Final Exam Ferhad Mislim

# DBAS27198 – Database Design and Implementation

Date: August 16th 2021

Total time: 90 minutes

Each question below is worth 5 points.

**Q1. Write a query to show all the employees whose first name is John and work in Sales or IT and make more than $5,000 a month. Sort your result by salary.**

SELECT \* FROM EMPLOYEES WHERE FIRST\_NAME = 'John' AND (JOB\_ID like 'IT%' OR JOB\_ID like 'SA%') AND SALARY > 5000 ORDER BY SALARY DESC;

**Q2. Write a query to show the names of the employees, side by side with their department names and office addresses, for people who work in accounting or shipping.**

SELECT FIRST\_NAME, LAST\_NAME, DEPARTMENT\_NAME,POSTAL\_CODE+'-'+STREET\_ADDRESS+' '+CITY+' '+STATE\_PROVINCE as 'Address(Postal,Street,City,State)'

from EMPLOYEES a INNER JOIN DEPARTMENTS b ON a.DEPARTMENT\_ID = b.DEPARTMENT\_ID

INNER JOIN LOCATIONS c ON b.LOCATION\_ID = c.LOCATION\_ID WHERE JOB\_ID LIKE 'AC%' OR JOB\_ID like 'SH%';

**Q3. Write a query to show the average salary at each location of all the employees who work in shipping or accounting**

SELECT c.LOCATION\_ID, AVG(a.SALARY) as 'AVG\_Salary' from EMPLOYEES a INNER JOIN DEPARTMENTS b ON a.DEPARTMENT\_ID=b.DEPARTMENT\_ID

INNER JOIN LOCATIONS c on b.LOCATION\_ID=c.LOCATION\_ID WHERE JOB\_ID LIKE 'AC%' OR JOB\_ID like 'SH%'GROUP BY c.LOCATION\_ID ;

**Q4. Write a query to show the number of employees in each country except for Canada (ie don't show Canada in your result).**

SELECT d.COUNTRY\_NAME, COUNT(EMPLOYEE\_ID) as EmpNum from EMPLOYEES a INNER JOIN DEPARTMENTS b on a.DEPARTMENT\_ID=b.DEPARTMENT\_ID

INNER JOIN LOCATIONS c ON b.LOCATION\_ID=c.LOCATION\_ID INNER JOIN COUNTRIES d ON

c.COUNTRY\_ID=d.COUNTRY\_ID WHERE COUNTRY\_NAME NOT in ('Canada') GROUP BY d.COUNTRY\_NAME;

**Q5. A data row in relational database is equivalent to which of the following in MongoDB:**

a. A record

b. An object

c. A class

**d. A document**

e. A collection

Table Structures

HR.EMPLOYEES

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Employee\_ID | First\_Name | Last\_Name | Hire\_Date | Job\_ID | Salary | Manager\_ID | Department\_ID |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

HR.DEPARTMENTS

|  |  |  |  |
| --- | --- | --- | --- |
| Department\_ID | Department\_Name | Manager\_ID | Location\_ID |
|  |  |  |  |
|  |  |  |  |

HR.LOCATIONS

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Location\_ID | Street\_Address | Postal\_Code | City | State\_Province | Country\_ID |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

HR.COUNTRIES

|  |  |  |
| --- | --- | --- |
| Country\_ID | Country\_Name | Region\_ID |
|  |  |  |
|  |  |  |

HR.REGIONS

|  |  |
| --- | --- |
| Region\_ID | Region\_Name |
|  |  |
|  |  |

HR.JOBS

|  |  |  |  |
| --- | --- | --- | --- |
| Job\_ID | Job\_Title | Min\_Salary | Max\_Salary |
|  |  |  |  |
|  |  |  |  |