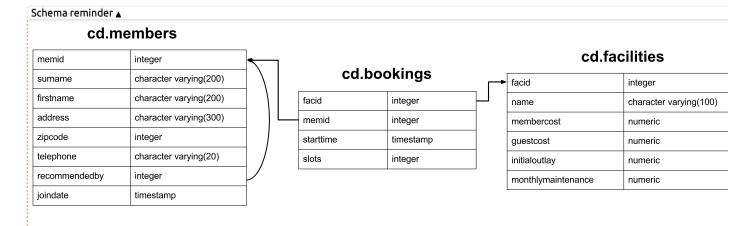**PostgreSQL Exercises**

Home / Joins / Tjsub

Produce a list of costly bookings, using a subquery

Question

The Produce a list of costly bookings exercise contained some messy logic: we had to calculate the booking cost in bot the WHERE clause and the CASE statement. Try to simplify this calculation using subqueries. For reference, the questio was:
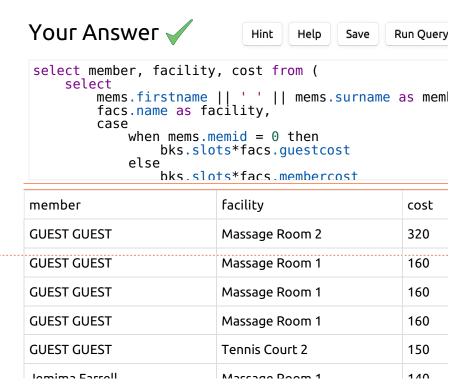
How can you produce a list of bookings on the day of 2012-09-14 which will cost the member (or guest) more than $30 Remember that guests have different costs to members (the listed costs are per half-hour 'slot'), and the guest user is always ID 0. Include in your output the name of the facility, the name of the member formatted as a single column, and the cost. Order by descending cost.

Schema reminder ▲

cd.members

memid	integer
surname	character varying(200)
firstname	character varying(200)
address	character varying(300)
zipcode	integer
telephone	character varying(20)
recommendedby	integer
joindate	timestamp

cd.bookings

facid	integer
memid	integer
starttime	timestamp
slots	integer

cd.facilities

facid	integer
name	character varying(100)
membercost	numeric
guestcost	numeric
initialoutlay	numeric
monthlymaintenance	numeric

Expected Results

member	facility
GUEST GUEST	Massage Room 2
GUEST GUEST	Massage Room 1
GUEST GUEST	Massage Room 1
GUEST GUEST	Massage Room 1
GUEST GUEST	Tennis Court 2
Jemima Farrell	Massage Room 1
GUEST GUEST	Tennis Court 1
GUEST GUEST	Tennis Court 2
GUEST GUEST	Tennis Court 1
Matthew Genting	Massage Room 1

Your Answer ✓

| Hint | Help | Save | Run Query |

```
select member, facility, cost from (
    select
        mems.firstname || ' ' || mems.surname as memk
        facs.name as facility,
        case
            when mems.memid = 0 then
                bks.slots*facs.guestcost
            else
                bks.slots*facs.membercost
```

member	facility	cost
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

Answers and Discussion [Hide]

```sql
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
                        cd.members mems
                        inner join cd.bookings bks
                                on mems.memid = bks.memid
                        inner join cd.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;
```

This answer provides a mild simplification to the previous iteration: in the no-subquery version, we had to calculate the member or guest's cost in both the WHERE clause and the CASE statement. In our new version, we produce an inline query that calculates the total booking cost for us, allowing the outer query to simply select the bookings it's looking for. For reference, you may also see subqueries in the FROM clause referred to as *inline views*.