Inf553, Project description: Step 2
Improving SQL query performance

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1 Outline

In this step, you must **propose ways to improve the performance of five queries among those of step 1** (that is, decrease the query running time).

2 To do

1. Select five queries (among those of project step 1) whose performance *can* be improved (for some other queries, the system is already as fast as possible).
2. Measure and record their execution time following the indications of Lab2
3. Propose one or several steps to improve (shorten) the running time of each query (see Lab 2). Explain why these should help.
4. Apply these steps, measure again the execution time following the indications of Lab2

3 What to turn in

You need to turn in Moodle by **Dec 1st, 2020** a report called `FirstnameLastname.pdf` containing

1. **Experimental settings**: the Postgres version being used; the operating system (and its version) on the machine where Postgres ran; the disk size and transfer rate; the memory size.
2. **Performance optimization report:** For each of the queries you chose:

- *Before* your proposed optimization(s), the executions times
- A description of the optimization(s), stating why you think they could be beneficial. Please give all necessary details, e.g., query plans, how an index should be helpful etc. If your optimization consists of building an extra data structure, be sure to also include the time to build it.
  You are also allowed to propose a single optimization that benefits *more than one* of your queries.
- *After* your optimization(s), the new execution times of the queries