**Introduction**

Due to the corona pandemic, Jacobs University’s gym and pool has been shut down for a long time and now they finally decided to reopen the facilities. However, since the pandemic is still not finished, the facilities came up with a new regulation that it can have maximum of only 10 people at a time. Many people have gone to the facilities only to find out that they have to go back to their room to wait an extra 30 minutes just because the facilities are full. Thus, we came up with an idea of making an application/website that not only shows people how many people in the gym and pool currently, but also helps the staff to store the data of the members easily rather than writing everything on Excel.

**Interaction with system**

**Auth**

* Students can sign up for the membership on the site, and they go to gym to pay their membership.
* Once it is paid, the gym staff approves the membership and inputs his j-mail.
* Pool staff adds pool members
* New role: Manager= admin of website -> can sign up new staff, can edit all info

**Optional**:

* create acc from Outlook oauth 2.0.

**After membership(timetable)**

* **(when facilities are not full -> when member count does not exceed certain value)** When member comes to facility, corresponding staff adds him to time slot, with start time -> Date.now(), and end\_time = Date.now() + 60min, when the end\_time reached the status is changed to TIME\_LIM\_EXC, the staff will log him out when member leaves the facility -> he is removed from the timetable. End\_time as column is when staff logs out the member.
* **(when facilities are full)** add option for member to book. When booking, the book\_start\_time = earliest end\_time in timetable, the booking can be chosen within earliest end\_time + 60min. The booking limit is n/2, where n is max num for facility users per time. The booking can be done by members and staff. The booking becomes invalid -> the entry is removed from the booking table after 5 min of book\_start\_time.

**View**

* **(For members)** can see how many people in facilities, members are shown anonymously in table. Members can see staff on duty and their own membership expiration date. When the staff shift is done, the staff will log out and the next staff will log in for members to see staff on duty.
* **(For staffs)** can see the j-mail, name, member\_expiry\_date.
* Admin can see everything,
* **(For visitors)** ask them to sign in.

**ER Diagram**

