**Part II-B**

SQL> SET ECHO ON

SQL> START C:\DBM\SQL\_PRJ\_PART2.txt

SQL> ---1.

SQL> SET LINESIZE 300

SQL> SET PAGESIZE 200

SQL> COLUMN employee FORMAT A20

SQL> COLUMN skill FORMAT A35

SQL> SELECT emp\_num||': '||emp\_last||' '||emp\_first AS "Employee", code||' '||description AS "Skill"

2 , NVL(C, 0) AS "#Count", X AS "Most recent", M AS "Month passed"

3 FROM employee LEFT OUTER JOIN(SELECT emp\_num, code, description, COUNT(\*) AS C, MAX(date\_acquired) AS X,

4 TRUNC(MONTHS\_BETWEEN(SYSDATE,MAX(date\_acquired)), 0) AS M

5 FROM training JOIN skill USING (code)

6 GROUP BY emp\_num, code, description) USING (emp\_num)

7 ORDER BY emp\_num;

Employee Skill #Count Most recent Month passed

-------------------- ----------------------------------- ---------- ------------ ------------

100: Krall Mary 115 Negotiation Strategy 1 05-JUL-13 53

128: Boon Pat 119 Big Data Application 1 20-DEC-13 47

128: Boon Pat 116 Python Application 1 12-DEC-10 83

137: Hall Jim 116 Python Application 1 02-MAY-09 103

137: Hall Jim 119 Big Data Application 1 06-AUG-12 64

153: Roditi Adam 119 Big Data Application 1 20-DEC-13 47

153: Roditi Adam 118 Data Mining Techniques 1 12-DEC-10 83

153: Roditi Adam 112 SQL Application 1 07-AUG-13 51

162: Nelson Ray 119 Big Data Application 1 28-APR-14 43

162: Nelson Ray 118 Data Mining Techniques 1 03-DEC-12 60

162: Nelson Ray 114 Java Application 1 15-MAY-14 42

168: Corman Chris 114 Java Application 1 07-DEC-12 59

168: Corman Chris 119 Big Data Application 1 12-JUL-16 16

168: Corman Chris 112 SQL Application 1 09-JAN-14 46

171: Belli Willam 112 SQL Application 1 09-JAN-14 46

171: Belli Willam 114 Java Application 1 04-MAY-13 55

172: Swift Lisa 0

173: Milton Kelly 0

203: Getz Bill 120 Marketing Strategy 1 24-DEC-07 119

214: Ramos Ana 0

225: Evans Stan 120 Marketing Strategy 1 24-DEC-07 119

312: Carter Henry 0

313: Bertram Jill 111 Financial Statements Analysis 1 11-JUN-15 29

314: Gates Bob 111 Financial Statements Analysis 1 11-JUN-15 29

315: Wheeler Howard 0

316: Whitestar Mary 0

317: Newton Steve 113 Effective Communication 1 01-DEC-16 12

318: Johnson Jack 0

319: Lin Amy 113 Effective Communication 2 29-MAR-17 8

320: Duncan Tina 117 Web Application 1 14-MAY-17 6

321: John Mayer 111 Financial Statements Analysis 1 08-NOV-17 0

400: Jones Amelia 0

401: Harris Scott 0

403: Hsu Michelle 113 Effective Communication 1 05-DEC-06 132

404: Chan William 0

35 rows selected.

SQL> ---2.

SQL> COLUMN employee FORMAT A30

SQL> COLUMN department FORMAT A30

SQL> SELECT LEVEL,

2 LPAD(' ',3\*(LEVEL -1 )) || emp\_num || ' '||

3 emp\_first || ' ' || emp\_last AS "Employee", Dept\_Code||': '|| Name AS "Department"

4 FROM employee JOIN department USING (dept\_code)

5 START WITH emp\_num = (SELECT emp\_num FROM employee WHERE super\_id IS NULL)

6 CONNECT BY PRIOR emp\_num = super\_ID;

LEVEL Employee Department

---------- ------------------------------ ------------------------------

1 400 Amelia Jones 1001: Administration

2 153 Adam Roditi 1003: IT

3 128 Pat Boon 1003: IT

4 162 Ray Nelson 1003: IT

3 137 Jim Hall 1003: IT

4 168 Chris Corman 1003: IT

5 171 Willam Belli 1003: IT

5 320 Tina Duncan 1003: IT

2 172 Lisa Swift 1004: Finance

3 173 Kelly Milton 1004: Finance

4 312 Henry Carter 1004: Finance

5 313 Jill Bertram 1004: Finance

6 314 Bob Gates 1004: Finance

6 321 Mayer John 1004: Finance

2 315 Howard Wheeler 1005: Human Resource

3 316 Mary Whitestar 1005: Human Resource

4 317 Steve Newton 1005: Human Resource

4 319 Amy Lin 1005: Human Resource

3 318 Jack Johnson 1005: Human Resource

2 401 Scott Harris 1002: Sales

3 203 Bill Getz 1002: Sales

4 100 Mary Krall 1002: Sales

4 214 Ana Ramos 1002: Sales

3 225 Stan Evans 1002: Sales

2 403 Michelle Hsu 1001: Administration

2 404 William Chan 1001: Administration

26 rows selected.

SQL> ---3.

SQL> COLUMN project FORMAT A25

SQL> COLUMN month FORMAT A10

SQL> BREAK ON project ON start\_date

SQL>

SQL> SELECT proj\_number||': '||name AS "Project", start\_date,

2 DECODE(EXTRACT(MONTH FROM date\_assigned), NULL, 'Subtotal: ',EXTRACT(MONTH FROM date\_assigned) ) AS "Month",

3 COUNT(DISTINCT Emp\_num) AS "#Employee", SUM(hours\_used) AS "Hours"

4 FROM project JOIN assignment USING (proj\_number)

5 WHERE total\_cost IS NULL

6 GROUP BY ROLLUP ((proj\_number, name, start\_date), EXTRACT(MONTH FROM date\_assigned))

7 HAVING COUNT(\*) < (SELECT COUNT(\*)

8 FROM project JOIN assignment USING (proj\_number)

9 WHERE total\_cost IS NULL)

10 ORDER BY Proj\_number, EXTRACT(MONTH FROM date\_assigned);

Project START\_DATE Month #Employee Hours

------------------------- ------------ ---------- ---------- ----------

0010: Resturcture Project 01-SEP-17 9 2 225

10 2 450

11 1

Subtotal: 2 675

0011: Marketing Project 02-OCT-17 10 1 280

11 2

Subtotal: 2 280

7 rows selected.

SQL> ---4.

SQL> ALTER TABLE Employee ADD BONUS\_AMT Number(10) DEFAULT 0;

Table altered.

SQL> UPDATE employee E

2 SET E.BONUS\_AMT =

3 NVL((SELECT TO\_CHAR(SUM(B), '$999,999')

4 FROM(SELECT emp\_num, S, NVL(DECODE (BONUS\_AMT, BONUS\_AMT, 200, 0),0) AS B

5 FROM(SELECT emp\_num, proj\_number, SUM(hours\_used) AS S, BONUS\_AMT

6 FROM employee JOIN assignment USING (emp\_num)

7 JOIN project USING (proj\_number)

8 WHERE EXTRACT (YEAR FROM start\_date) = EXTRACT (YEAR FROM SYSDATE) -1

9 GROUP BY emp\_num, proj\_number, bonus\_amt)

10 WHERE S >=40)

11 WHERE E.emp\_num=emp\_num

12 GROUP BY emp\_num), 0);

26 rows updated.

SQL> SELECT \* FROM employee;

EMP\_NUM EMP\_LAST EMP\_FIRST DOB HIRE\_DATE SUPER\_ID DEPT\_CODE BONUS\_AMT

---------- --------------- --------------- ------------ ------------ ---------- -------------- ----------

400 Jones Amelia 17-MAY-73 01-OCT-01 1001 $0

403 Hsu Michelle 20-JUL-85 10-SEP-03 400 1001 $0

404 Chan William 03-FEB-86 12-DEC-04 400 1001 $0

401 Harris Scott 28-MAR-71 02-DEC-02 400 1002 $0

203 Getz Bill 08-OCT-74 05-APR-04 401 1002 $0

214 Ramos Ana 09-MAR-74 12-APR-04 203 1002 $200

225 Evans Stan 14-JUL-75 01-JUN-04 401 1002 $0

100 Krall Mary 11-FEB-87 18-MAY-09 203 1002 $400

153 Roditi Adam 05-MAR-87 19-MAR-08 400 1003 $0

137 Hall Jim 06-AUG-79 10-NOV-08 153 1003 $0

128 Boon Pat 23-NOV-83 20-OCT-08 153 1003 $0

162 Nelson Ray 24-SEP-90 20-OCT-10 128 1003 $0

168 Corman Chris 11-AUG-89 20-OCT-10 137 1003 $200

171 Belli Willam 28-MAY-91 01-NOV-12 168 1003 $200

320 Duncan Tina 29-JAN-95 11-JUN-16 168 1003 $0

172 Swift Lisa 17-FEB-88 01-NOV-12 400 1004 $0

173 Milton Kelly 16-DEC-87 07-NOV-12 172 1004 $200

312 Carter Henry 22-APR-94 09-JAN-13 173 1004 $200

313 Bertram Jill 06-JUL-91 09-JAN-13 312 1004 $0

314 Gates Bob 26-DEC-92 04-JUN-14 313 1004 $0

321 John Mayer 29-JAN-94 03-SEP-17 313 1004 $0

315 Wheeler Howard 11-JUN-92 04-JUN-13 400 1005 $0

316 Whitestar Mary 24-MAR-94 25-FEB-14 315 1005 $0

317 Newton Steve 29-JAN-96 03-JUN-15 316 1005 $200

318 Johnson Jack 29-JAN-96 03-JUN-15 315 1005 $200

319 Lin Amy 18-JAN-93 05-FEB-16 316 1005 $0

26 rows selected.

SQL> ---5.

SQL> COLUMN employee FORMAT A18

SQL> COLUMN 'Training name' FORMAT A22

SQL> BREAK ON employee ON hire

SQL> SELECT emp\_num||': '||emp\_last||' '||emp\_first AS "Employee", hire\_date AS "Hire", name AS "Training name",

2 date\_acquired, (date\_acquired-hire\_date) AS "#Days", COUNT(Distinct Proj\_Number) AS "#Project"

3 FROM Employee LEFT Join training USING (emp\_Num) LEFT Join Assignment USING (Emp\_Num)

4 WHERE EXTRACT(YEAR FROM hire\_date) = EXTRACT(YEAR FROM SYSDATE)-1

5 GROUP BY emp\_num,emp\_last,emp\_first,hire\_date,name,date\_acquired

6 ORDER BY emp\_num;

Employee Hire Training name DATE\_ACQUIRE #Days #Project

------------------ ------------ ---------------------- ------------ ---------- ----------

319: Lin Amy 05-FEB-16 Communication 29-MAR-17 418 0

Speaking Training 23-SEP-16 231 0

320: Duncan Tina 11-JUN-16 Web Develop 14-MAY-17 337 2

3 rows selected.

SQL> ---6.

SQL> Select P.proj\_number||': '||p.name AS "Distinuous project", P.start\_date,

2 DECODE(total\_cost, NULL, 'on-going', 'completed') AS "Condition"

3 FROM project P JOIN (SELECT z.p as pn, MONTHS\_BETWEEN(z.XA, z.YE) D, z.xa, z.xe, z.ya, z.ye , z.xr, z.yr

4 FROM(SELECT X.P as P, x.a as XA, x.e AS XE, y.a as YA, y.e AS YE, x.rr XR, y.rr YR

5 FROM(SELECT proj\_number P, Date\_Assigned A, Date\_Ended E,

6 ROW\_NUMBER() OVER(PARTITION BY PROJ\_NUMBER

7 ORDER BY Date\_Assigned DESC, Date\_Ended Desc) AS RR

8 FROM assignment)X,

9 (SELECT proj\_number P, Date\_Assigned A, Date\_Ended E,

10 ROW\_NUMBER() OVER(PARTITION BY PROJ\_NUMBER

11 ORDER BY Date\_Assigned DESC, Date\_Ended Desc) AS RR

12 FROM assignment)Y

13 WHERE X.P =Y.P and x.rr!=y.rr) Z

14 WHERE z.XR< z.yr AND Z.XR+1 = Z.YR) W on p.proj\_number = w.pn

15 WHERE D>=1;

Distinuous project START\_DATE Condition

------------------------------ ------------ ------------------

0004: Shoes Purchase 12-NOV-15 completed

0008: Consulting Project 11-AUG-16 completed

2 rows selected.

SQL> ---7.

SQL> SELECT X AS "Quarter", P AS "#Project", NVL(E, 0) AS "#Employee", NVL(S/C, 0) AS "AVG of hours"

2 FROM(SELECT X , COUNT(P) P

3 FROM(SELECT ROWNUM AS X

4 FROM dual

5 CONNECT BY ROWNUM <=4) R LEFT OUTER JOIN (SELECT EXTRACT(MONTH FROM start\_date) AS M, proj\_number AS P,

6 CASE

7 WHEN EXTRACT(MONTH FROM start\_date) IN ('1', '2', '3') THEN '1'

8 WHEN EXTRACT(MONTH FROM start\_date) IN ('4', '5', '6') THEN '2'

9 WHEN EXTRACT(MONTH FROM start\_date) IN ('7', '8', '9') THEN '3'

10 WHEN EXTRACT(MONTH FROM start\_date) IN ('10', '11', '12') THEN '4'

11 END AS X

12 FROM project JOIN assignment USING (proj\_number)

13 WHERE EXTRACT(YEAR FROM start\_date) = EXTRACT(YEAR FROM SYSDATE)-1

14 GROUP BY proj\_number, EXTRACT(MONTH FROM start\_date)) M USING (X)

15 GROUP BY X)

16 LEFT OUTER JOIN (SELECT X, COUNT(\*) AS E, SUM(hours\_used) AS S, COUNT(DISTINCT(proj\_number)) AS C

17 FROM(SELECT proj\_number, hours\_used,

18 CASE

19 WHEN EXTRACT(MONTH FROM start\_date) IN ('1', '2', '3') THEN '1'

20 WHEN EXTRACT(MONTH FROM start\_date) IN ('4', '5', '6') THEN '2'

21 WHEN EXTRACT(MONTH FROM start\_date) IN ('7', '8', '9') THEN '3'

22 WHEN EXTRACT(MONTH FROM start\_date) IN ('10', '11', '12') THEN '4'

23 END AS X

24 FROM assignment JOIN project USING (proj\_number)

25 WHERE EXTRACT(YEAR FROM start\_date) = EXTRACT(YEAR FROM SYSDATE)-1)

26 GROUP BY X) USING (X)

27 ORDER BY X;

Quarter #Project #Employee AVG of hours

---------- ---------- ---------- ------------

1 1 3 210

2 1 3 285

3 2 7 372.5

4 0 0 0

4 rows selected.

SQL> ---8.

SQL> SET LINESIZE 400

SQL> SET PAGESIZE 200

SQL> COLUMN Emp\_Num HEADING 'Emp|Num' FORMAT A3

SQL> COLUMN Emp\_Name HEADING 'Emp|Name' FORMAT A20

SQL> COLUMN LDA HEADING 'Latest|Date|Acquired' FORMAT A10

SQL> COLUMN FSA FORMAT 999

SQL> COLUMN SQL FORMAT 999

SQL> COLUMN COM HEADING 'Communi|-cation' FORMAT 9999999

SQL> COLUMN NEG HEADING 'Negoti|-ation' FORMAT 999999

SQL> COLUMN PY HEADING 'Python' FORMAT 999999

SQL> COLUMN WEB HEADING 'Web' FORMAT 999

SQL> COLUMN BD HEADING 'Big|Data' FORMAT 9999

SQL> COLUMN MKT HEADING 'Marke|ting' FORMAT 99999

SQL> COLUMN JAVA HEADING 'Java' FORMAT 9999

SQL> COLUMN DM HEADING 'Data|Mining' FORMAT 999999

SQL> SELECT Emp\_Num, Emp\_First||' '||Emp\_Last AS Emp\_Name,

1 NVL((SELECT Count(\*)

2 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

3 WHERE E.Emp\_Num=A.Emp\_Num AND Code=(SELECT Code FROM Skill WHERE Description='Financial Statements Analysis')

4 GROUP BY A.Emp\_Num),0) AS FSA,

5 (SELECT TO\_CHAR(MAX(Date\_Acquired),'mm/dd/yy')

6 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

7 WHERE E.Emp\_Num=A.Emp\_Num AND Code= (SELECT Code FROM Skill WHERE Description='Financial Statements Analysis'))AS LDA,

8 NVL((SELECT Count(\*)

9 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

10 WHERE E.Emp\_Num=A.Emp\_Num AND Code= (SELECT Code FROM Skill WHERE Description='SQL Application')

11 GROUP BY A.Emp\_Num),0) AS SQL,

12 (SELECT TO\_CHAR(MAX(Date\_Acquired),'mm/dd/yy')

13 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

14 WHERE E.Emp\_Num=A.Emp\_Num AND Code= (SELECT Code FROM Skill WHERE Description='SQL Application')) AS LDA,

15 NVL((SELECT Count(\*)

16 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

17 WHERE E.Emp\_Num=A.Emp\_Num AND Code= (SELECT Code FROM Skill WHERE Description='Effective Communication')

18 GROUP BY A.Emp\_Num),0) AS COM,

19 (SELECT TO\_CHAR(MAX(Date\_Acquired),'mm/dd/yy')

20 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

21 WHERE E.Emp\_Num=A.Emp\_Num AND Code= (SELECT Code FROM Skill WHERE Description='Effective Communication'))AS LDA,

22 NVL((SELECT Count(\*)

23 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

24 WHERE E.Emp\_Num=A.Emp\_Num AND Code= (SELECT Code FROM Skill WHERE Description='Negotiation Strategy')

25 GROUP BY A.Emp\_Num),0) AS NEG,

26 (SELECT TO\_CHAR(MAX(Date\_Acquired),'mm/dd/yy')

27 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

28 WHERE E.Emp\_Num=A.Emp\_Num AND Code= (SELECT Code FROM Skill WHERE Description='Negotiation Strategy'))AS LDA,

29 NVL((SELECT Count(\*)

30 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

31 WHERE E.Emp\_Num=A.Emp\_Num AND Code= (SELECT Code FROM Skill WHERE Description='Python Application')

32 GROUP BY A.Emp\_Num),0) AS PY,

33 (SELECT TO\_CHAR(MAX(Date\_Acquired),'mm/dd/yy')

34 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

35 WHERE E.Emp\_Num=A.Emp\_Num AND Code= (SELECT Code FROM Skill WHERE Description='Python Application'))AS LDA,

36 NVL((SELECT Count(\*)

37 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

37 WHERE E.Emp\_Num=A.Emp\_Num AND Code= (SELECT Code FROM Skill WHERE Description='Web Application')

39 GROUP BY A.Emp\_Num),0) AS WEB,

40 (SELECT TO\_CHAR(MAX(Date\_Acquired),'mm/dd/yy')

41 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

42 WHERE E.Emp\_Num=A.Emp\_Num AND Code= (SELECT Code FROM Skill WHERE Description='Web Application')) AS LDA,

43 NVL((SELECT Count(\*)

44 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

45 WHERE E.Emp\_Num=A.Emp\_Num AND Code= (SELECT Code FROM Skill WHERE Description='Big Data Application')

46 GROUP BY A.Emp\_Num),0) AS BD,

47 (SELECT TO\_CHAR(MAX(Date\_Acquired),'mm/dd/yy')

48 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

49 WHERE E.Emp\_Num=A.Emp\_Num AND Code= (SELECT Code FROM Skill WHERE Description='Big Data Application')) AS LDA,

50 NVL((SELECT Count(\*)

51 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

52 WHERE E.Emp\_Num=A.Emp\_Num AND Code= (SELECT Code FROM Skill WHERE Description='Marketing Strategy')

53 GROUP BY A.Emp\_Num),0) AS MKT,

54 (SELECT TO\_CHAR(MAX(Date\_Acquired),'mm/dd/yy')

55 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

56 WHERE E.Emp\_Num=A.Emp\_Num AND Code= (SELECT Code FROM Skill WHERE Description='Marketing Strategy')) AS LDA,

57 NVL((SELECT Count(\*)

58 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

60 WHERE E.Emp\_Num=A.Emp\_Num AND Code= (SELECT Code FROM Skill WHERE Description='Java Application')

61 GROUP BY A.Emp\_Num),0) AS JAVA,

62 (SELECT TO\_CHAR(MAX(Date\_Acquired),'mm/dd/yy')

63 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

64 WHERE E.Emp\_Num=A.Emp\_Num AND Code= (SELECT Code FROM Skill WHERE Description='Java Application')) AS LDA,

65 NVL((SELECT Count(\*)

66 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

67 WHERE E.Emp\_Num=A.Emp\_Num AND Code= (SELECT Code FROM Skill WHERE Description='Data Mining Techniques')

68 GROUP BY A.Emp\_Num),0) AS DM,

69 (SELECT TO\_CHAR(MAX(Date\_Acquired),'mm/dd/yy')

70 FROM Employee A JOIN Training ON (A.Emp\_Num=Training.Emp\_Num)

71 WHERE E.Emp\_Num=A.Emp\_Num AND Code= (SELECT Code FROM Skill WHERE Description='Data Mining Techniques')) AS LDA,

72 (SELECT Count(Distinct Code) FROM Training T NATURAL JOIN Skill WHERE T.Emp\_Num=E.Emp\_Num) "Number of Skills"

73 FROM Employee E

74 UNION

75 SELECT Null,'Number of Trainings:',

76 (SELECT Count(Distinct Emp\_Num) FROM Training NATURAL JOIN Skill S WHERE S.Description='Financial Statements Analysis'),

77 Null,

78 (SELECT Count(Distinct Emp\_Num) FROM Training NATURAL JOIN Skill S WHERE S.Description='SQL Application'),

79 Null,

80 (SELECT Count(Distinct Emp\_Num) FROM Training NATURAL JOIN Skill S WHERE S.Description='Effective Communication'),

81 Null,

82 (SELECT Count(Distinct Emp\_Num) FROM Training NATURAL JOIN Skill S WHERE S.Description='Negotiation Strategy'),

83 Null,

84 (SELECT Count(Distinct Emp\_Num) FROM Training NATURAL JOIN Skill S WHERE S.Description='Python Application'),

85 Null,

86 (SELECT Count(Distinct Emp\_Num) FROM Training NATURAL JOIN Skill S WHERE S.Description='Web Application'),

87 Null,

88 (SELECT Count(Distinct Emp\_Num) FROM Training NATURAL JOIN Skill S WHERE S.Description='Big Data Application'),

89 Null,

90 (SELECT Count(Distinct Emp\_Num) FROM Training NATURAL JOIN Skill S WHERE S.Description='Marketing Strategy'),

91 Null,

92 (SELECT Count(Distinct Emp\_Num) FROM Training NATURAL JOIN Skill S WHERE S.Description='Java Application'),

93 Null,

94 (SELECT Count(Distinct Emp\_Num) FROM Training NATURAL JOIN Skill S WHERE S.Description='Data Mining Techniques'),

95 Null,Null

96 FROM Dual;

Latest Latest Latest Latest Latest Latest Latest Latest Latest Latest

Emp Emp Date Date Communi Date Negoti Date Date Date Big Date Marke Date Date Data Date

Num Name FSA Acquired SQL Acquired -cation Acquired -ation Acquired Python Acquired Web Acquired Data Acquired ting Acquired Java Acquired Mining Acquired Number of Skills

--- -------------------- ---- ---------- ---- ---------- -------- ---------- ------- ---------- ------- ---------- ---- ---------- ----- ---------- ------ ---------- ----- ---------- ------- ---------- ----------------

100 Mary Krall 0 0 0 1 07/05/13 0 0 0 0 0 0 1

128 Pat Boon 0 0 0 0 1 12/12/10 0 1 12/20/13 0 0 0 2

137 Jim Hall 0 0 0 0 1 05/02/09 0 1 08/06/12 0 0 0 2

153 Adam Roditi 0 1 08/07/13 0 0 0 0 1 12/20/13 0 0 1 12/12/10 3

162 Ray Nelson 0 0 0 0 0 0 1 04/28/14 0 1 05/15/14 1 12/03/12 3

168 Chris Corman 0 1 01/09/14 0 0 0 0 1 07/12/16 0 1 12/07/12 0 3

171 Willam Belli 0 1 01/09/14 0 0 0 0 0 0 1 05/04/13 0 2

172 Lisa Swift 0 0 0 0 0 0 0 0 0 0 0

173 Kelly Milton 0 0 0 0 0 0 0 0 0 0 0

203 Bill Getz 0 0 0 0 0 0 0 1 12/24/07 0 0 1

214 Ana Ramos 0 0 0 0 0 0 0 0 0 0 0

225 Stan Evans 0 0 0 0 0 0 0 1 12/24/07 0 0 1

312 Henry Carter 0 0 0 0 0 0 0 0 0 0 0

313 Jill Bertram 1 06/11/15 0 0 0 0 0 0 0 0 0 1

314 Bob Gates 1 06/11/15 0 0 0 0 0 0 0 0 0 1

315 Howard Wheeler 0 0 0 0 0 0 0 0 0 0 0

316 Mary Whitestar 0 0 0 0 0 0 0 0 0 0 0

317 Steve Newton 0 0 1 12/01/16 0 0 0 0 0 0 0 1

318 Jack Johnson 0 0 0 0 0 0 0 0 0 0 0

319 Amy Lin 0 0 2 03/29/17 0 0 0 0 0 0 0 1

320 Tina Duncan 0 0 0 0 0 1 05/14/17 0 0 0 0 1

321 Mayer John 1 11/08/17 0 0 0 0 0 0 0 0 0 1

400 Amelia Jones 0 0 0 0 0 0 0 0 0 0 0

401 Scott Harris 0 0 0 0 0 0 0 0 0 0 0

403 Michelle Hsu 0 0 1 12/05/06 0 0 0 0 0 0 0 1

404 William Chan 0 0 0 0 0 0 0 0 0 0 0

Number of Trainings: 3 3 3 1 2 1 5 2 3 2

27 rows selected.

SQL> ---9.

SQL> COLUMN Department FORMAT A18

SQL> COLUMN Skill FORMAT A30

SQL> BREAK ON Department

SQL> SELECT N AS Department , Description AS Skill, Count(Train\_Num) "Training#", RANK() OVER (PARTITION BY N ORDER BY count(Train\_Num) DESC) RANK

2 FROM (SELECT Name AS N, Description,Code,Dept\_Code FROM Department, Skill)

3 LEFT JOIN (Training JOIN Employee USING (Emp\_Num)) USING(Dept\_Code, Code)

4 GROUP BY N, Description

5 ORDER BY N, RANK;

DEPARTMENT SKILL Training# RANK

------------------ ------------------------------ ---------- ----------

Administration Effective Communication 1 1

Data Mining Techniques 0 2

Marketing Strategy 0 2

Financial Statements Analysis 0 2

Big Data Application 0 2

Negotiation Strategy 0 2

Python Application 0 2

Java Application 0 2

Web Application 0 2

SQL Application 0 2

Finance Financial Statements Analysis 3 1

SQL Application 0 2

Data Mining Techniques 0 2

Java Application 0 2

Python Application 0 2

Marketing Strategy 0 2

Big Data Application 0 2

Web Application 0 2

Effective Communication 0 2

Negotiation Strategy 0 2

Human Resource Effective Communication 3 1

Marketing Strategy 0 2

Java Application 0 2

Negotiation Strategy 0 2

Big Data Application 0 2

Financial Statements Analysis 0 2

Web Application 0 2

Python Application 0 2

Data Mining Techniques 0 2

SQL Application 0 2

IT Big Data Application 5 1

SQL Application 3 2

Java Application 3 2

Data Mining Techniques 2 4

Python Application 2 4

Web Application 1 6

Marketing Strategy 0 7

Financial Statements Analysis 0 7

Negotiation Strategy 0 7

Effective Communication 0 7

Sales Marketing Strategy 2 1

Negotiation Strategy 1 2

Big Data Application 0 3

Python Application 0 3

Web Application 0 3

Financial Statements Analysis 0 3

Java Application 0 3

SQL Application 0 3

Effective Communication 0 3

Data Mining Techniques 0 3

50 rows selected.

SQL> SET ECHO OFF

SQL> EXIT