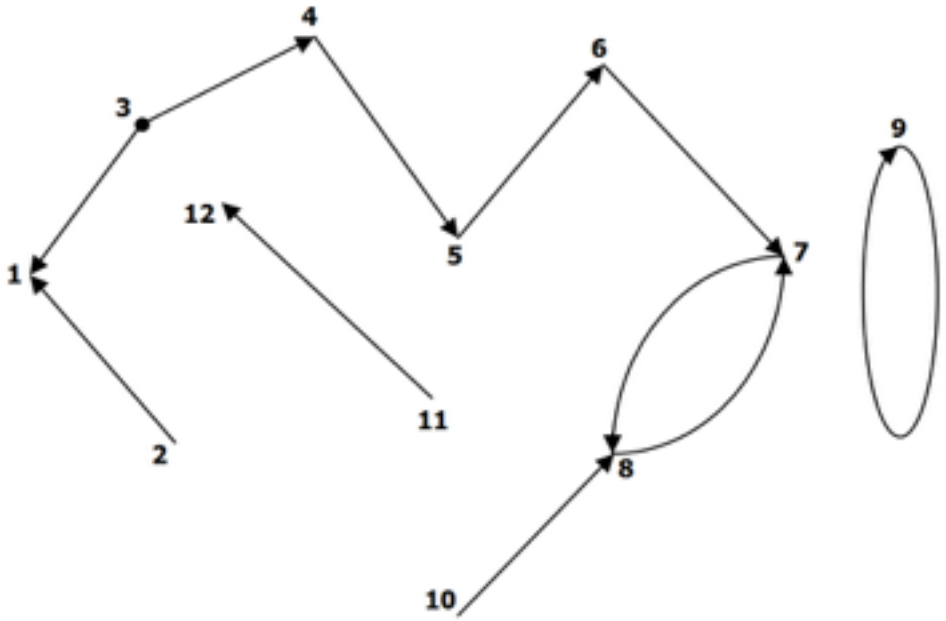
Task 1 Table contains the sides directed graph. Write query which returns all nodes connected with given node.
For example: for node 1 - returned 2 and 3.




```
SQL> with graph as
  2  (select 1 id, 2 parent_id from dual
  3  union all select 1 id, 3 parent_id from dual
  4  union all select 4 id, 3 parent_id from dual
  5  union all select 5 id, 4 parent_id from dual
  6  union all select 6 id, 5 parent_id from dual
  7  union all select 7 id, 6 parent_id from dual
  8  union all select 8 id, 7 parent_id from dual
  9  union all select 7 id, 6 parent_id from dual
 10  union all select 8 id, 10 parent_id from dual
 11  union all select 9 id, 9 parent_id from dual
 12  union all select 12 id, 11 parent_id from dual)
...
 20  /
```

Task 2.
The table contains information about user sessions. Write a request that will return the maximum number of simultaneous connections for each user and the minimum time when this occurred.

```
with log as
  2  (select 'U1' username, date '2013-08-08'+1/24 logon_time,
  3   date '2013-08-08'+10/24 logoff_time from dual
  4  union all select 'U1' username, date '2013-08-08'+6/24 logon_time,
  5   date '2013-08-08'+14/24 logoff_time from dual
  6  union all select 'U1' username, date '2013-08-08'+4/24 logon_time,
  7   date '2013-08-08'+12/24 logoff_time from dual
  8  union all select 'U1' username, date '2013-08-08'+8/24 logon_time,
  9   date '2013-08-08'+17/24 logoff_time from dual
 10  union all select 'U1' username, date '2013-08-08'+16/24 logon_time,
 11   date '2013-08-08'+18/24 logoff_time from dual
 12  union all select 'U1' username, date '2013-08-08'+9/24 logon_time,
 13   date '2013-08-08'+16/24 logoff_time from dual
 14  union all select 'U2' username, date '2013-08-08'+1/24 logon_time,
 15   date '2013-08-08'+3/24 logoff_time from dual
 16  union all select 'U2' username, date '2013-08-08'+2/24 logon_time,
 17   date '2013-08-08'+12/24 logoff_time from dual
```

```
 18  union all select 'U2' username, date '2013-08-08'+11/24 logon_time,
 19   date '2013-08-08'+13/24 logoff_time from dual
 20  union all select 'U2' username, date '2013-08-08'+10/24 logon_time,
 21   date '2013-08-08'+14/24 logoff_time from dual)
...
 37  /

Result should be:

U1             5 08.08.13 09.00.00
U2             3 08.08.13 11.00.00
```

Task 3. Write a query that generates the first n Fibonacci numbers. The use of any formulas is not allowed. The number to be generated must be specified in the associated variable

Task 4. For data tables master and detail tables write a query that returns the sum value with grouping by grp, as well as the total amount in the first line. Only one scan of the master table is allowed.

```
with
  2  master as
  3  (select 1 as id_m, 111 as value  from dual union all
  4  select 2 as id_m, 222 as value  from dual union all
  5  select 3 as id_m, 333 as value  from dual union all
  6  select 4 as id_m, 444 as value  from dual union all
  7  select 5 as id_m, 555 as value  from dual union all
  8  select 6 as id_m, 666 as value  from dual),
  9  detail as
 10  (select 1 as id_m, 1 as grp from dual union all
 11  select 1 as id_m, 2 as grp from dual union all
 12  select 1 as id_m, 4 as grp from dual union all
 13  select 2 as id_m, 3 as grp from dual union all
 14  select 2 as id_m, 4 as grp from dual union all
 15  select 3 as id_m, 1 as grp from dual union all
 16  select 3 as id_m, 3 as grp from dual union all
 17  select 3 as id_m, 5 as grp from dual)
…

Result:
       GRP     ALLSUM
---------- ----------
                 2331
         1         444
         2         111
         3         555
         4         333
         5         333
```

Task 5. The table contains nodes for several trees. Write a request that will return the nodes with the signed sign, as well as their parents on the first three levels. Connect by can only be used once.

```
with tree as
  2  (select 3 id, 1 parent_id, 0 sign from dual
  3  union all select 4 id, 2 parent_id, 0 sign from dual
  4  union all select 5 id, 2 parent_id, 0 sign from dual
  5  union all select 6 id, 3 parent_id, 0 sign from dual
  6  union all select 7 id, 3 parent_id, 0 sign from dual
  7  union all select 8 id, 3 parent_id, 0 sign from dual
  8  union all select 9 id, 4 parent_id, 0 sign from dual
  9  union all select 10 id, 4 parent_id, 1 sign from dual
 10  union all select 11 id, 7 parent_id, 1 sign from dual
```

```
 11  union all select 12 id, 7 parent_id, 0 sign from dual
 12  union all select 13 id, 9 parent_id, 0 sign from dual
 13  union all select 14 id, 9 parent_id, 1 sign from dual
 14  union all select 15 id, 9 parent_id, 1 sign from dual
 15  union all select 2 id, null parent_id, 0 sign from dual
 16  union all select 1 id, null parent_id, 0 sign from dual)
...
 30  /
```