# Project 1

SGD

Department of Informatics Engineering

**Delivery date: see Inforestudante/Submissao de trabalhos**

## Objectives

- Learn how to do simple benchmaking of db. Learn about SSB.

## Final Delivery

- You must submit your project in a zip file using Inforestudante. Do not forget to associate your work colleague during the submission process.
- The submission contents are:
  - SQL code you executed.
  - Report with setup and all measurements

The REPORT is expected to be complete in the sense that it needs to contain all necessary and sufficient information for the teacher to give the score to the evaluation item. For that you can include descriptions, screenshots, code extracts, whatever is needed for a complete and thorough evaluation. If the report is absent the score is 0, and if it is incomplete the score is significantly affected. This is to make sure you do have a complete report.

Before the main body, the REPORT starts with the complete identification of the students and group, then a table of contents, then the following:

a. Lists of what the group succeeded to do and what is missing
b. self-evaluation of the group (0-100%)
c. List of what each student contributed (no repetitions)
d. self-evaluation of each student in the group (0-100%)
e. hours of effort by each student separately

These items a,b,c are important for the teacher to check whether his evaluation coincides more or less with what the group and student thinks.

## Grading

- REPORT (confirmed later by defense)
  - Charts and measurements information;
  - Quality of the work;
  - Final presentation of the work.

## Resources

- Postgresql and pgAdmin
  - https://www.postgresql.org/download/
  - https://www.pgadmin.org/download/
- Star Schema Benchmark
  - https://github.com/eyalroz/ssb-dbgen

## Project Description

Proj 1: (SSB perf bench and processing design)

In this part, we intend to generate and load the SSB benchmark for postgres and perform performance evaluation. The following items will be evaluated, therefore you should get them and produce charts:

1. load time graph (load without keys)
2. query time graph (search without keys), the queries and their times are well identified
3. keys times (time of creation of each PK and FK key, well identified each case)
4. query times (searches with keys)
5. also calculate average rates, including at least: Nr of rows per second, MB per second
6. Obtain explain query execution plans for one of each query series (1 to 4) and explain the plans