**ISEM 3006 Data Management in Business**

SQL 4 In-class Exercise

Answers (Q1-Q3)

1 List the task number of the tasks that are assigned to ALL the employees of the company. (Note: This query should return nothing, i.e., an empty table.)

SELECT TNum

FROM TaskAssignment

GROUP BY TNum

HAVING COUNT(TNum) = (SELECT COUNT(EmpNo)

FROM Employee) ;

2 Similar to 1, also list the task name, i.e., list the task number and the task name of the tasks that are assigned to ALL the employees of the company.

SELECT T.TNum, T.TName

FROM TaskAssignment TA JOIN Task T

ON TA.TNum = T.TNum

GROUP BY T.TNum, T.TName

HAVING COUNT(T.TNum) = (SELECT COUNT(EmpNo)

FROM Employee) ;

Since T.TNum is the primary key of the task table, you can project TName without including it in the Group By clause.

SELECT T.TNum, T.TName

FROM TaskAssignment TA JOIN Task T

ON TA.TNum = T.TNum

GROUP BY T.TNum

HAVING COUNT(T.TNum) = (SELECT COUNT(EmpNo)

FROM Employee) ;

However, if you use TA.TNum in the Group By clause, you have to include the TName in the Group By clause to project it (even though it does not create additional grouping within each TA.TNum value.) because TA.TNum is not the primary key of the task table.

So the following cannot be executed.

SELECT TA.TNum, T.TName

FROM TaskAssignment TA JOIN Task T

ON TA.TNum = T.TNum

GROUP BY TA.TNum

HAVING COUNT(TA.TNum) = (SELECT COUNT(EmpNo)

FROM Employee) ;

The following one is correct:

SELECT TA.TNum, T.TName

FROM TaskAssignment TA JOIN Task T

ON TA.TNum = T.TNum

GROUP BY TA.TNum, T.TName

HAVING COUNT(TA.TNum) = (SELECT COUNT(EmpNo)

FROM Employee) ;

3. List the employees who are earning the highest or the second highest distinct salaries. (In the current Employee table, it should be those employees who are earning 5000 and 3800.)

SELECT \*

FROM Employee

WHERE Salary IN (SELECT DISTINCT Salary

FROM Employee

ORDER BY Salary DESC

FETCH FIRST 2 ROW ONLY) ;