Retrieve the start times of members' bookings

Question

- How can you produce a list of the start times for bookings by members named 'David Farrell'?

Expected output

starttime
2012-09-18 09:00:00
2012-09-18 17:30:00
2012-09-18 13:30:00
2012-09-18 20:00:00
2012-09-19 09:30:00
2012-09-19 15:00:00
2012-09-19 12:00:00
2012-09-20 15:30:00
2012-09-20 11:30:00
2012-09-20 14:00:00
2012-09-21 10:30:00

SQL code

```
select b.starttime from cd.bookings b
    inner join cd.members m on m.memid = b.memid
where m.firstname = 'David' and m.surname = 'Farrell';
```

Work out the start times of bookings for tennis courts

Question

- How can you produce a list of the start times for bookings for tennis courts, for the date '2012-09-21'? Return a list of start time and facility name pairings, ordered by the time.

Expected Results

start	name
2012-09-21 08:00:00	Tennis Court 1
2012-09-21 08:00:00	Tennis Court 2
2012-09-21 09:30:00	Tennis Court 1
2012-09-21 10:00:00	Tennis Court 2
2012-09-21 11:30:00	Tennis Court 2
2012-09-21 12:00:00	Tennis Court 1
2012-09-21 13:30:00	Tennis Court 1
2012-09-21 14:00:00	Tennis Court 2
2012-09-21 15:30:00	Tennis Court 1
2012-09-21 16:00:00	Tennis Court 2
2012-09-21 17:00:00	Tennis Court 1
2012-09-21 18:00:00	Tennis Court 2

SQL code

```
select b.starttime, f.name from cd.bookings b
    inner join cd.facilities f ON f.facid = b.facid
where date(b.starttime) = '2012-09-21' and f.name like '%Tennis Court%'
order by b.starttime;
```

Keywords

- **Like**: The `LIKE` operator is used in a `WHERE` clause to search for a specified pattern in a column.
- There are two wildcards often used in conjunction with the `LIKE` operator:
    - `%` The percent sign represents zero, one, or multiple characters

- _ The underscore sign represents one, single character

Produce a list of all members who have recommended another member

Question

How can you output a list of all members who have recommended another member? Ensure that there are no duplicates in the list, and that results are ordered by (surname, firstname).

Expected Results

firstname	surname
Florence	Bader
Timothy	Baker
Gerald	Butters
Jemima	Farrell
Matthew	Genting
David	Jones
Janice	Joplette
Millicent	Purview
Tim	Rownam
Darren	Smith
Tracy	Smith
Ponder	Stibbons
Burton	Tracy

SQL code

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

Keywords

- **DISTINCT**: The `SELECT DISTINCT` statement is used to return only distinct (different) values.
- Inside a table, a column often contains many duplicate values and sometimes you only want to list the different (distinct) values.

Produce a list of all members, along with their recommender

Question

How can you output a list of all members, including the individual who recommended them (if any)? Ensure that results are ordered by (surname, firstname).

Expected Results

memfname	memsname	recfname	recsname
Florence	Bader	Ponder	Stibbons
Anne	Baker	Ponder	Stibbons
Timothy	Baker	Jemima	Farrell
Tim	Boothe	Tim	Rownam
Gerald	Butters	Darren	Smith
Joan	Coplin	Timothy	Baker
Erica	Crumpet	Tracy	Smith
Nancy	Dare	Janice	Joplette
David	Farrell		
Jemima	Farrell		
GUEST	GUEST		
Matthew	Genting	Gerald	Butters
John	Hunt	Millicent	Purview
David	Jones	Janice	Joplette
Douglas	Jones	David	Jones

memfname	memsname	recfname	recsname
Janice	Joplette	Darren	Smith
Anna	Mackenzie	Darren	Smith
Charles	Owen	Darren	Smith
David	Pinker	Jemima	Farrell
Millicent	Purview	Tracy	Smith
Tim	Rownam		
Henrietta	Rumney	Matthew	Genting
Ramnaresh	Sarwin	Florence	Bader
Darren	Smith		
Darren	Smith		
Jack	Smith	Darren	Smith
Tracy	Smith		
Ponder	Stibbons	Burton	Tracy
Burton	Tracy		
Hyacinth	Tupperware		
Henry	Worthington-Smyth	Tracy	Smith

SQL

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

- `(INNER) JOIN` : Returns records that have matching values in both tables
- `LEFT (OUTER) JOIN` : Returns all records from the left table, and the matched records from the right table
- `RIGHT (OUTER) JOIN` : Returns all records from the right table, and the matched records from

the left table

- `FULL (OUTER) JOIN` : Returns all records when there is a match in either left or right table

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

Question

How can you produce a list of all members who have used a tennis court? Include in your output the name of the court, and the name of the member formatted as a single column. Ensure no duplicate data, and order by the member name followed by the facility name.

Expected Results

member	facility
Anne Baker	Tennis Court 1
Anne Baker	Tennis Court 2
Burton Tracy	Tennis Court 1
Burton Tracy	Tennis Court 2
Charles Owen	Tennis Court 1
Charles Owen	Tennis Court 2
Darren Smith	Tennis Court 2
David Farrell	Tennis Court 1
David Farrell	Tennis Court 2
David Jones	Tennis Court 1
David Jones	Tennis Court 2
David Pinker	Tennis Court 1
Douglas Jones	Tennis Court 1
Erica Crumpet	Tennis Court 1
Florence Bader	Tennis Court 1
Florence Bader	Tennis Court 2

member	facility
GUEST GUEST	Tennis Court 1
GUEST GUEST	Tennis Court 2
Gerald Butters	Tennis Court 1
Gerald Butters	Tennis Court 2
Henrietta Rumney	Tennis Court 2
Jack Smith	Tennis Court 1
Jack Smith	Tennis Court 2
Janice Joplette	Tennis Court 1
Janice Joplette	Tennis Court 2
Jemima Farrell	Tennis Court 1
Jemima Farrell	Tennis Court 2
Joan Coplin	Tennis Court 1
John Hunt	Tennis Court 1
John Hunt	Tennis Court 2
Matthew Genting	Tennis Court 1
Millicent Purview	Tennis Court 2
Nancy Dare	Tennis Court 1
Nancy Dare	Tennis Court 2
Ponder Stibbons	Tennis Court 1
Ponder Stibbons	Tennis Court 2
Ramnaresh Sarwin	Tennis Court 1
Ramnaresh Sarwin	Tennis Court 2
Tim Boothe	Tennis Court 1
Tim Boothe	Tennis Court 2
Tim Rownam	Tennis Court 1
Tim Rownam	Tennis Court 2
Timothy Baker	Tennis Court 1

member	facility
Timothy Baker	Tennis Court 2
Tracy Smith	Tennis Court 1
Tracy Smith	Tennis Court 2

SQL

```
select distinct mems.firstname || ' ' || mems.surname as member, facs.name as facili
    from
        cd.members mems
        inner join cd.bookings b
            on mems.memid = b.memid
        inner join cd.facilities facs
            on b.facid = facs.facid
    where
        facs.name like '%Tennis Court%'
order by member, facility;
```