User and database creation

Go to postgreSQL: http://www.student.famnit.upr.si/phppgadmin/

Login as:

> user: OPBvaje
> pass: OPBvaje

Click on the server "PostgreSQL" → on the top right click on the "SQL"

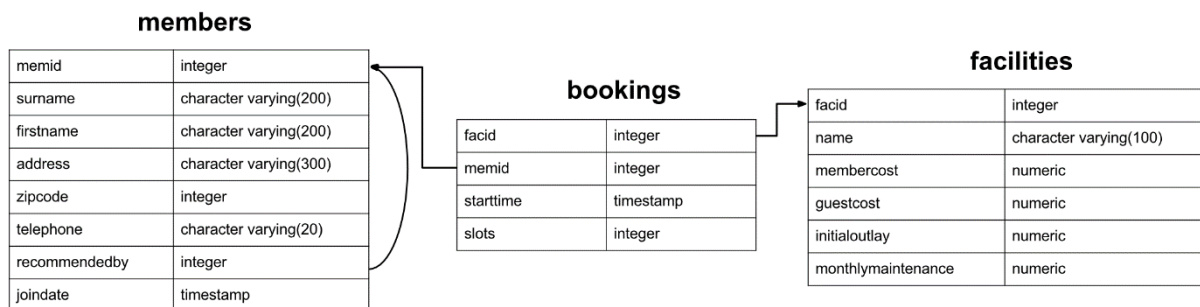Create an username with a password

> Execute each of these two lines separately.
>
> CREATE USER "user_name" WITH PASSWORD 'set_password' CREATEDB SUPERUSER;
> CREATE DATABASE "name_database" WITH OWNER "user_name" TEMPLATE opb_19_20;

Logout and login with a new created username.

Exercises:

The following scheme is given.

members

memid	integer
surname	character varying(200)
firstname	character varying(200)
address	character varying(300)
zipcode	integer
telephone	character varying(20)
recommendedby	integer
joindate	timestamp

bookings

facid	integer
memid	integer
starttime	timestamp
slots	integer

facilities

facid	integer
name	character varying(100)
membercost	numeric
guestcost	numeric
initialoutlay	numeric
monthlymaintenance	numeric

1. **Retrieve all the information from the facilities table**

```
SELECT *
From Facilities;
```

facid	name	membercost	guestcost	initialoutlay	monthlymaintenance
0	Tennis Court 1	5	25	10000	200
1	Tennis Court 2	5	25	8000	200
2	Badminton Court	0	15.5	4000	50
3	Table Tennis	0	5	320	10
4	Massage Room 1	35	80	4000	3000
5	Massage Room 2	35	80	4000	3000
6	Squash Court	3.5	17.5	5000	80
7	Snooker Table	0	5	450	15
8	Pool Table	0	5	400	15

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

```
SELECT names, membercost
From Facilities;
```

name	membercost
Tennis Court 1	5
Tennis Court 2	5
Badminton Court	0
Table Tennis	0
Massage Room 1	35
Massage Room 2	35
Squash Court	3.5
Snooker Table	0
Pool Table	0

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

```
SELCET names
FROM facilities
WHERE membercost > 0;
```

name
Tennis Court 1
Tennis Court 2
Massage Room 1
Massage Room 2
Squash Court

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.

facid	name	membercost	monthlymaintenance
4	Massage Room 1	35	3000
5	Massage Room 2	35	3000

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

name
Tennis Court 1
Tennis Court 2
Table Tennis

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

facid	name	membercost	guestcost	initialoutlay	monthlymaintenance
1	Tennis Court 2	5	25	8000	200
5	Massage Room 2	35	80	4000	3000

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

memid	surname	firstname	joindate
24	Sarwin	Ramnaresh	2012-09-01 08:44:42
26	Jones	Douglas	2012-09-02 18:43:05
27	Rumney	Henrietta	2012-09-05 08:42:35
28	Farrell	David	2012-09-15 08:22:05
29	Worthington-Smyth	Henry	2012-09-17 12:27:15
30	Purview	Millicent	2012-09-18 19:04:01
33	Tupperware	Hyacinth	2012-09-18 19:32:05
35	Hunt	John	2012-09-19 11:32:45
36	Crumpet	Erica	2012-09-22 08:36:38
37	Smith	Darren	2012-09-26 18:08:45

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

surname
Bader
Baker
Boothe
Butters
Coplin
Crumpet
Dare
Farrell
Genting
GUEST

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

combined
Tennis Court 2
Worthington-Smyth
Badminton Court
Pinker
Dare
Bader
Mackenzie
Crumpet
Massage Room 1
Squash Court
Tracy
Hunt
Tupperware
Smith
Butters
Rownam
Baker
Genting
Purview
Coplin
Massage Room 2
Joplette
Stibbons
Rumney
Pool Table
Sarwin
Boothe
Farrell
Tennis Court 1
Snooker Table
Owen
Table Tennis
GUEST
Jones

10. **Retrieve the signup date of your last member.**

latest
2012-09-26 18:08:45

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

count
9

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

count
6

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

id	count
1	5
2	3
3	1
4	2
5	1
6	1
9	2
11	1
13	2
15	1
16	1
20	1
30	1

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

facid	Tot Slots
0	1320
1	1278
2	1209
3	830
4	1404
5	228
6	1104
7	908
8	911

15. **Produce a list of the 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.**

facid	Tot Slots
5	122
3	422
7	426
8	471
6	540
2	570
1	588
0	591
4	648

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()'

facid	month	Tot Slots
0	7	270
0	8	459
0	9	591
1	7	207
1	8	483
1	9	588
2	7	180
2	8	459
2	9	570
3	7	104
3	8	304
3	9	422
4	7	264
4	8	492
4	9	648
5	7	24
5	8	82
5	9	122
6	7	164
6	8	400
6	9	540
7	7	156
7	8	326
7	9	426
8	7	117
8	8	322
8	9	471

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

	count
	30

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

facid	Tot Slots
0	1320
1	1278
2	1209
4	1404
6	1104

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

facid	Tot Slots
4	1404