01. Exercises

https://prod-files-secure.s3.us-west-2.amazonaws.com/a602fa3d-5d89-44de-be78-87f9d54a111b/89ed6738-82c3-41b9-89c9-b5ef3b00cdbf/vaja_1_-_EXERCISES_1_EN.pdf

1. Retrieve all the information from the facilities table

```
SELECT * FROM Facilities;
```

2. Print out a list of all of the facilities and their cost to members.

```
SELECT name, membercost FROM Facilities;
```

3. Produce a list of facilities that charge a fee to members.

```
SELECT name FROM Facilities where membercost>0;
```

4. Produce a list of facilities that charge a fee to members, and that fee is less than 1/50th of the monthly maintenance cost.

   Return the facid, facility name, member cost, and monthly maintenance of the facilities.

```
SELECT * FROM Facilities where membercost>0 AND membercost<monthlymaintenance/50;
```

5. Produce a list of all facilities with the word 'Tennis' in their name.

```
SELECT * FROM Facilities WHERE name LIKE '%Tennis%';
```

6. Retrieve the details of facilities with ID 1 and 5? Do no use the OR operator

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

7. Produce a list of members who joined after the start of September 2012. Return the mimed, surname, firstname, and joindate of the members.

```
SELECT * FROM Members WHERE joindate>'01-09-2012';
```

8. Produce an ordered list of the first 10 surnames in the members table? The list must not contain duplicates.

```
SELECT DISTINCT surname
FROM Members
ORDER BY surname
LIMIT 10;
```

9. Return a combined list of all surnames and all facility names.

```
SELECT surname as "combined"
FROM members
union
SELECT name
FROM facilities;
```

10. Retrieve the signup date of your last member

```
SELECT MAX(joindate) as "latest"
FROM members;
```

11. Figure out how many facilities exist - (produce a total count)

```
SELECT count(*)
FROM facilities;
```

12. Produce a count of the number of facilities that have a cost to guests of 10 or more.

```
SELECT count(facid)
FROM facilities
WHERE guestcost >= 10;
```

13. Produce a count of the number of recommendation each member has made. Order by number of recommendations.

```
SELECT recommendedby as id, count(*)
FROM members
WHERE recommendedby IS NOT NULL
GROUP BY recommendedby
ORDER BY recommendedby;
```

EXPLANATION: we take the recommendedby, and iterate through the whole relation. Count the recommendedby, and group them. Means, all recommendedby with the same value are grouped as one, then iterate again for the next row and etc. will the end.

14. Produce a list of the total number of slots booked per faculty. For now, just produce an output table consisting of faculty id and slots, sorted by faculty id.

```
SELECT facid, sum(slots) as "Tot Slots"
FROM bookings
GROUP BY facid
ORDER BY facid;
```

15. Produce a List of total number of slots booked per facility in the month of September 2012. Produce an output table consisting of facility id and slots, sorted by the number of slots.

```
SELECT facid, sum(slots) as "Tot Slots"
FROM bookings
WHERE starttime >= '2012-09-01' AND starttime < '2012-09-30'
GROUP BY facid
ORDER BY sum(slots);
```

16. Produce a list of the total number of slots booked per facility per month in the year of 2012. Produce an output table consisting of facility id and slots, sorted by

the id and month.

Hint: Extract month from the start time using ‘extract()’

```
SELECT facid, EXTRACT(month FROM starttime) as month, sum(slots) as "Tot Slots"
FROM bookings
WHERE starttime >= '2012-01-01' AND starttime < '2013-01-01'
GROUP BY facid, month
ORDER BY facid, month;
```

17. Print out the total number of members who have made at least one booking.

```
SELECT count(DISTINCT memid)
FROM bookings;
```

18. Produce a list of facilities with more than 1000 slots booked. Produce an output table consisting of facility id and slots, sorted by facility id.

```
SELECT facid, sum(slots) as "Tot Slots"
FROM bookings
GROUP BY facid
HAVING sum(slots) > 1000
ORDER BY facid;
```

19. Output the facility id that has the highest number of slots booked.

```
SELECT facid, sum(slots) as "Tot Slots"
FROM bookings
GROUP BY facid
ORDER BY sum(slots) DESC
LIMIT 1;
```