**SQL Assignment**

/\* 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

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

SELECT \*

FROM `Facilities`

WHERE `membercost` =0

OR `membercost` IS NULL

/\* 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` < ( (

`monthlymaintenance` /100

) \*20 )

/\* 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)

/\* 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` , `monthlymaintenance` ,

CASE WHEN `monthlymaintenance` >100

THEN 'Expensive'

ELSE 'Cheap' END AS Cheap\_Expensive

FROM `Facilities`

/\* 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)

/\* 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 CONCAT(M.firstname," ", M.surname) as Member,F.name FROM Bookings B,Facilities F,Members M where

M. memid = B. memid AND

F. facid = B.facid AND

F. name like 'Tennis Court%'

/\* 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 M.firstname "Member\_Name",F.name "Facility\_Name", F.guestcost \* B.slots "Member\_cost" FROM Facilities F,Bookings B, Members M WHERE B.facid = F.facid AND

M.memid = B.memid AND

M.memid = 0 AND

B.starttime > '2012-09-14' AND

B.starttime < '2012-09-15' AND

(F.guestcost \* B.slots ) > 30

UNION

SELECT M.firstname "Member\_Name",F.name "Facility\_Name", F.membercost \* B.slots "Member\_cost" FROM Facilities F,Bookings B, Members M WHERE B.facid = F.facid AND

M.memid = B.memid AND

M.memid <> 0 AND

B.starttime > '2012-09-14' AND

B.starttime < '2012-09-15' AND

(F.membercost \* B.slots ) > 30

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

/\* 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 AS name, sum(

CASE WHEN Bookings.memid =0

THEN Facilities.guestcost \* Bookings.slots

ELSE Facilities.membercost \* Bookings.slots

END ) AS revenue

FROM Facilities

JOIN Bookings ON Facilities.facid = Bookings.facid

GROUP BY 1

having revenue <1000