/* Welcome to the SQL mini project. For this project, you will use Springboard' online SQL platform, which you can log into through the following link:

https://sql.springboard.com/
Username: student
Password: learn_sql@springboard

The data you need is in the "country_club" database. This database contains 3 tables:
    i) the "Bookings" table,
    ii) the "Facilities" table, and
    iii) the "Members" table.

Note that, if you need to, you can also download these tables locally.

In the mini project, you'll be asked a series of questions. You can solve them using the platform, but for the final deliverable, paste the code for each solution into this script, and upload it to your GitHub.

Before starting with the questions, feel free to take your time, exploring the data, and getting acquainted with the 3 tables. */

/* Q1: Some of the facilities charge a fee to members, but some do not. Please list the names of the facilities that do. */

Answer: Massage Room 1, Massage Room 2, Tennis Court 1, Tennis Court 2, Squash Court

```
SELECT *
FROM country_club.Facilities
WHERE membercost >0
LIMIT 0 , 30
```

Profiling [Inline] [Edit] [Expl

Restore column order | Show : Start row: 0 Number of rows: 30 Headers every 100 rows

ort by key: None

Options

	name	membercost	guestcost	facid	initialoutlay	monthlymaintenance
Edit Copy Delete	Massage Room 1	9.9	80.0	4	4000	3000
Edit Copy Delete	Massage Room 2	9.9	80.0	5	4000	3000
Edit Copy Delete	Tennis Court 1	5.0	25.0	0	10000	200
Edit Copy Delete	Tennis Court 2	5.0	25.0	1	8000	200
Edit Copy Delete	Squash Court	3.5	17.5	6	5000	80

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

Answer: Badminton Court, Table Tennis, Snooker Table, Pool Table

```
SELECT *
FROM `Facilities`
WHERE membercost = 0.0
LIMIT 0 , 30
```

Profiling [Inline] [Edit] [Explai

Restore column order | Show : Start row: 0 Number of rows: 30 Headers every 100 rows

ort by key: None

Options

	name	membercost	guestcost	facid	initialoutlay	monthlymaintenance
Edit Copy Delete	Badminton Court	0.0	15.5	2	4000	50
Edit Copy Delete	Table Tennis	0.0	5.0	3	320	10
Edit Copy Delete	Snooker Table	0.0	5.0	7	450	15
Edit Copy Delete	Pool Table	0.0	5.0	8	400	15

/* Q3: How can you produce 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.

Answer: All 9 facilities

```
SELECT Facilities.facid, Facilities.name, Facilities.membercost, Facilities.Month
FROM `Facilities`
WHERE Facilities.membercost <= ( Facilities.Monthlymaintenance * 0.20 )
LIMIT 0 , 30
```

Show : Start row: 0 Number of rows: 30 Headers every 100 rows

ort by key: None

Options

	facid	name	membercost	Monthlymaintenance
Edit Copy Delete	0	Tennis Court 1	5.0	200
Edit Copy Delete	1	Tennis Court 2	5.0	200
Edit Copy Delete	2	Badminton Court	0.0	50
Edit Copy Delete	3	Table Tennis	0.0	10
Edit Copy Delete	4	Massage Room 1	9.9	3000
Edit Copy Delete	5	Massage Room 2	9.9	3000
Edit Copy Delete	6	Squash Court	3.5	80
Edit Copy Delete	7	Snooker Table	0.0	15
Edit Copy Delete	8	Pool Table	0.0	15

*/

/* Q4: How can you retrieve the details of facilities with ID 1 and 5? Write the query without using the OR operator. */

```
SELECT *
FROM `Facilities`
WHERE Facilities.facid
IN ( 1, 5 )
LIMIT 0 , 30
```

Profiling [Inline] [Edit] [Exp

Restore column order | Show : Start row: 0 Number of rows: 30 Headers every 100 rows

Sort by key: None

Options

	name	membercost	guestcost	facid	initialoutlay	monthlymaintenance
Edit Copy Delete	Massage Room 2	9.9	80.0	5	4000	3000
Edit Copy Delete	Tennis Court 2	5.0	25.0	1	8000	200

/* Q5: How can you 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 Facilities.Name, Facilities.Monthlymaintenance,
CASE WHEN Facilities.Monthlymaintenance <=100
THEN 'cheap'
WHEN Facilities.Monthlymaintenance >100
THEN 'expensive'
END AS expense_type
FROM `Facilities`
LIMIT 0 , 30
```

Show : Start row: 0 Number of rows: 30 Headers

Sort by key: None

+ Options

Name	Monthlymaintenance	expense_type
Tennis Court 1	200	expensive
Tennis Court 2	200	expensive
Badminton Court	50	cheap
Table Tennis	10	cheap
Massage Room 1	3000	expensive
Massage Room 2	3000	expensive
Squash Court	80	cheap
Snooker Table	15	cheap
Pool Table	15	cheap

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

```
SELECT Members.firstname, Members.surname, Members.joindate
FROM `Members`
WHERE Members.firstname != 'GUEST'
ORDER BY Members.joindate DESC
LIMIT 1
```

+ Options

firstname	surname	joindate
Darren	Smith	2012-09-26 18:08:45

/* Q7: 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. */

```
SELECT DISTINCT Facilities.name, CONCAT(Members.firstname, ' ', Members.surname)
FROM Members

LEFT JOIN Bookings ON Members.memid = Bookings.memid
JOIN Facilities ON Bookings.facid = Facilities.facid

WHERE Facilities.facid = 0
OR Facilities.facid = 1

ORDER BY Members.firstname
```

Couple of rows of output:

name	CONCAT(Members.firstname, ' ', Members.surname)
Tennis Court 2	Anne Baker
Tennis Court 1	Anne Baker
Tennis Court 2	Burton Tracy
Tennis Court 1	Burton Tracy

/* Q8: 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'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 Facilities.name, CONCAT(Members.firstname, ' ', Members.surname)
AS "Member Name",

CASE WHEN Members.memid = 0 THEN (Bookings.slots * Facilities.guestcost)
     ELSE (Bookings.slots * Facilities.membercost) END AS session_cost

FROM Bookings
LEFT JOIN Members ON Bookings.memid = Members.memid
JOIN Facilities ON Bookings.facid = Facilities.facid

WHERE Bookings.starttime LIKE '2012-09-14%' HAVING session_cost > 30.0
ORDER BY session_cost DESC
```

name	Member Name	session_cost
Massage Room 2	GUEST GUEST	320.0
Massage Room 1	GUEST GUEST	160.0
Massage Room 1	GUEST GUEST	160.0
Massage Room 1	GUEST GUEST	160.0
Tennis Court 2	GUEST GUEST	150.0
Tennis Court 1	GUEST GUEST	75.0
Tennis Court 1	GUEST GUEST	75.0
Tennis Court 2	GUEST GUEST	75.0
Squash Court	GUEST GUEST	70.0
Massage Room 1	Jemima Farrell	39.6
Squash Court	GUEST GUEST	35.0
Squash Court	GUEST GUEST	35.0

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

```
SELECT
       (SELECT Facilities.name
        FROM Facilities
        WHERE Facilities.facid = Bookings.facid) AS facility_name,

       (SELECT CONCAT(Members.firstname, ' ', Members.surname)
        FROM Members
        WHERE Members.memid = Bookings.memid) AS member_name,

       CASE WHEN Bookings.memid = 0 THEN
           Bookings.slots *((SELECT Facilities.guestcost
           FROM Facilities
           WHERE Facilities.facid = Bookings.facid))
       ELSE
           Bookings.slots *((SELECT Facilities.membercost
           FROM Facilities
           WHERE Facilities.facid = Bookings.facid)) END AS session_cost

FROM Bookings
WHERE Bookings.starttime LIKE '2012-09-14%' HAVING session_cost > 30
ORDER BY session_cost DESC
```

facility_name	member_name	session_cost
Massage Room 2	GUEST GUEST	320.0
Massage Room 1	GUEST GUEST	160.0
Massage Room 1	GUEST GUEST	160.0
Massage Room 1	GUEST GUEST	160.0
Tennis Court 2	GUEST GUEST	150.0
Tennis Court 1	GUEST GUEST	75.0
Tennis Court 1	GUEST GUEST	75.0
Tennis Court 2	GUEST GUEST	75.0
Squash Court	GUEST GUEST	70.0
Massage Room 1	Jemima Farrell	39.6
Squash Court	GUEST GUEST	35.0
Squash Court	GUEST GUEST	35.0

/* Q10: Produce a list of facilities with a total revenue less than 1000.
The output of facility name and total revenue, sorted by revenue. Remember that there's a different cost for guests and members! */

```
SELECT Facilities.name,

CASE WHEN Bookings.memid = 0 THEN SUM(Bookings.slots *
Facilities.guestcost)
     ELSE SUM(Bookings.slots * Facilities.membercost) END AS
session_revenue

FROM Bookings

LEFT JOIN Facilities
ON Bookings.facid = Facilities.facid

GROUP BY Bookings.facid
ORDER BY session_revenue DESC
```

+ Options

name	session_revenue
Tennis Court 2	31950.0
Squash Court	19320.0
Massage Room 2	18240.0
Massage Room 1	13899.6
Tennis Court 1	6600.0
Pool Table	0.0
Badminton Court	0.0
Table Tennis	0.0
Snooker Table	0.0