Joins and subqueries

1. Retrieve the start times of memebers' bookings

Query: select bks.starttime from bookings bks inner join members mems on mems.memid = bks.memid where mems.firstname='David' and mems.surname='Farrell';

SQLOUTPUT:

```
exercises=# celect bks.starttime from bookings bks inner join members mems on mems.memid = bks.memid where mems.firstname="David" and mems.surname="Farrell";
starttime

2012-09-18 09-00-09
2012-09-18 13:30-00
2012-09-18 13:30-00
2012-09-19 09:30-00
2012-09-19 09:30-00
2012-09-19 15:00-00
2012-09-19 15:00-00
2012-09-19 15:00-00
2012-09-20 15:30-00
2012-09-21 11:30-00
2012-09-21 11:30-00
2012-09-22 11:30-00
2012-09-23 13:30-00
2012-09-23 13:30-00
2012-09-23 19:00-00
2012-09-23 19:00-00
2012-09-23 19:00-00
2012-09-23 19:00-00
2012-09-23 19:00-00
2012-09-23 19:00-00
2012-09-24 08:00-00
2012-09-25 19:00-00
2012-09-25 19:00-00
2012-09-26 19:00-00
2012-09-27 19:00-00
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2. Work out the start times of bookings for tennis courts

Query: select bks.starttime as start, facs.name as name from facilities facs inner join bookings bks on facs.facid = bks.facid where facs.name in ('Tennis Court 2','Tennis Court 1') and bks.starttime >= '2012-09-21' and bks.starttime < '2012-09-22' order by bks.starttime;

SQLOUTPUT:

3. Produce a list of all members who have recommended another member

Query: select distinct recs.firstname as firstname, recs.surname as surname from members mems inner join cd.members recs on recs.memid = mems.recommendedby order by surname, firstname;

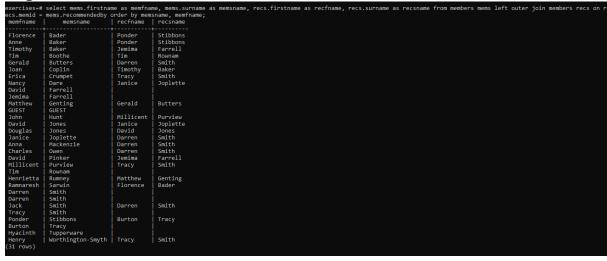
SQLOUTPUT:

```
exercises=# select distinct recs.firstname as firstname, recs.surname as surname from members mems inner join cd.members recs on recs.memid - mems.recommendedby order by surname firstname | surname | surnam
```

4. Produce a list of all members, along with their recommender

Query: select mems.firstname as memfname, mems.surname as memsname, recs.firstname as recfname, recs.surname as recsname from members mems left outer join members recs on recs.memid = mems.recommendedby order by memsname, memfname;

SQLOUTPUT:



5. Produce a list of all members who have used a tennis court

Query: select distinct mems.firstname || ' ' || mems.surname as member, facs.name as facility from members mems inner join bookings bks on mems.memid = bks.memid inner join cd.facilities facs on bks.facid = facs.facid where facs.name in ('Tennis Court 2','Tennis Court 1') order by member, facility **SOLOUTPUT:**

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seerclessed solect district mess, firstname || ' || mess, surname as member, facc, name as faccility from sembers, mess, immers, faccid where facc, name as faccility from sember, faccility member | facci
```

6. Produce a list of costly bookings

Query: select mems.firstname $\parallel ' \, ' \, \parallel$ mems.surname as member, facs.name as facility, case when mems.memid = 0 then bks.slots*facs.guestcost else bks.slots*facs.membercost end as cost from members mems inner join bookings bks on mems.memid = bks.memid inner join facilities facs on bks.facid = facs.facid where bks.starttime >= '2012-09-14' and bks.starttime < '2012-09-15' and ((mems.memid = 0 and bks.slots*facs.guestcost > 30) or (mems.memid != 0 and bks.slots*facs.membercost > 30)) order by cost desc;

SOLOUTPUT:

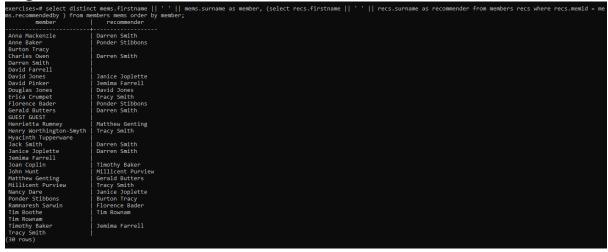
```
| | | | | mems.surname as member, facs.name as facility, case when mems.memid = 0 then bks.slots*facs.guestcost else bks.slots*facs.membercost end as cost from members mems inner join bookings bks on mems.memid = 0 kss.memid inner join facilities facs on bks.facid * facs.facid where bks.starttime > '2012-09-15' and ( (mems.memid = 0 and bks.slots*facs.guestcost > 30) or (mems.memid != 0 and bks.slots*facs.membercost > 30) ) order by cost desc;

GUEST GUEST | Massage Room | 1 60
GUEST GUEST | Massage Room | 1 70
GUEST GUEST | Massage Room | 70
GUEST GUEST | M
```

7. Produce a list of all members, along with their recommender, using no joins.

Query: select distinct mems.firstname $\| ' ' \|$ mems.surname as member, (select recs.firstname $\| ' ' \|$ recs.surname as recommender from members recs where recs.memid = mems.recommendedby) from members mems order by member;

SQLOUTPUT:



8. Produce a list of costly bookings, using a subquery

Query: select member, facility, cost from (select mems.firstname $\| ' ' \|$ mems.surname as member, facs.name as facility, case when mems.memid = 0 then bks.slots*facs.guestcost else bks.slots*facs.membercost end as cost from members mems inner join bookings bks on mems.memid = bks.memid inner join facilities facs on bks.facid = facs.facid where bks.starttime >= '2012-09-14' and bks.starttime < '2012-09-15') as bookings where cost > 30 order by cost desc;

SQLOUTPUT:

exercises=# select member, facility, cost from (select mems.firstname || ' ' || mems.surname as member, facs.name as facility, case when mems.memid = 0 then bks.slots*facs.gues tcost else bks.slots*facs.membercost end as cost from members mems inner join bookings bks on mems.memid = bks.memid inner join facilities facs on bks.facid = facs.facid where bks.starttime > '2012-09-14' and bks.starttime < '2012-09-15') as bookings where cost > 30 order by cost desc;

member | facility | cost

member		2032
GUEST GUEST	Massage Room 2	320
GUEST GUEST	Massage Room 1	160
GUEST GUEST	Massage Room 1	160
GUEST GUEST	Massage Room 1	160
GUEST GUEST	Tennis Court 2	150
Jemima Farrell	Massage Room 1	140
GUEST GUEST	Tennis Court 1	
GUEST GUEST	Tennis Court 1	
GUEST GUEST	Tennis Court 2	
Ponder Stibbons	Massage Room 1	70
Jemima Farrell	Massage Room 1	70
Burton Tracy	Massage Room 1	70
Matthew Genting	Massage Room 1	70
Florence Bader	Massage Room 2	70
Jack Smith	Massage Room 1	70
GUEST GUEST	Squash Court	70.0
GUEST GUEST	Squash Court	35.0
GUEST GUEST	Squash Court	35.0
(18 rows)		