **COLLEAGUE** |
| 20 | Fay | Hartstein |
| 20 | Hartstein | Fay |
| 30 | Baida | Colmenares |
| 30 | Baida | Himuro |
| 30 | Baida | Khoo |
| 30 | Baida | Raphaely |
| 30 | Baida | Tobias |
| 30 | Colmenares | Baida |
| 30 | Colmenares | Himuro |
| 30 | Colmenares | Khoo |
| 30 | Colmenares | Raphaely |
| 30 | Colmenares | Tobias |
| 30 | Himuro | Baida |
| 30 | Himuro | Colmenares |
| 30 | Himuro | Khoo |
| 30 | Himuro | Raphaely |
| 30 | Himuro | Tobias |
| 30 | Khoo | Baida |

3192 rows returned

1. **The HR department needs a report on job grades and salaries. To familiarize yourself with the JOB\_GRADES table, first show the structure of the JOB\_GRADES table. Then create a query that displays the name, job, department name, salary, and grade for all employees.**

SELECT e.last\_name AS Name, e.job\_id, d.department\_name, e.salary, j.grade\_level

FROM employees e JOIN departments d

ON (e.department\_id = d.department\_id)

JOIN job\_grades j

ON (e.salary BETWEEN j.lowest\_sal AND j.highest\_sal);

1. **The HR department wants to determine the names of all employees who were hired after Davies. Create a query to display the name and hire date of any employee hired after employee Davies.**

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

FROM employees e JOIN employees davies

ON (davies.last\_name = 'Davies')

WHERE davies.hire\_date < e.hire\_date;

|  |  |
| --- | --- |
| **LAST\_NAME** | **HIRE\_DATE** |
| Austin | 25-JUN-97 |
| Pataballa | 05-FEB-98 |
| Lorentz | 07-FEB-99 |
| Chen | 28-SEP-97 |
| Sciarra | 30-SEP-97 |
| Urman | 07-MAR-98 |
| Popp | 07-DEC-99 |
| Baida | 24-DEC-97 |

78 rows returned

1. **The HR department needs to find the names and hire dates for all employees who were hired before their managers, along with their managers’ names and hire dates. Save the script to a file named lab\_05\_09.sql**.

SELECT w.last\_name, w.hire\_date, m.last\_name, m.hire\_date

FROM employees w JOIN employees m

ON (w.manager\_id = m.employee\_id)

WHERE w.hire\_date < m.hire\_date;

|  |  |  |  |
| --- | --- | --- | --- |
| **LAST\_NAME** | **HIRE\_DATE** | **LAST\_NAME** | **HIRE\_DATE** |
| Hunold | 03-JAN-90 | De Haan | 13-JAN-93 |
| Faviet | 16-AUG-94 | Greenberg | 17-AUG-94 |
| Marlow | 16-FEB-97 | Fripp | 10-APR-97 |
| Ladwig | 14-JUL-95 | Vollman | 10-OCT-97 |
| Rajs | 17-OCT-95 | Mourgos | 16-NOV-99 |
| Davies | 29-JAN-97 | Mourgos | 16-NOV-99 |
| Matos | 15-MAR-98 | Mourgos | 16-NOV-99 |
| Vargas | 09-JUL-98 | Mourgos | 16-NOV-99 |

30 rows returned

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