**Springboard Data Science Career Track**

8.3 - SQL Case Study (Country Club) by Ashutosh Varshney

**Part 1.**

**Q1: Some of the facilities charge a fee to members, but some do not. Write a SQL query to produce a list of the names of the facilities that do.**

SELECT \* FROM Facilities WHERE membercost > 0

**Q2: How many facilities do not charge a fee to members?**

SELECT COUNT(\*) FROM Facilities WHERE membercost =0

**Q3: Write an SQL query to show a list of facilities that charge a fee to members, where the fee is less than 20% of the facility's monthly maintenance cost. Return the facid, facility name, member cost, and monthly maintenance of the facilities in question.**

SELECT facid, name, membercost, monthlymaintenance

FROM Facilities

WHERE membercost < (monthlymaintenance \* 0.20)

**Q4: Write an SQL query to retrieve the details of facilities with ID 1 and 5. Try writing the query without using the OR operator.**

SELECT \* FROM Facilities WHERE facid IN (1, 5)

**Q5: Produce a list of facilities, with each labelled as 'cheap' or 'expensive', depending on if their monthly maintenance cost is more than $100. Return the name and monthly maintenance of the facilities in question.**

SELECT name, monthlymaintenance,

CASE WHEN monthlymaintenance >100 THEN 'expensive'

ELSE 'cheap' END AS class

FROM `Facilities`

**Q6: You'd like to get the first and last name of the last member(s) who signed up. Try not to use the LIMIT clause for your solution.**

SELECT firstname, surname

FROM Members

WHERE joindate = (SELECT MAX(joindate) FROM Members)

**Q7: 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.**

SELECT DISTINCT (CONCAT(m.firstname, ' ', m.surname)) AS member\_name,

f.name AS facility

FROM Members m, Facilities f, Bookings b

WHERE b.facid = f.facid

AND b.memid = m.memid

AND f.name LIKE 'Tennis Court%'

ORDER BY member\_name

**Q8: 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's ID is always 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, and do not use any subqueries.**

[SELECT](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Fselect.html&token=a06355f6b510ffc0bd4e977d95e47855)  b.starttime,

[CONCAT](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Fstring-functions.html%23function_concat&token=a06355f6b510ffc0bd4e977d95e47855)(m.firstname, ' ‘, m.surname) AS member\_name,

f.name AS facility,  
[CASE](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Fcontrol-flow-functions.html%23operator_case&token=a06355f6b510ffc0bd4e977d95e47855) b.memid WHEN 0 THEN f.guestcost

ELSE f.membercost END AS cost

FROM  Members m, Facilities f, Bookings b

WHERE  b.memid [=](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Fcomparison-operators.html%23operator_equal&token=a06355f6b510ffc0bd4e977d95e47855) m.memid  
[AND](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Flogical-operators.html%23operator_and&token=a06355f6b510ffc0bd4e977d95e47855) b.facid [=](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Fcomparison-operators.html%23operator_equal&token=a06355f6b510ffc0bd4e977d95e47855) f.facid

[AND](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Flogical-operators.html%23operator_and&token=a06355f6b510ffc0bd4e977d95e47855) ([CASE](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Fcontrol-flow-functions.html%23operator_case&token=a06355f6b510ffc0bd4e977d95e47855) b.memid WHEN 0 THEN f.guestcost

ELSE f.membercost END) [>](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Fcomparison-operators.html%23operator_greater-than&token=a06355f6b510ffc0bd4e977d95e47855)30

[AND](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Flogical-operators.html%23operator_and&token=a06355f6b510ffc0bd4e977d95e47855) b.starttime [LIKE](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Fstring-comparison-functions.html%23operator_like&token=a06355f6b510ffc0bd4e977d95e47855) '2012-09-14%'

ORDER BY  cost DESC

**Q9: This time, produce the same result as in Q8, but using a subquery.**

[SELECT](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Fselect.html&token=a06355f6b510ffc0bd4e977d95e47855)  b.starttime,

([SELECT](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Fselect.html&token=a06355f6b510ffc0bd4e977d95e47855) [CONCAT](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Fstring-functions.html%23function_concat&token=a06355f6b510ffc0bd4e977d95e47855)(m.firstname, ' ', m.surname)

FROM Members m WHERE m.memid [=](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Fcomparison-operators.html%23operator_equal&token=a06355f6b510ffc0bd4e977d95e47855) b.memid) AS member\_name,

f.name AS facility,

[CASE](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Fcontrol-flow-functions.html%23operator_case&token=a06355f6b510ffc0bd4e977d95e47855) b.memid WHEN 0 THEN f.guestcost ELSE f.membercost END AS cost

FROM  Bookings b, Facilities f

WHERE  b.facid [=](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Fcomparison-operators.html%23operator_equal&token=a06355f6b510ffc0bd4e977d95e47855) f.facid

[AND](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Flogical-operators.html%23operator_and&token=a06355f6b510ffc0bd4e977d95e47855) ([CASE](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Fcontrol-flow-functions.html%23operator_case&token=a06355f6b510ffc0bd4e977d95e47855) b.memid WHEN 0 THEN f.guestcost

ELSE f.membercost END) [>](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Fcomparison-operators.html%23operator_greater-than&token=a06355f6b510ffc0bd4e977d95e47855)30  
[AND](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Flogical-operators.html%23operator_and&token=a06355f6b510ffc0bd4e977d95e47855) b.starttime [LIKE](https://sql.springboard.com/phpmyadmin/url.php?url=http%3A%2F%2Fdev.mysql.com%2Fdoc%2Frefman%2F5.5%2Fen%2Fstring-comparison-functions.html%23operator_like&token=a06355f6b510ffc0bd4e977d95e47855) '2012-09-14%'

ORDER BY  cost DESC