



DISTRIBUTED SYSTEMS
2023-2024

PROJECT

1 - Introduction

This evaluation moment consists of an team work (ideally 3 elements) and is an integral part (50 %) of the evaluation of the curricular unit.

Applying project-based learning, it is intended that students develop a project that allows them to contribute to achieving the following learning objectives of the course :

- Problem solving
- Creativity
- Written and oral communication
- Apply theoretical knowledge in practice
- Ability to adapt to new situations
- Synthesis and Analysis

The project will also enable students to understand the interconnection between themes addressed in different curricular units of their degree and have an approach to work in the real world. The specific objectives of this project are as follows.

2 - Project description

Goal : create a key-value distributed DB, using the nodejs ecosysytem.

Each pair exists as a FS file, having by name the md5sum of the stringified key.

The DB is sharded in a fixed number of nodes, consisting of at least two servers to achieve solution robustness (we know the correct needed number).

Report must comply with the rules for the preparation of academic work reports available on the coordination page and must be submitted, by a member of the group, on moodle platform until 2024-06-03-00:00. The work must be presented orally (15 minutes + 15 minutes for answers) by all group members on the date published in the DCT assessment map.

3- Assessment criteria [base 100%]

- Report (20 %)
- Fulfillment of work objectives (5 %)
- Compliance with the rules for the written work (5 %)
- Writing accuracy (5 %)
- Code (40%)
- Oral presentation (10 %)
- Posture (5 %)
- 1— Creativity in creating the materials used (5 %)
- Rigorous presentation (5 %)

4 - Report

The report must have a maximum of 10 and a minimum of 7 pages, excluding the title page, index and bibliography, using Sans Serif font, size 12, a right margin, left, top and bottom of at least 2 cm and line spacing of 1.5. The report must contain at least the following elements (not necessarily with the titles and structure indicated) :

- Cover – Group identification elements
- Abstract – Brief summary of the project (150 to 250 words).
- Index – Structure of the report
- Introduction – Description of the objectives and motivation related to the topic ; it should also contain a description of the structure of the report
- Detailed description of the solution: architecture
- Detailed aspects of the robustness of the distributed solution.
- what are the non solved problems
- Conclusions – reflection on the theme and its approach.
- Bibliography – List of books, articles, web pages, or other sources