/\* 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. \*/**

**SQL query:** SELECT \*

FROM Facilities

WHERE membercost!= 0

ORDER BY `Facilities`.`membercost` ASC

LIMIT 0,30;

**Rows:** 5

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

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

**SQL query:** SELECT \*

FROM Facilities

WHERE membercost = 0

ORDER BY `Facilities`.`membercost` ASC

LIMIT 0,30;

**Rows:** 4

| **facid** | **name** | **membercost** | **guestcost** | **initialoutlay** | **monthlymaintenance** |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2 | Badminton Court | 0.0 | 15.5 | 4000 | 50 |  |
| 3 | Table Tennis | 0.0 | 5.0 | 320 | 10 |  |
| 7 | Snooker Table | 0.0 | 5.0 | 450 | 15 |  |
| 8 | Pool Table | 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. \*/**

**SQL query:** SELECT facid, name AS facility, membercost, monthlymaintenance

FROM Facilities

WHERE membercost < (0.2 \* monthlymaintenance)

LIMIT 0, 30;  
**Rows:** 9

| **facid** | **facility** | **membercost** | **monthlymaintenance** |  |
| --- | --- | --- | --- | --- |
| 0 | Tennis Court 1 | 5.0 | 200 |  |
| 1 | Tennis Court 2 | 5.0 | 200 |  |
| 2 | Badminton Court | 0.0 | 50 |  |
| 3 | Table Tennis | 0.0 | 10 |  |
| 4 | Massage Room 1 | 9.9 | 3000 |  |
| 5 | Massage Room 2 | 9.9 | 3000 |  |
| 6 | Squash Court | 3.5 | 80 |  |
| 7 | Snooker Table | 0.0 | 15 |  |
| 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. \*/**

**SQL query:** SELECT \*

FROM Facilities

WHERE!(facid!=1 AND facid !=5)

ORDER BY `Facilities`.`membercost` ASC

LIMIT 0, 30;  
**Rows:** 2

| **facid** | **name** | **membercost** | **guestcost** | **initialoutlay** | **monthlymaintenance** |  |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | Tennis Court 2 | 5.0 | 25.0 | 8000 | 200 |  |
| 5 | Massage Room 2 | 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. \*/**

**SQL query:** SELECT name AS facility, monthlymaintenance,

CASE WHEN monthlymaintenance > 100 THEN 'expensive’

ELSE 'cheap' END AS label

FROM Facilities

LIMIT 0, 30;  
**Rows:** 9

| facility | **monthlymaintenance** | **label** |  |
| --- | --- | --- | --- |
| 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. \*/

**SQL query:** SELECT firstname, surname, joindate

FROM Members

ORDER BY joindate DESC;

**Rows:** 31

| **firstname** | **surname** | **joindate** |  |
| --- | --- | --- | --- |
| Darren | Smith | 2012-09-26 18:08:45 |  |
| Erica | Crumpet | 2012-09-22 08:36:38 |  |
| John | Hunt | 2012-09-19 11:32:45 |  |
| Hyacinth | Tupperware | 2012-09-18 19:32:05 |  |
| Millicent | Purview | 2012-09-18 19:04:01 |  |
| Henry | Worthington-Smyth | 2012-09-17 12:27:15 |  |
| David | Farrell | 2012-09-15 08:22:05 |  |
| Henrietta | Rumney | 2012-09-05 08:42:35 |  |
| Douglas | Jones | 2012-09-02 18:43:05 |  |
| Ramnaresh | Sarwin | 2012-09-01 08:44:42 |  |
| Joan | Coplin | 2012-08-29 08:32:41 |  |
| Anna | Mackenzie | 2012-08-26 09:32:05 |  |
| Matthew | Genting | 2012-08-19 14:55:55 |  |
| David | Pinker | 2012-08-16 11:32:47 |  |
| Timothy | Baker | 2012-08-15 10:34:25 |  |
| Florence | Bader | 2012-08-10 17:52:03 |  |
| Jack | Smith | 2012-08-10 16:22:05 |  |
| Jemima | Farrell | 2012-08-10 14:28:01 |  |
| Anne | Baker | 2012-08-10 14:23:22 |  |
| David | Jones | 2012-08-06 16:32:55 |  |
| Charles | Owen | 2012-08-03 19:42:37 |  |
| Ponder | Stibbons | 2012-07-25 17:09:05 |  |
| Tim | Boothe | 2012-07-25 16:02:35 |  |
| Nancy | Dare | 2012-07-25 08:59:12 |  |
| Burton | Tracy | 2012-07-15 08:52:55 |  |
| Gerald | Butters | 2012-07-09 10:44:09 |  |
| Janice | Joplette | 2012-07-03 10:25:05 |  |
| Tim | Rownam | 2012-07-03 09:32:15 |  |
| Tracy | Smith | 2012-07-02 12:08:23 |  |
| Darren | Smith | 2012-07-02 12:02:05 |  |
| GUEST | GUEST | 2012-07-01 00:00:00 |  |

/\* 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. \*/

**SQL query:** SELECT

DISTINCT CASE WHEN mem.memid = 0 THEN mem.firstname

ELSE CONCAT(mem.firstname," ", mem.surname) END AS member\_name,

fac.name AS facility

FROM country\_club.Facilities fac

INNER JOIN country\_club.Bookings book

ON fac.facid = book.facid

INNER JOIN country\_club.Members mem

ON mem.memid = book.memid

WHERE fac.name = 'tennis court 1' OR fac.name = 'tennis court 2'

ORDER BY 1, 2;

**Rows:** 46

| member\_name | 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 |  |
| Gerald Butters | Tennis Court 1 |  |
| Gerald Butters | Tennis Court 2 |  |
| GUEST | Tennis Court 1 |  |
| GUEST | 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 |  |
| Timothy Baker | Tennis Court 1 |  |
| Timothy Baker | Tennis Court 2 |  |
| Tim Rownam | Tennis Court 1 |  |
| Tim Rownam | Tennis Court 2 |  |
| Tracy Smith | Tennis Court 1 |  |
| Tracy Smith | Tennis Court 2 |  |

/\* 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. \*/

**SQL query:** SELECT fac.name AS facility,

CASE WHEN mem.memid = 0 THEN mem.firstname

ELSE CONCAT(mem.firstname," ", mem.surname) END AS member\_name,

CASE WHEN book.memid = 0 THEN book.slots \* fac.guestcost

ELSE book.slots \* fac.membercost END AS cost

FROM Facilities fac

JOIN Bookings book

ON fac.facid = book.facid

JOIN Members mem

ON mem.memid = book.memid

WHERE DAY(book.starttime) = 14 AND MONTH(book.starttime) = 09 AND YEAR(book.starttime) = 2012 AND

(CASE WHEN mem.memid = 0 THEN book.slots \* fac.guestcost ELSE book.slots \* fac.membercost END) > 30

ORDER BY 3 DESC

**Rows:** 12

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| **facility** | **member\_name** | **cost** |  |
| --- | --- | --- | --- |
| Massage Room 2 | GUEST | 320.0 |  |
| Massage Room 1 | GUEST | 160.0 |  |
| Massage Room 1 | GUEST | 160.0 |  |
| Massage Room 1 | GUEST | 160.0 |  |
| Tennis Court 2 | GUEST | 150.0 |  |
| Tennis Court 1 | GUEST | 75.0 |  |
| Tennis Court 1 | GUEST | 75.0 |  |
| Tennis Court 2 | GUEST | 75.0 |  |
| Squash Court | GUEST | 70.0 |  |
| Massage Room 1 | Jemima Farrell | 39.6 |  |
| Squash Court | GUEST | 35.0 |  |
| Squash Court | GUEST | 35.0 |  |

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

SELECT tot.\*

FROM (

SELECT fac.name AS facility,

CASE WHEN mem.memid = 0 THEN mem.firstname

ELSE CONCAT(mem.firstname," ", mem.surname) END AS member\_name,

CASE WHEN book.memid = 0 THEN book.slots \* fac.guestcost

ELSE book.slots \* fac.membercost END AS cost

FROM Facilities fac

JOIN Bookings book

ON fac.facid = book.facid

JOIN Members mem

ON mem.memid = book.memid

WHERE DAY(book.starttime) = 14 AND MONTH(book.starttime) = 09

AND YEAR(book.starttime) = 2012

)tot

WHERE tot.cost > 30

ORDER BY 3 DESC

/\* Q10: Produce a list of facilities with a total revenue less than 1000.

The output with facility name and total revenue, sorted by revenue. Remember that there's a different cost for guests and members! \*/

**SQL query:** SELECT fac.name AS facility\_name,

SUM(CASE WHEN book.memid = 0 THEN fac.guestcost \* book.slots

ELSE fac.membercost \* book.slots END) AS total\_revenue

FROM Facilities fac

LEFT JOIN Bookings book

ON book.facid = fac.facid

GROUP BY fac.name

ORDER BY 2 DESC

LIMIT 0, 30;

**Rows:** 9

| **facility\_name** | **total\_revenue** |  |
| --- | --- | --- |
| Massage Room 1 | 50351.6 |  |
| Massage Room 2 | 14454.6 |  |
| Tennis Court 2 | 14310.0 |  |
| Tennis Court 1 | 13860.0 |  |
| Squash Court | 13468.0 |  |
| Badminton Court | 1906.5 |  |
| Pool Table | 270.0 |  |
| Snooker Table | 240.0 |  |
| Table Tennis | 180.0 |  |