SQL HW#2   I-Wen Chou

SQL> Start C:\DBM\SQL2\SQL_HW2.txt
SQL> SET ECHO ON
SQL> SET FEEDBACK ON
SQL> SET LINESIZE 255
SQL> SET PAGESIZE 999
SQL>
SQL> --**Q1
SQL> SELECT Emp_ID, Fname, Lname , NVL(TO_CHAR(MIN(ROUND(MONTHS_BETWEEN(TO_DATE(SYSDATE) , TO_DATE(Appr_Date)),0))),'N/A') AS MONTHS
  2 FROM Employee   JOIN DEPARTMENT USING (Dept_ID)
  3   LEFT JOIN TRAINING USING (Emp_ID)
  4 WHERE Dept_Name = 'IT'
  5 GROUP BY Emp_ID, Fname, Lname
  6 ORDER BY Lname;

    EMP_ID FNAME   LNAME   MONTHS
----
       137 Jim   Hall   24
       162 Ray   Nelson   12
       317 Steve   Newton   12
       214 Ana   Ramos   N/A
       153 Adam   Roditi   12
       316 Mary   Whitestar   12

6 rows selected.

SQL>

```
SQL> --**Q2
SQL> SELECT *
  2  FROM(SELECT T.Crs_ID, T.Section, T.Sem_Cmpltd, CO.Crs_Title, TO_CHAR(COUNT(1) * Co.Tuition,'$9999990.99') AS Expense
  3  FROM Training T
  4  JOIN Class C ON C.Crs_ID = T.Crs_ID AND C.Section = T.Section AND C.Sem_Cmpltd = T.Sem_Cmpltd
  5  JOIN Course Co ON Co.Crs_ID = T.Crs_ID
  6  GROUP BY T.Crs_ID, T.Section, T.Sem_Cmpltd, Co.Crs_Title, Co.Tuition
  7  ORDER BY Expense DESC)
  8  WHERE ROWNUM=1;


CRS_ID   S SEM_CMPLT CRS_TITLE                EXPENSE
-------------------------------------------------------------
IS 700   A Spr 2019  Internet Marketing       $15000.00


1 row selected.




SQL>
SQL>
SQL> --Q3
SQL> SELECT Crs_ID,Crs_Title, College_Name, TO_CHAR(MAX(Emp_Count)) AS Popularity
  2    FROM COURSE JOIN(SELECT CRS_ID,COUNT(EMP_ID) AS Emp_Count
  3    FROM TRAINING GROUP BY CRS_ID) USING(CRS_ID)
  4    HAVING MAX(Emp_Count) = (SELECT MAX(Emp_Count)
  5    FROM COURSE JOIN(SELECT CRS_ID,COUNT(EMP_ID) AS Emp_Count
  6    FROM TRAINING GROUP BY CRS_ID) USING(CRS_ID))
  7    GROUP BY Crs_ID,Crs_Title,College_Name;
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```
CRS_ID   CRS_TITLE                COLLEGE_NAME      POPULARITY
--------------------------------------------------------------------------
IS 700   Internet Marketing       Chatham           8


1 row selected.


SQL>
SQL> --Q4
SQL> SELECT COUNT(Emp_ID)
  2  FROM Course JOIN TRAINING USING (Crs_ID)
  3                  JOIN EMPLOYEE USING (Emp_ID)
  4  WHERE College_Name = 'Oakland'
  5  AND Appr_Date LIKE '%21%';


COUNT(EMP_ID)
-------------
          2


1 row selected.


SQL> --Q5
SQL> COLUMN Times FORMAT A6
SQL> SELECT Crs_ID, Crs_Title, College_Name, TO_CHAR(Times), Times*Tuition
  2  FROM(
  3  SELECT Crs_ID, Crs_Title, College_Name, COUNT(Crs_ID) AS Times, Tuition
  4  FROM Course JOIN TRAINING USING (Crs_ID)
  5                  JOIN EMPLOYEE USING (Emp_ID)
  6  WHERE Lname = 'Boon'
  7  AND Fname ='Pat'
```

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  8  GROUP BY Crs_ID, Crs_Title, College_Name, Tuition
  9  HAVING COUNT(Crs_ID) > 1)
 10  UNION
 11  SELECT 'Total_Tuition', ' ',' ',' ', SUM(Times *Tuition)
 12  FROM(
 13  SELECT Crs_ID, Crs_Title, COUNT(Crs_ID) AS Times, Tuition
 14  FROM Course JOIN TRAINING USING (Crs_ID)
 15                  JOIN EMPLOYEE USING (Emp_ID)
 16  WHERE Lname = 'Boon'
 17  AND Fname ='Pat'
 18  GROUP BY Crs_ID, Crs_Title, Tuition);
```

CRS_ID	CRS_TITLE	COLLEGE_NAME	TO_CHAR(TIMES)	TIMES*TUITION
IS 350	Database Management	Chatham	2	6000
211 CIS	C++	Oakland	2	5000
Total_Tuition				19000

3 rows selected.


```
SQL> --Q6
SQL> COLUMN NAME FORMAT 'A20'
SQL> SELECT I.Instr_ID, Fname || ', ' || Lname Name, Phone, Number_of_classes, Number_of_employees
  2  FROM Instructor I LEFT JOIN(SELECT Instr_ID,Count(Instr_ID) Number_of_classes
  3                      FROM CLASS
  4                      GROUP BY Instr_ID
  5                      HAVING Count(*) > 1) C
  6                  ON C.Instr_ID = I.Instr_ID
  7                  LEFT JOIN(SELECT Count(DISTINCT T.emp_id) Number_of_employees, Instr_ID
```

```
  8                         FROM Training T
  9                         JOIN class C
 10                         ON C.Crs_ID = T.Crs_ID
 11                         AND C.Section = T.Section
 12                         AND C.Sem_Cmpltd = T.Sem_Cmpltd
 13                         GROUP BY Instr_ID) T
 14                         ON t.Instr_ID = I.Instr_ID
 15  ORDER BY I.Lname;


  INSTR_ID NAME                 PHONE           NUMBER_OF_CLASSES      NUMBER_OF_EMPLOYEES
--------------------------------------------------------------------------------------------
       502 Peter, Chen          700-121-5689            4                     2
       501 Jim, Codd            700-121-4126            2                     3
       521 Steve, Hall          700-555-4532            4                     4
       602 John, Jones          700-151-5687            2                     2
       533 Carol, Jones         700-389-8933            4                     4
       545 Chris, McCarthy      700-689-1339            5                     9
       503 Adam, Miller         700-389-1289            5                     6
       510 Joe, Smith           700-121-1323            4                     6


8 rows selected.

SQL> --**Q7
SQL> SELECT S.SUP_ID, EE.Fname, ee.Lname, Number_of_Employees
  2  FROM Employee ee
  3  Join (
  4  SELECT DISTINCT S.sup_id,Count(DISTINCT E.emp_id) AS Number_of_employees
  5  FROM employee S left join(SELECT T.emp_id,sup_id
  6                    FROM training T
```

```
  7                             join employee E
  8                             ON E.emp_id = T.emp_id
  9                             join class C
 10                             ON C.crs_id = T.crs_id
 11                             AND C.SECTION = T.SECTION
 12                             AND C.sem_cmpltd = T.sem_cmpltd
 13                             WHERE C.Crs_id IN (SELECT crs_id FROM COURSE
 14                                       WHERE Crs_title IN ( 'Java', 'C++' ))
 15                             AND T.grade <> 'R') E
 16                             ON E.sup_id = S.sup_id
 17                             WHERE S.sup_id <> 0
 18                             GROUP BY S.sup_id
 19  ) S ON ee.emp_id = S.sup_id
 20  ORDER BY Number_of_employees DESC;


    SUP_ID FNAME                    LNAME                    NUMBER_OF_EMPLOYEES
---------- ------------------------ ------------------------ -------------------
       214 Ana                      Ramos                                      2
       203 Bill                     Getz                                       1
       400 Amelia                   Jones                                      1
       168 Chris                    Corman                                     0
       401 Scott                    Harris                                     0
       225 Stan                     Evans                                      0
       162 Ray                      Nelson                                     0


7 rows selected.


SQL>
SQL> spool off
```