



**Universitat  
de Lleida**

**GRAU EN ENGINYERIA INFORMATICA**

## **Deliverable 1**

### **Basic Web Application 1.0**

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# INTRODUCTION

Our goal in this report is to state the servers we have in our web project, the connections and dependencies between them, and also mentioning which of those are required and which are not.

## 1. Number and function of servers

Our web project is composed by six servers, which interact with each other to satisfy a function.

- Project: has the capability of creating new tasks and deleting them.
- Department: here we can create a new project or delete an already existent one.
- User: an user can sign in or sign up, create or delete projects, and also he can create or delete groups of users
- Company: it can add or delete users for a company, and the same with groups and departments.

Important to know, that all the servers will have the functions to get the main information of each database that corresponds to them.

## 2. Connections and dependences among them

In case of *Project* and *Task*, the multiplicity is  $1 - 0 \dots *$ , that means that from only one project we can have zero or many tasks, but tasks can not be repeated.

Unlike the rest of connections, we have ternary between *Project*, *Department* and *Companies*. It all has  $0 \dots *$ , because zero or more can be associated with 0 or more departments or 0 or more companies and the same reasoning for the leftovers.

The multiplicity of *User* and *Project* is  $0 \dots *$  in both directions. This is due to, that a project might not be started by a single user, but instead, by a company. Moreover, a project can be handled by more than one user, and at the same time, a user, can be the author of as many projects as he desire.

Between *User* and *Company*, the multiplicity is  $1 \dots * - 0 - 1$ , respectively, meaning that a user can be part of none or one company, and a company can have one or many users. Originally we had thought that, because a user could be working by himself, the multiplicity should be  $0 \dots *$ . But this does not make sense, considering that this would imply that a company could be composed of no users.

Last but not least, when a *User* deals with the *Database*, the multiplicity is  $0 \dots * - 1$ . We dispose of a single database which can contain a large amount of users.

### **3. State which are required and which are optional**

In the present state of the project, we consider that all the current dependencies are required. Later on during the development of the following deliveries this might change, as we add more dependencies.