Tricky SQL queries, advanced SQL queries, Interesting SQL queries

This is a collection of tricky sql queries, usually asked inthe interviews. Some of the questions have been taken from other websites and the original links have been provided. The sole purpose is to provide a collection of queries in one place.  
The solutions will work in ORACLE database. It may or may not work in other databases(depending on the portability of the SQL queries). In cases where the solutions are not working, the question or the logic may be taken and an attempt be made to solve it.  
The solutions provided in no case may be optimal. Better(efficient/alternate) solutions can be shared as we are all trying to learn and grow.  
Any error that may have crept in inadvertently may be pointed out.

For more queries :<http://oddabout.com/?page_id=1907>  
and <http://oddabout.com/?page_id=2210>  
1. **A column has some negative values and some positive values. It is required to find the sum of negative numbers and the sum of the positive numbers in two separate columns.**

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9  10 | create table neg\_pos(num number);  insert into neg\_pos values(-1);  insert into neg\_pos values(-2);  insert into neg\_pos values(-3);  insert into neg\_pos values(-4);  insert into neg\_pos values(1);  insert into neg\_pos values(2);  insert into neg\_pos values(3);  insert into neg\_pos values(4);  commit; |
| 1  2  3  4  5  6  7  8  9  10 | select \* from neg\_pos ;  num  -1  -2  -3  -4  1  2  3  4 |

**Answer :**

|  |  |
| --- | --- |
| 1  2  3  4 | SELECT  SUM(CASE WHEN num < 0 THEN num ELSE 0 END) neg,  SUM(CASE WHEN num > 0 THEN num ELSE 0 END)pos  FROM neg\_pos; |

gives  
————-  
neg | pos  
————-  
-10 | 10  
————-

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

2. **How to search for strings containing ‘%’ in Oracle? Search for columns containing ‘%’ in Oracle.**  
In ORACLE , you can use the ESCAPE keyword to search for strings containing ‘%’. Otherwise it would be considered as a META CHARACTER .

Using the escape character ( to search for strings containing like ‘ABC %%TRF’, ‘TR%FF’ or ‘%GH’)

Answer :

|  |  |
| --- | --- |
| 1  2 | SELECT col\_name FROM tbl\_name     WHERE col\_name LIKE '%?%%' ESCAPE '?'; |

Here ‘?’ can be replaced with any other character.  
Another solution:

|  |  |
| --- | --- |
| 1  2 | SELECT col\_name FROM tbl\_name  WHERE instr(col\_name,'%') > 0 |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

3. **How does one remove special characters in ORACLE?**

To replace special characters in a string with null use translate :  
**translate(‘string’,'to\_replace’,'replace\_with’)**

for eg:

|  |  |
| --- | --- |
| 1  2 | SELECT translate  ('asdfsd@#@$#$%$sdfg&;','!@#$%^&;\*()\_+=-`~?><:/.,',' ') FROM dual; |

will return—asdfsdsdfg

**To remove quotes, use two quotes for every single quote as shown below:**

|  |  |
| --- | --- |
| 1  2  3  4 | CREATE TABLE test\_quote(quote VARCHAR2(5));  INSERT INTO test\_quote VALUES ('L''uck');  SELECT \* FROM test\_quote;  SELECT REPLACE(quote,'''','') from test\_quote; |

**A table has columns with numbers and numbers with alphabets. Write a query to select only those rows which contains alphanumeric values.**

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8 | create table alpha\_numeric(col1 varchar2(20));  insert into alpha\_numberic values ('1000');  insert into alpha\_numberic values ('a1093b');  insert into alpha\_numberic values ('19b45');  insert into alpha\_numberic values ('231');  insert into alpha\_numberic values ('1000cc');  insert into alpha\_numberic values ('a1000');  commit; |

Answer:

|  |  |
| --- | --- |
| 1  2 | SELECT \* from alpha\_numeric  where length(trim(translate(col1,'1234567890',' '))>0); |

col1  
——  
a1093b  
19b45  
1000cc  
a1000

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

4. **Give a string of format ‘NN/NN’, verify that the first and last two characters are numbers and that the middle character is’/’. Print the expression ‘NUMBER’ if valid, ‘NOT NUM’ if not valid. Use the following values to test your solution. ‘12/34’,’01/1a’, ‘99/98’**.

Answer:

|  |  |
| --- | --- |
| 1  2  3  4  5  6 | SELECT CASE WHEN ascii(substr('99/98',1,1)) BETWEEN 48 AND 57  AND ascii(substr('99/98',2,1)) BETWEEN 48 AND 57  AND substr('99/98',3,1) ='/'  AND ascii(substr('99/98',4,1)) BETWEEN 48 AND 57  AND ascii(substr('99/98',5,1)) BETWEEN 48 AND 57  THEN 'number' ELSE 'not num' END FROM dual; |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

5. **From the given table, find those employees who are more than 21 years of age.**

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9  10  11 | CREATE TABLE find\_age(NAME Varchar2(10), dob DATE);  INSERT INTO find\_age VALUES('AAA',to\_date('06/02/1983','DD/MM/YYYY'));  INSERT INTO find\_age VALUES('BBB',to\_date('06/02/1967','DD/MM/YYYY'));  INSERT INTO find\_age VALUES('CCC',to\_date('02/06/1983','DD/MM/YYYY'));  INSERT INTO find\_age VALUES('DDD',to\_date('03/06/1983','DD/MM/YYYY'));  INSERT INTO find\_age VALUES('EEE',to\_date('04/06/1999','DD/MM/YYYY'));  INSERT INTO find\_age VALUES('FFF',to\_date('04/06/1999','DD/MM/YYYY'));  INSERT INTO find\_age VALUES('GGG',to\_date('02/06/1999','DD/MM/YYYY'));  INSERT INTO find\_age VALUES('HHH',to\_date('02/06/1990','DD/MM/YYYY'));  INSERT INTO find\_age VALUES('III',to\_date('03/06/1990','DD/MM/YYYY'));  COMMIT; |

Answer:

|  |  |
| --- | --- |
| 1  2 | SELECT NAME FROM find\_age      WHERE dob < (SELECT add\_months(SYSDATE,-(12\*21)) FROM dual); |

\*corrected after the comment.  
\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

6. **There are two tables stu\_dept and dept\_cap. stu\_dept contains the student name and the department(consider distinct values). dept\_cap contains the capacity for each department. We need to find those departments(DEPT) where the number of students is less than the total capacity of the department.**

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18 | CREATE TABLE stu\_dept(stu\_name VARCHAR2(30), dept VARCHAR2(30));  INSERT INTO stu\_dept VALUES('AAA','D1');  INSERT INTO stu\_dept VALUES('BBB','D1');  INSERT INTO stu\_dept VALUES('CCC','D1');  INSERT INTO stu\_dept VALUES('DDD','D1');  INSERT INTO stu\_dept VALUES('EEE','D2');  INSERT INTO stu\_dept VALUES('FFF','D2');  INSERT INTO stu\_dept VALUES('GGG','D2');  INSERT INTO stu\_dept VALUES('HHH','D3');  INSERT INTO stu\_dept VALUES('III','D3');  INSERT INTO stu\_dept VALUES('JJJ','D3');  INSERT INTO stu\_dept VALUES('KKK','D3');  INSERT INTO stu\_dept VALUES('LLL','D3');    CREATE TABLE dept\_cap(dept VARCHAR2(5),capacity NUMBER);  INSERT INTO dept\_cap VALUES('D1',5);  INSERT INTO dept\_cap VALUES('D2',5);  INSERT INTO dept\_cap VALUES('D3',5); |

Answer:

|  |  |
| --- | --- |
| 1  2  3  4  5  6 | SELECT  a.dept,a.capacity-t.cap remaining\_seats   FROM dept\_cap a,  (SELECT dept,COUNT(dept)cap FROM stu\_dept  GROUP BY dept)t  WHERE a.dept=t.dept  AND t.cap<a.capacity; |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

7. **Some questions on the dual table.**

**Select two rows from dual**

|  |  |
| --- | --- |
| 1  2  3 | select dummy from dual  union all  select dummy from dual |

**To dispaly the numbers 1..10 from dual**

|  |  |
| --- | --- |
| 1  2 | select level from dual  connect by level <=10 |

or

|  |  |
| --- | --- |
| 1  2 | SELECT ROWNUM FROM dual  CONNECT BY ROWNUM <=10 |

Another tricky question on dual involves the use of decode with NULL.

|  |  |
| --- | --- |
| 1 | SELECT decode(null,null,1,0) from dual; |

OUTPUT—1  
Although two NULL values are not equal, the output is 1, as decode checks for the existence of NULL and does not compare the two values.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

8. **Find the missing sequence. Table test\_number contains the sequence for each id. Table test\_number\_min\_max contains the minimum and maximum number for each id. We need to find the missing number between the minimum and maximum number for each id. text column can be ignored.**

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23 | CREATE TABLE test\_number(id NUMBER,SEQ NUMBER,text VARCHAR2(5)) ;  INSERT INTO test\_number VALUES(1,1,'AA');  INSERT INTO test\_number VALUES(1,3,'CC');  INSERT INTO test\_number VALUES(1,4,'DD');  INSERT INTO test\_number VALUES(1,5,'EE');  INSERT INTO test\_number VALUES(1,6,'FF');  INSERT INTO test\_number VALUES(1,7,'GG');  INSERT INTO test\_number VALUES(1,8,'HH');  INSERT INTO test\_number VALUES(1,10,'JJ');  INSERT INTO test\_number VALUES(2,1,'KK');  INSERT INTO test\_number VALUES(2,2,'LL');  INSERT INTO test\_number VALUES(2,3,'MM');  INSERT INTO test\_number VALUES(2,4,'NN');  INSERT INTO test\_number VALUES(2,6,'PP');  INSERT INTO test\_number VALUES(2,7,'QQ');  INSERT INTO test\_number VALUES(3,1,'TT');  INSERT INTO test\_number VALUES(3,4,'ZZ');  INSERT INTO test\_number VALUES(3,5,'XX');    create tabel test\_number\_min\_max(id number,mn number,mx  number);  INSERT INTO test\_number\_min\_max VALUES(1,1,12);  INSERT INTO test\_number\_min\_max VALUES(2,1,9);  INSERT INTO test\_number\_min\_max VALUES(3,1,5); |

Answer:

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8 | SELECT r id,rn seq FROM (SELECT ROWNUM rn FROM all\_objects WHERE ROWNUM <13),  (SELECT ROWNUM r FROM all\_objects  WHERE ROWNUM <4),test\_number\_min\_max m  WHERE r=id  AND rn >= mn  AND rn <= mx  AND (r,rn) NOT IN  (SELECT id,seq FROM test\_number) |

OR

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9 | SELECT r id ,l seq FROM  (SELECT LEVEL l FROM dual  CONNECT BY LEVEL <13),  (SELECT LEVEL r FROM dual CONNECT BY LEVEL <4),  test\_number\_min\_max  WHERE r=id  AND  l>=mn  AND l<=mx  AND (r,l) NOT IN (SELECT id,seq FROM test\_number) |

OUTPUT :  
ID SEQ  
1 2  
1 9  
1 11  
1 12  
2 5  
2 8  
2 9  
3 2  
3 3

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

9. **Get the following OUTPUT using dual**  
1 L R  
—————  
1 1 1  
1 1 2  
1 1 3  
1 2 1  
1 2 2  
1 2 3  
1 3 1  
1 3 2  
1 3 3

Answer:

|  |  |
| --- | --- |
| 1  2  3  4 | SELECT \* FROM  (SELECT 1 FROM dual),  (SELECT LEVEL l FROM dual CONNECT BY LEVEL <4),  (SELECT LEVEL r FROM dual CONNECT BY LEVEL <4); |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

10. Check the Input and Output and try to figure out the question.

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7 | CREATE TABLE test\_output(NAME VARCHAR2(5), city VARCHAR2(6), num NUMBER);        INSERT INTO test\_output VALUES ('AN','TTT',5);        INSERT INTO test\_output VALUES ('AN','TTT',6);        INSERT INTO test\_output VALUES ('AN','TTT',7);        INSERT INTO test\_output VALUES ('BB','RRR',8);        INSERT INTO test\_output VALUES ('BB','RRR',9);        INSERT INTO test\_output VALUES ('BB','RRR',10); |

Input :

| **NAME** | **CITY** | **NUM** |
| --- | --- | --- |
| AN | TTT | 5 |
| AN | TTT | 6 |
| AN | TTT | 7 |
| BB | RRR | 8 |
| BB | RRR | 9 |
| BB | RRR | 10 |

Answer :

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7 | SELECT (CASE WHEN rn=1 THEN NAME ELSE NULL END) NAME,   (CASE WHEN rn=1 THEN CITY ELSE NULL END ) CITY,   num   FROM   (SELECT NAME,city,num,   row\_number() over(PARTITION BY NAME,city ORDER BY NAME) rn   FROM test\_output); |

Output :

| **NAME** | **CITY** | **NUM** |
| --- | --- | --- |
| AN | TTT | 5 |
|  |  | 6 |
|  |  | 7 |
| BB | RRR | 8 |
|  |  | 9 |
|  |  | 10 |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

11.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

12. **Beginner question based on the above logic. From the table given below, all the numbers should be on the first column and the alphabets on the second column.**

ALPA RANK  
———-  
a 1  
b 2  
c 4  
x 5  
y 6  
z 8  
9 g  
0 f  
7 e  
3 d

All the alphabets on column B and all numbers in column A  
OUTPUT:  
A B  
——–  
0 f  
1 a  
2 b  
3 d  
4 c  
5 x  
6 y  
7 e  
8 z  
9 g

Answer:

|  |  |
| --- | --- |
| 1  2 | SELECT  least(alpa,rank) a,greatest(alpa,rank) b FROM test\_b  ORDER BY 1 |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

13. **One of the most common question asked in interviews. To find the second (or third or fourth…) nth highest number in each group.**

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18 | CREATE TABLE find\_rank(group\_id VARCHAR2(2),val NUMBER);  INSERT INTO find\_rank VALUES ('G1',11);  INSERT INTO find\_rank VALUES ('G1',12);  INSERT INTO find\_rank VALUES ('G1',13);  INSERT INTO find\_rank VALUES ('G1',14);  INSERT INTO find\_rank VALUES ('G2',8);  INSERT INTO find\_rank VALUES ('G2',10);  INSERT INTO find\_rank VALUES ('G2',10);  INSERT INTO find\_rank VALUES ('G2',19);  INSERT INTO find\_rank VALUES ('G2',21);  INSERT INTO find\_rank VALUES ('G3',1);  INSERT INTO find\_rank VALUES ('G3',2);  INSERT INTO find\_rank VALUES ('G3',4);  INSERT INTO find\_rank VALUES ('G4',0);  INSERT INTO find\_rank VALUES ('G5',-1);  INSERT INTO find\_rank VALUES ('G5',-2);  INSERT INTO find\_rank VALUES ('G5',-3);  COMMIT; |

Answer:

|  |  |
| --- | --- |
| 1  2  3  4  5  6 | SELECT DISTINCT \* FROM  (SELECT group\_id,val,  dense\_rank() over  (PARTITION BY group\_id ORDER BY val DESC) rn  FROM find\_rank) t  WHERE t.rn=&rank |

**with &rank = 2**

GROUP\_ID VAL RN  
———————-  
G1 13 2  
G2 19 2  
G3 2 2  
G5 -2 2

If we need to have G4 also in the output even though it does not have a second/third highest value then :

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9  10 | SELECT DISTINCT f.group\_id,  CASE WHEN o.val > 0 THEN to\_char(o.val) ELSE 'N/A' END val  FROM find\_rank f  LEFT OUTER JOIN  (SELECT  DISTINCT group\_id,val FROM  (SELECT group\_id,val,  dense\_rank() over (PARTITION BY group\_id ORDER BY val DESC) rn  FROM find\_rank) t  WHERE t.rn=&rank)o  ON f.group\_id=o.group\_id |

**with &rank =3**

GROUP\_ID VAL  
——————-  
G1 12  
G2 10  
G3 1  
G4 N/A  
G5 -3

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

14. **Another common interview question. To transform column into rows.**

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18 | CREATE TABLE col\_to\_rows(stu\_name VARCHAR2(30),  subject VARCHAR2(10),marks NUMBER);  INSERT INTO col\_to\_rows VALUES('GEORGE','ECO',77);  INSERT INTO col\_to\_rows VALUES('GEORGE','HIS',99);  INSERT INTO col\_to\_rows VALUES('GEORGE','MAT',64);  INSERT INTO col\_to\_rows VALUES('GEORGE','GEO',85);  INSERT INTO col\_to\_rows VALUES('GEORGE','SCI',98);  INSERT INTO col\_to\_rows VALUES('ROBERT','ECO',71);  INSERT INTO col\_to\_rows VALUES('ROBERT','HIS',90);  INSERT INTO col\_to\_rows VALUES('ROBERT','MAT',84);  INSERT INTO col\_to\_rows VALUES('ROBERT','GEO',95);  INSERT INTO col\_to\_rows VALUES('ROBERT','SCI',58);  INSERT INTO col\_to\_rows VALUES('TIMOTHY','ECO',56);  INSERT INTO col\_to\_rows VALUES('TIMOTHY','HIS',55);  INSERT INTO col\_to\_rows VALUES('TIMOTHY','MAT',67);  INSERT INTO col\_to\_rows VALUES('TIMOTHY','GEO',54);  INSERT INTO col\_to\_rows VALUES('TIMOTHY','SCI',45);  COMMIT; |

Answer :

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8 | SELECT stu\_name,  max(CASE WHEN subject='ECO' THEN marks ELSE 0 END) ECO,  max(CASE WHEN subject='HIS' THEN marks ELSE 0 END) HIS,  max(CASE WHEN subject='MAT' THEN marks ELSE 0 END) MAT,  max(CASE WHEN subject='GEO' THEN marks ELSE 0 END) GEO,  max(CASE WHEN subject='SCI' THEN marks ELSE 0 END) SCI  FROM col\_to\_rows  GROUP BY stu\_name |

OR

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7 | SELECT stu\_name,  MAX(decode(subject,'ECO',marks,0)) ECO,  MAX(decode(subject,'HIS',marks,0)) HIS,  MAX(decode(subject,'MAT',marks,0)) MAT,  MAX(decode(subject,'GEO',marks,0)) GEO,  MAX(decode(subject,'SCI',marks,0)) SCI  FROM col\_to\_rows GROUP BY stu\_name |

OR

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8 | SELECT stu\_name,  max(CASE WHEN rn=1 THEN marks ELSE 0 END) ECO,  max(CASE WHEN rn=2 THEN marks ELSE 0 END) GEO,  max(CASE WHEN rn=3 THEN marks ELSE 0 END) HIS,  max(CASE WHEN rn=4 THEN marks ELSE 0 END) MAT,  max(CASE WHEN rn=5 THEN marks ELSE 0 END) SCI FROM  (SELECT stu\_name,subject,marks, rank() over (PARTITION BY stu\_name ORDER BY subject )rn FROM col\_to\_rows)  GROUP BY stu\_name |

Output :

| **STU\_NAME** | **ECO** | **HIS** | **MAT** | **GEO** | **SCI** |
| --- | --- | --- | --- | --- | --- |
| GEORGE | 77 | 99 | 64 | 85 | 98 |
| ROBERT | 71 | 90 | 84 | 95 | 58 |
| TIMOTHY | 56 | 55 | 67 | 54 | 45 |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

15. **Another question from http://asktom.oracle.com/pls/asktom/f?p=100:11:0::::P11\_QUESTION\_ID:65356113852721 . This question teaches the trick to use decode with order by to select your own ordering rule . In this case the minimum value should always be at the last row. The other values are sorted in ascending order. You can create your own ordering rules.**

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48  49  50  51 | SQL> CREATE TABLE TEST1 (c1 NUMBER(2));    Table created    SQL> INSERT INTO TEST1 ( C1 ) VALUES (    2  2);    1 row inserted    SQL> INSERT INTO TEST1 ( C1 ) VALUES (    2  3);    1 row inserted    SQL> INSERT INTO TEST1 ( C1 ) VALUES (    2  1);    1 row inserted    SQL> INSERT INTO TEST1 ( C1 ) VALUES (    2  5);    1 row inserted    SQL> INSERT INTO TEST1 ( C1 ) VALUES (    2  4);    1 row inserted    SQL> COMMIT;    Commit complete    SQL>    C1  2  3  1  5  4    select \* from test1  order by decode( c1, (select min(c1) from test1), to\_number(null), c1);    C1  2  3  4  5  1 |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

* [Post to Blogger](http://www.shareaholic.com/api/share/?title=Tricky+SQL+queries%2C+advanced+SQL+queries%2C+Interesting+SQL+queries&link=http%3A%2F%2Foddabout.com%2F%3Fpage_id%3D1807&notes=&short_link=&shortener=google&shortener_key=&v=1&apitype=1&apikey=8afa39428933be41f8afdb8ea21a495c&source=Shareaholic-Publishers&template=&service=219&ctype=)
* [Post to Delicious](http://www.shareaholic.com/api/share/?title=Tricky+SQL+queries%2C+advanced+SQL+queries%2C+Interesting+SQL+queries&link=http%3A%2F%2Foddabout.com%2F%3Fpage_id%3D1807&notes=&short_link=&shortener=google&shortener_key=&v=1&apitype=1&apikey=8afa39428933be41f8afdb8ea21a495c&source=Shareaholic-Publishers&template=&service=2&ctype=)
* [Post to Digg](http://www.shareaholic.com/api/share/?title=Tricky+SQL+queries%2C+advanced+SQL+queries%2C+Interesting+SQL+queries&link=http%3A%2F%2Foddabout.com%2F%3Fpage_id%3D1807&notes=&short_link=&shortener=google&shortener_key=&v=1&apitype=1&apikey=8afa39428933be41f8afdb8ea21a495c&source=Shareaholic-Publishers&template=&service=3&ctype=)
* [Post to Facebook](http://www.shareaholic.com/api/share/?title=Tricky+SQL+queries%2C+advanced+SQL+queries%2C+Interesting+SQL+queries&link=http%3A%2F%2Foddabout.com%2F%3Fpage_id%3D1807&notes=&short_link=&shortener=google&shortener_key=&v=1&apitype=1&apikey=8afa39428933be41f8afdb8ea21a495c&source=Shareaholic-Publishers&template=&service=5&ctype=)

5

5

5

5

5

5

5

5

5

* [Post to StumbleUpon](http://www.shareaholic.com/api/share/?title=Tricky+SQL+queries%2C+advanced+SQL+queries%2C+Interesting+SQL+queries&link=http%3A%2F%2Foddabout.com%2F%3Fpage_id%3D1807&notes=&short_link=&shortener=google&shortener_key=&v=1&apitype=1&apikey=8afa39428933be41f8afdb8ea21a495c&source=Shareaholic-Publishers&template=&service=38&ctype=)
* Post to Twitter

1

1

1

1

1

1

1

1

1

40 Responses to “Tricky SQL queries, advanced SQL queries, Interesting SQL queries”

1. http://0.gravatar.com/avatar/e529953cc6e87d79fb5a8b2be7d1db3b?s=50&d=http%3A%2F%2F0.gravatar.com%2Favatar%2Fad516503a11cd5ca435acc9bb6523536%3Fs%3D50&r=G

*admin* *says:*

[*July 1, 2011 at 10:02 pm*](http://oddabout.com/?page_id=1807#comment-121)

for more queries visit  
<http://oddabout.com/?page_id=1907>

[***reply***](http://oddabout.com/?page_id=1807&replytocom=121#respond)

1. http://1.gravatar.com/avatar/d10ca8d11301c2f4993ac2279ce4b930?s=50&d=http%3A%2F%2F1.gravatar.com%2Favatar%2Fad516503a11cd5ca435acc9bb6523536%3Fs%3D50&r=G

*unknown* *says:*

[*September 4, 2012 at 10:44 am*](http://oddabout.com/?page_id=1807#comment-187)

very nice collection of queries….helped me alot…thanks

[***reply***](http://oddabout.com/?page_id=1807&replytocom=187#respond)

1. http://0.gravatar.com/avatar/2fc55105df969f05d15e9331f586d548?s=50&d=http%3A%2F%2F0.gravatar.com%2Favatar%2Fad516503a11cd5ca435acc9bb6523536%3Fs%3D50&r=G

*jatin* *says:*

[*October 16, 2012 at 1:58 pm*](http://oddabout.com/?page_id=1807#comment-209)

very tricky, took time to understand them and very soon use them, quite helpful too

[***reply***](http://oddabout.com/?page_id=1807&replytocom=209#respond)

1. http://1.gravatar.com/avatar/d10ca8d11301c2f4993ac2279ce4b930?s=50&d=http%3A%2F%2F1.gravatar.com%2Favatar%2Fad516503a11cd5ca435acc9bb6523536%3Fs%3D50&r=G

[*Ram*](http://a.com/) *says:*

[*December 5, 2012 at 11:25 pm*](http://oddabout.com/?page_id=1807#comment-278)

Very Useful…….Appreciate efforts for putting very useful info.

[***reply***](http://oddabout.com/?page_id=1807&replytocom=278#respond)

1. http://0.gravatar.com/avatar/a72f1c991da00f11d9aa51eb31798320?s=50&d=http%3A%2F%2F0.gravatar.com%2Favatar%2Fad516503a11cd5ca435acc9bb6523536%3Fs%3D50&r=G

*Vimal* *says:*

[*March 4, 2013 at 8:01 pm*](http://oddabout.com/?page_id=1807#comment-598)

Hello,

Above Help is Great.

[***reply***](http://oddabout.com/?page_id=1807&replytocom=598#respond)

1. http://1.gravatar.com/avatar/be2a77fe8fe1b9292d65c7ff772d6203?s=50&d=http%3A%2F%2F1.gravatar.com%2Favatar%2Fad516503a11cd5ca435acc9bb6523536%3Fs%3D50&r=G

*Nishu* *says:*

[*April 7, 2013 at 6:25 pm*](http://oddabout.com/?page_id=1807#comment-997)

Buddy nice collection of queries helpde me a lot..keep finding more things like this..Thanks!!!

[***reply***](http://oddabout.com/?page_id=1807&replytocom=997#respond)

1. http://1.gravatar.com/avatar/7580c5a57466ecdfb9638ae90caede73?s=50&d=http%3A%2F%2F1.gravatar.com%2Favatar%2Fad516503a11cd5ca435acc9bb6523536%3Fs%3D50&r=G

*Sankar* *says:*

[*May 16, 2013 at 10:33 pm*](http://oddabout.com/?page_id=1807#comment-1444)

Thanks a lot for your effort.It helped me a lot.

[***reply***](http://oddabout.com/?page_id=1807&replytocom=1444#respond)

1. http://1.gravatar.com/avatar/b10697d2fc0430130cd9d41f957bac34?s=50&d=http%3A%2F%2F1.gravatar.com%2Favatar%2Fad516503a11cd5ca435acc9bb6523536%3Fs%3D50&r=G

*dipu* *says:*

[*May 17, 2013 at 8:42 pm*](http://oddabout.com/?page_id=1807#comment-1451)

10. How to solve it  
CREATE TABLE test\_output(NAME VARCHAR2(5), city VARCHAR2(6), num NUMBER);  
INSERT INTO test\_output VALUES (‘AN’,'TTT’,5);  
INSERT INTO test\_output VALUES (‘AN’,'TTT’,6);  
INSERT INTO test\_output VALUES (‘AN’,'SSS’,7);  
INSERT INTO test\_output VALUES (‘BB’,'SSS’,8);  
INSERT INTO test\_output VALUES (‘BB’,'GGG’,9);  
INSERT INTO test\_output VALUES (‘BB’,'GGG’,10);

The required output as follows

=============================  
NAME CITY NUM  
=============================  
AN TTT 5  
—————————–  
6  
—————————–  
SSS 7  
—————————–  
BB SSS 8  
—————————–  
GGG 9  
—————————–  
10  
=============================

[***reply***](http://oddabout.com/?page_id=1807&replytocom=1451#respond)

* + http://1.gravatar.com/avatar/b10697d2fc0430130cd9d41f957bac34?s=50&d=http%3A%2F%2F1.gravatar.com%2Favatar%2Fad516503a11cd5ca435acc9bb6523536%3Fs%3D50&r=G

*dipu* *says:*

[*May 17, 2013 at 8:49 pm*](http://oddabout.com/?page_id=1807#comment-1452)

Output :

NAMECITYNUM

ANTTT5

6

SSS7

BBSSS8

GGG9

10

[***reply***](http://oddabout.com/?page_id=1807&replytocom=1452#respond)

* + - http://1.gravatar.com/avatar/7e731b0a48197ebd949e20ba4b5f7520?s=50&d=http%3A%2F%2F1.gravatar.com%2Favatar%2Fad516503a11cd5ca435acc9bb6523536%3Fs%3D50&r=G

[*pradeep*](http://pradeepfb@rediffmail.com/) *says:*

[*May 20, 2013 at 1:07 pm*](http://oddabout.com/?page_id=1807#comment-1470)

SELECT (CASE WHEN rn=1 and num=5 or num=8 THEN NAME ELSE ” END) NAME,  
(CASE WHEN rn=1 or city=’sss’ and name=’bb’ THEN CITY ELSE ” END ) CITY,

num  
FROM  
(SELECT NAME,city,num,  
row\_number() over(PARTITION BY city,city ORDER BY NAME) rn  
FROM test\_outputed) as tabl

[***reply***](http://oddabout.com/?page_id=1807&replytocom=1470#respond)

* + - * http://1.gravatar.com/avatar/7e731b0a48197ebd949e20ba4b5f7520?s=50&d=http%3A%2F%2F1.gravatar.com%2Favatar%2Fad516503a11cd5ca435acc9bb6523536%3Fs%3D50&r=G

[*pradeep*](http://pradeepfb@rediffmail.com/) *says:*

[*May 20, 2013 at 1:12 pm*](http://oddabout.com/?page_id=1807#comment-1471)

SELECT (CASE WHEN rn=1 and num=5 or num=8 THEN NAME ELSE ” END) NAME,  
(CASE WHEN rn=1 or city=’sss’ and name=’bb’ THEN CITY ELSE ” END ) CITY,

num  
FROM  
(SELECT NAME,city,num,  
row\_number() over(PARTITION BY city,city ORDER BY NAME) rn  
FROM test\_output) as tabl

[***reply***](http://oddabout.com/?page_id=1807&replytocom=1471#respond)

* + - * + http://0.gravatar.com/avatar/8ee2f3282ff2ee5202f358ac04ba14a7?s=50&d=http%3A%2F%2F0.gravatar.com%2Favatar%2Fad516503a11cd5ca435acc9bb6523536%3Fs%3D50&r=G

*Garuda* *says:*

[*January 29, 2014 at 6:25 pm*](http://oddabout.com/?page_id=1807#comment-2144)

Thanks a lot for your effort.  
Nice questions…. keep posting …

* + - * + http://1.gravatar.com/avatar/521ddd8ce8b655d7fdc90778f51bbb18?s=50&d=http%3A%2F%2F1.gravatar.com%2Favatar%2Fad516503a11cd5ca435acc9bb6523536%3Fs%3D50&r=G

*Tanvi Garg* *says:*

[*March 26, 2014 at 2:40 pm*](http://oddabout.com/?page_id=1807#comment-2670)

a more generic approach, without the hard coded city name could be as follows:-

select case when rn\_name = 1 then name else ‘ ‘ end as name, case when rn\_city = 1 then city else ‘ ‘ end as city,num from  
(select name, CITY,num,row\_number() over ( partition by name order by city desc) rn\_name,  
row\_number() over ( partition by name,city order by city desc) rn\_city from test\_output) a;

* + - * + http://0.gravatar.com/avatar/4d7c0783e99749ea6520170db79dc3ec?s=50&d=http%3A%2F%2F0.gravatar.com%2Favatar%2Fad516503a11cd5ca435acc9bb6523536%3Fs%3D50&r=G

*SIva* *says:*

[*February 18, 2015 at 2:47 pm*](http://oddabout.com/?page_id=1807#comment-4275)

Another generalised approach: hope it might help

from(select row\_number() over (partitioned by name,city) as rn\_1, row\_number() over (partitioned by name) as rn\_2  
,name,city,num) select (case when rn\_1 =1 and rn\_2 =1 then Name when rn\_1 = 1 and rn\_2!=1 then city else num end) as name,  
(case when rn\_1=1 and rn\_2 = 1 then city when rn\_1=1 and rn\_2 !=1 then num else null end) as city,  
(case when rn\_1=1 and rn\_2 =1 then num else null end) as num;

* + http://0.gravatar.com/avatar/26f532db88dbd612223684572b771ce0?s=50&d=http%3A%2F%2F0.gravatar.com%2Favatar%2Fad516503a11cd5ca435acc9bb6523536%3Fs%3D50&r=G

*Anudeep Jaiswal* *says:*

[*March 16, 2015 at 11:44 am*](http://oddabout.com/?page_id=1807#comment-4434)

WITH CTE  
AS (SELECT Name,  
City,  
NUM,  
Row\_number()  
OVER(  
Partition BY Name, City  
ORDER BY Name, City, NUM) AS id  
FROM test\_output)  
SELECT Ltrim(Rtrim(CASE WHEN ID = 1 THEN Name ELSE ” END + ‘ ‘ + CASE WHEN ID = 1 THEN City ELSE ” END + ‘ ‘ + CONVERT(VARCHAR, Num))) Output  
FROM CTE