1.

```sql
SQL> select a.id, b.id, a.name
from author a, author b
where a.name = b.name and a.id < b.id;
```

<table>
<thead>
<tr>
<th>ID1</th>
<th>ID2</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1744</td>
<td>2447</td>
<td>Mary F. Fernandez</td>
</tr>
</tbody>
</table>

2.

```sql
SQL> select c1.year, c1.location
from conference c1, conference c2
where c1.year = c2.year and c1.location = c2.location and c1.name = 'SIGMOD'
and c2.name='ICDE' order by c1.year;
```

<table>
<thead>
<tr>
<th>Year</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>USA</td>
</tr>
<tr>
<td>2006</td>
<td>USA</td>
</tr>
<tr>
<td>2010</td>
<td>USA</td>
</tr>
</tbody>
</table>

3.

```sql
SQL> with amol_c(aid) as (select distinct AP2.AID
                         from author a1, author a2, authorpublication ap1, authorpublication ap2
                         where a1.id = ap1.aid and ap1.pid = ap2.pid and a1.name = 'Amol Deshpande'
                         and ap2.aid=a2.id and a1.id<>a2.id order by aid),
       sam_c(aid) as (select distinct AP2.AID
                      from author a1, author a2, authorpublication ap1, authorpublication ap2
                      where a1.id = ap1.aid and ap1.pid = ap2.pid and a1.name = 'Samuel Madden'
                      and ap2.aid=a2.id and a1.id<>a2.id order by aid),
       common(aid) as (select * from amol_c intersect select * from sam_c),
       pubs_count(id, name, cnt) as (select author.id, author.name, count(aip.pid)
                                      from author, authorpublication aip
                                      where author.id=aip.aid
                                      group by author.name, author.id, aip.aid),
       common_pubs(id, name, cnt) as (select c.aid, pc.name, pc.cnt
                                      from common c, pubs_count pc
                                      where c.aid=pc.id)
       select name
       from common_pubs
       where cnt = (select max(cnt) from common_pubs);
```

Michael J. Franklin

4.

```sql
SQL> with xml_cnt(aid1, aid2, cnt) as (select ap1.aid, ap2.aid, count(*)
                                       from authorpublication ap1, authorpublication ap2, publication p
                                       where ap1.pid=ap2.pid and ap2.pid=p.id and ap1.aid<ap2.aid and title like '%XML%'
                                       group by ap1.aid, ap2.aid),
       tmp(name1, name2, cnt) as (select a1.name, a2.name, cnt
                                from author a1, author a2, xml_cnt x
                                where a1.id=x.aid1 and a2.id=x.aid2
                                order by cnt desc)
       select *
       from tmp
       where cnt = (select max(cnt) from tmp);
```

Nick Koudas  Divesh Srivastava
5. with t1 (id1, id2) as (select distinct A1.aid, A2.aid
from AuthorPublication A1, Publication P, AuthorPublication A2
where A1.pid = P.id and P.id = A2.pid and A1.aid < A2.aid),
t2(aid1, aid2, aid3) as (select c1.id1, c1.id2, c2.id2
from t1 c1, t1 c2, t1 c3
where c1.id2 = c2.id1 and c2.id2 = c3.id2 and c3.id1 = c1.id1),
t11(aid, cnt) as (select id, count(*)
from author A, t2
where A.id = t2.aid1 or A.id = t2.aid2 or A.id = t2.aid3
group by A.id)
t13(aid,cnt) as (select aid,max(cnt)
from t11 group by aid)
select name,t13.cnt
from author ,t13
where author.id=t13.aid and id in (select aid
from t11
where cnt=(select max(cnt)
from t11));

6. SQL> with t2(pid, cid) as (select id, cid
from publication where cid in (select id
from conference where year=2004)),
t3(aid, cid, cnt) as (select aid, t2.cid, count(*)
from authorpublication ap join t2 on ap.pid = t2.pid
group by aid, t2.cid order by aid),
t5(cnt) as (select count(aid)
from t3 group by aid having count(*) > 1),
t6(cnt) as (select count(aid)
from t3 group by aid)
select tot1/tot2 from (select count(*) tot1 from t5), (select count(*) tot2 from t6);
0.1709677419354838709677419354838709677419
SQL> with t4(aid, cnt) as (select aid, count(*)
from authorpublication ap, publication p, conference c
where ap.pid = p.id and p.cid = c.id and c.year=2002
  group by ap.aid),
  t5(aid, cnt, year) as (select aid, count(*), year
from authorpublication ap, publication p, conference c
where ap.pid = p.id and p.cid = c.id and c.year>=2003 and c.year <= 2005
  group by ap.aid, year),
  t9(aid, year) as (select distinct t4.aid, t5.year
from t4,t5
where t4.cnt = (select max(cnt) from t4))
select t5.year,1+count(*)
from t5, t9
where t5.year = t9.year and t5.cnt >
  (select cnt
   from t5
   where t5.aid=t9.aid and t5.year=t9.year)
  group by t5.year
order by t5.year;

2003  204
2004  24
2005  100