/* 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.

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

			name	facid	membercost	guestcost	initialoutlay	monthlymaintenance
Edit	Copy	Delete	Squash Court	6	3.5	17.5	5000	80
Edit	Copy	Delete	Tennis Court 1	0	5.0	25.0	10000	200

Edit	Copy	Delete	Tennis Court 2	1	5.0	25.0	8000	200
Edit	Copy	Delete	Massage Room 1	4	9.9	80.0	4000	3000
Edit	Copy	Delete	Massage Room 2	5	9.9	80.0	4000	3000

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

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

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

```
SELECT `facid` , `name` , `membercost` ,
`monthlymaintenance`
FROM `Facilities`
WHERE `membercost` >0
AND `membercost` < ( `monthlymaintenance` /50 )
LIMIT 0 , 30
```

			facid	name	membercost	monthlymaintenance
Edit	Copy	Delete	4	Massage Room 1	9.9	3000
Edit	Copy	Delete	5	Massage Room 2	9.9	3000

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 `facid`
IN ( 1, 5 )
LIMIT 0 , 30
```

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

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 `name` ,
CASE WHEN `monthlymaintenance` >100
THEN 'expensive'
ELSE 'cheap'
END
FROM `Facilities`
LIMIT 0 , 30
```

name	CASE WHEN `monthlymaintenance` >100 THEN 'expensive' ELSE 'cheap' END
Tennis Court 1	expensive
Tennis Court 2	expensive
Badminton Court	cheap
Table Tennis	cheap
Massage Room 1	expensive
Massage Room 2	expensive
Squash Court	cheap
Snooker Table	cheap
Pool Table	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 `firstname` , `surname` , `joindate`
FROM `Members`
```

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

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 facility.name AS facility, CONCAT( member.firstname,
' ', member.surname ) AS member
FROM country_club.Members member
INNER JOIN country_club.Bookings book ON member.memid
= book.memid
INNER JOIN country_club.Facilities facility ON book.facid =
facility.facid
WHERE facility.facid
IN ( 0, 1 )
GROUP BY member
```

facility	member
Tennis Court 1	Anne Baker
Tennis Court 2	Burton Tracy
Tennis Court 1	Charles Owen

Tennis Court 2	Darren Smith
Tennis Court 1	David Farrell
Tennis Court 2	David Jones
Tennis Court 1	David Pinker
Tennis Court 1	Douglas Jones
Tennis Court 1	Erica Crumpet
Tennis Court 2	Florence Bader
Tennis Court 1	Gerald Butters
Tennis Court 2	GUEST GUEST
Tennis Court 2	Henrietta Rumney
Tennis Court 1	Jack Smith
Tennis Court 1	Janice Joplette
Tennis Court 2	Jemima Farrell
Tennis Court 1	Joan Coplin
Tennis Court 1	John Hunt
Tennis Court 1	Matthew Genting

Tennis Court 2	Millicent Purview
Tennis Court 2	Nancy Dare
Tennis Court 2	Ponder Stibbons
Tennis Court 2	Ramnaresh Sarwin
Tennis Court 2	Tim Boothe
Tennis Court 2	Tim Rownam
Tennis Court 2	Timothy Baker
Tennis Court 1	Tracy Smith

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 facility.name, surname AS member, facility.guestcost
* book.slots AS cost
FROM country_club.Bookings book
JOIN country_club.Facilities facility ON book.facid =
facility.facid
JOIN country_club.Members member ON member.memid =
book.memid
WHERE LEFT( starttime, 10 ) = '2012-09-14'
AND member.memid =0
UNION
SELECT facility.name, CONCAT( member.firstname, ' ',
```

```
member.surname ) AS member, SUM( facility.membercost *
book.slots ) AS cost
FROM country_club.Bookings book
JOIN country_club.Facilities facility ON book.facid =
facility.facid
JOIN country_club.Members member ON member.memid =
book.memid
WHERE LEFT( starttime, 10 ) = '2012-09-14'
AND member.memid !=0
GROUP BY member.memid
HAVING cost >30
ORDER BY cost DESC
LIMIT 0 , 30
```

name	member	cost
Massage Room 2	GUEST	320.0
Massage Room 1	GUEST	160.0
Tennis Court 2	GUEST	150.0
Tennis Court 1	GUEST	75.0
Tennis Court 2	GUEST	75.0
Squash Court	GUEST	70.0
Massage Room 1	Jemima Farrell	59.4
Squash Court	GUEST	35.0
Tennis Court 1	Burton Tracy	34.8

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

```
SELECT guest.name, surname AS member, guest.cost
FROM country_club.Members member
JOIN (
```

```
SELECT book.memid, facility.name, slots * guestcost AS cost
FROM country_club.Bookings book
JOIN country_club.Facilities facility ON book.facid =
facility.facid
WHERE LEFT( starttime, 10 ) = '2012-09-14'
AND memid =0
)guest ON member.memid = guest.memid
WHERE cost >30
UNION
SELECT mem.name, CONCAT( member.firstname, ' ',
member.surname ) AS member, mem.cost
FROM country_club.Members member
JOIN (

SELECT book.memid, facility.name, SUM( facility.membercost
* book.slots ) AS cost
FROM country_club.Bookings book
JOIN country_club.Facilities facility ON book.facid =
facility.facid
JOIN country_club.Members member ON member.memid =
book.memid
WHERE LEFT( starttime, 10 ) = '2012-09-14'
AND member.memid !=0
GROUP BY member.memid
)mem ON member.memid = mem.memid
WHERE cost >30
ORDER BY cost DESC
LIMIT 0 , 30
```

name	member	cost
Massage Room 2	GUEST	320.0
Massage Room 1	GUEST	160.0

Tennis Court 2	GUEST	150.0
Tennis Court 2	GUEST	75.0
Tennis Court 1	GUEST	75.0
Squash Court	GUEST	70.0
Massage Room 1	Jemima Farrell	59.4
Squash Court	GUEST	35.0
Tennis Court 1	Burton Tracy	34.8

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 facility.name, SUM(
CASE WHEN book.memid =0
THEN facility.guestcost * book.slots
ELSE facility.membercost * book.slots
END ) AS revenue
FROM country_club.Facilities facility
JOIN country_club.Bookings book ON facility.facid =
book.facid
GROUP BY facility.name
HAVING revenue <1000
ORDER BY revenue DESC
LIMIT 0 , 30
```

name	revenue
Pool Table	270.0
Snooker Table	240.0
Table Tennis	180.0