

Data Transformation Exercise

- 1) Using a CASE statement, Write a query to display the number of employees in department ID 10, 20, 30 and 40. (Each department ID should have its own column with the number of employees displayed like below).

TOTAL_10	TOTAL_20	TOTAL_30	TOTAL_40
1	2	6	1

- 2) Perform the same as mentioned in question 1, but this time using PIVOT function.
- 3) Write a query to display the following information
- Department ID
 - Manager ID list separated by |
- 4) Write a query to create a table "DEPT_COUNT" based out of the query written in the Question 2
- 5) Using UNION ALL, Write a Query to display the column values into rows from the table DEPT_COUNT

DEPARTMENT_ID	EMPLOYEE_CNT
10	1
20	2
30	6
40	1

- 6) Perform the same as mentioned in question 5, but this time using UNPIVOT function.

Answer 1

```
SELECT  
  
SUM(CASE WHEN DEPARTMENT_ID = 10 THEN 1 ELSE 0 END) AS TOTAL_10,  
SUM(CASE WHEN DEPARTMENT_ID = 20 THEN 1 ELSE 0 END) AS TOTAL_20,  
SUM(CASE WHEN DEPARTMENT_ID = 30 THEN 1 ELSE 0 END) AS TOTAL_30,  
SUM(CASE WHEN DEPARTMENT_ID = 40 THEN 1 ELSE 0 END) AS TOTAL_40  
FROM EMPLOYEES  
  
WHERE DEPARTMENT_ID IN (10,20,30,40)
```

Answer 2

```
SELECT * FROM  
  
(SELECT  
  
DEPARTMENT_ID,  
  
1 AS EMP_COUNT  
  
FROM EMPLOYEES  
  
WHERE DEPARTMENT_ID IN (10,20,30,40)  
  
) PIVOT (SUM(EMP_COUNT) FOR (DEPARTMENT_ID) IN (10 as TOTAL_10,20 AS TOTAL_20,30 AS  
TOTAL_30,40 AS TOTAL_40))
```

Answer 3

```
SELECT DEPARTMENT_ID,  
  
LISTAGG (MANAGER_ID, '|') WITHIN GROUP (ORDER BY MANAGER_ID) AS MANAGER_LIST  
FROM EMPLOYEES  
  
GROUP BY DEPARTMENT_ID
```

Answer 4

```
CREATE TABLE DEPT_COUNT AS  
SELECT * FROM  
(SELECT  
    DEPARTMENT_ID,  
    1 AS EMP_COUNT  
    FROM EMPLOYEES  
    WHERE DEPARTMENT_ID IN (10,20,30,40)  
)  
PIVOT (SUM(EMP_COUNT) FOR (DEPARTMENT_ID) IN (10 as TOTAL_10,20 AS TOTAL_20,30 AS  
TOTAL_30,40 AS TOTAL_40))
```

Answer 5

```
select 10 as department_id, TOTAL_10 as employee_count from dept_count  
union all  
select 20 as department_id, TOTAL_20 as employee_count from dept_count  
union all  
select 30 as department_id, TOTAL_30 as employee_count from dept_count  
union all  
select 40 as department_id, TOTAL_40 as employee_count from dept_count
```

Answer 6

```
SELECT DEPARTMENT_ID, EMPLOYEE_COUNT  
FROM DEPT_COUNT  
UNPIVOT (EMPLOYEE_COUNT FOR DEPARTMENT_ID IN  
(
```

TOTAL_10 AS '10',

TOTAL_20 AS '20',

TOTAL_30 AS '30',

TOTAL_40 AS '40'

)

)