

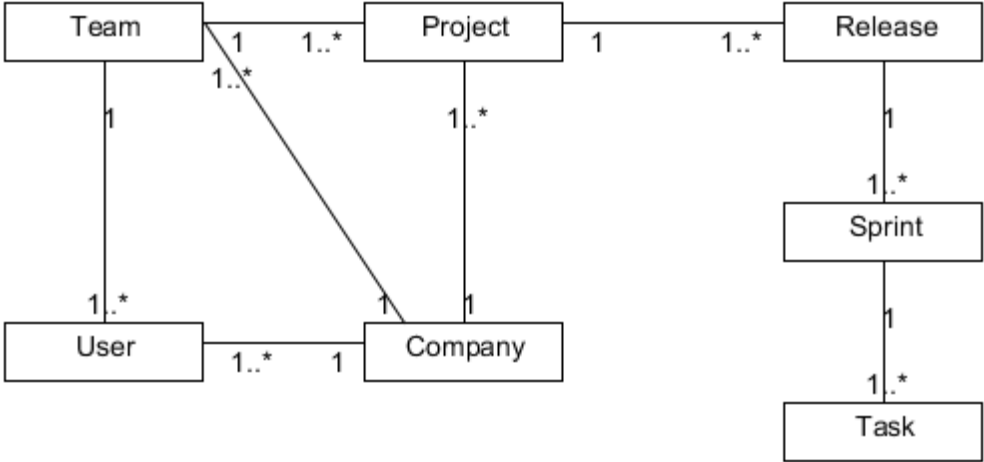
Design Document

Project Manager App

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1-Design of the database



Project :

- id : int
- version : int
- team : Foreign key to Team
- company : Foreign key to Company
- status : Boolean
- name : String
- description : String
- created_time : date (automatically set by the framework)
- last_modified_time : date (automatically set by the framework)
- deadline : date

Release:

- id : int
- project : Foreign key to Project
- status : Boolean
- name : String
- description : String
- created_time : date (automatically set by the framework)
- deadline : date

Sprint:

- id : int
- release : Foreign key to Release
- status : Boolean
- name : String

description : String
created_time : date (automatically set by the framework)
deadline : date

Task:

id : int
sprint : Foreign key to Sprint
current_developers : List of foreign keys to Users
status : "OnGoing" or "Done" or "NotSorted"
name : String
description : String
created_time : date (automatically set by the framework)
time_spent : time
estimated_time : time

Team :

id : int
projects : List of foreign keys to Project
company : Foreign key to Company
members : List containing foreign key to User
name : String

User :

id : int
company : Foreign key to Company
username : String
first_name : String
last_name : String
email_address : String
pending_email : String
email_validation_token : String
password : String
reset_password : String
is_admin : Boolean
is_manager : Boolean
activated : Boolean

Company :

id : int
company_name : String

2-Product Details

Web part

User creation

The creation of user will be available only for administrators and managers. Administrators can create only managers for any company while managers can create other managers for their own company and also developers.

The user will need to give a username, a first name, a last name, an email address, a password and if the new user is going to be manager or not. Plus, administrators will be able to choose if they want to create an administrator or a manager account, in case it's a manager account, then a company will have to be assigned to this account.

User suppression

The removal of user will be available only for administrators and managers. Administrators can remove only managers for any company while managers can remove all kind of users belonging to their own company.

The user will have to choose a user account to delete among a list. Of course, an user can't remove their own account.

When an account is said removed, it will just be disabled and no access to it will be possible.

We keep the user among our data as this user could be related to some tasks.

Login/Logout

The user types their username and password, then they match before opening a new session. When the user will wish to log out, this session will be removed.

Team administration

Before creating any project, a manager has to create a team with its developers. They will be allowed to choose a list of developers who do not have a team among their own company. Plus, managers will be able to remove or add anyone at any time so it will be possible to edit the team settings. To finish, a team can be simply removed, as for the users, a team won't be removed from the database and will just be disabled. Users will be allowed to have several teams.

Project administration

Once everyone is ready to work, managers can create a new project. they will need to give a name, a description, a deadline and finally, they will have to choose a team among all the team of their company. A project can be closed at any time as it can be given up or finished.

Then, managers can create different releases and sprints by giving a name, a description and a deadline. Only one release and one sprint can be running at a time.

To finish, the last step is to create tasks which will be contained into sprints. To create a task, a name, a description and a estimated time are required.

Phone Part

Login

The login will be asked the first time the application will be used and then, stored into an encrypted file. The login will be sent in every message to permit the server to recognize the sender.

Display Projects

Each time the user wants to access to their project list, the phone will send a message to the server giving the version number of all the projects in which the user is involved and, if the projects stored on the server have a greater version number, then the server will send back the information concerning these projects.

Sent	Received (supposing that only project2 needs to be updated)
<pre>{“projects”: { “project1” : “1.2” “project2” : “0.3” “project3” : “0.5” } }</pre>	<pre>{“projects_update”:{ “project2” :{ “sprint1”:{ “task1”:{ “status” : “OnGoing” “name” : “foo” “description” : “bar” “time_spent” : “2h03min” “estimated_time” : “5h” } } } }</pre>

Choose a new task

When a developer decides to start working on a task, this user will be locked and will not be able to choose another task. So the phone will have to send a message giving the user name and the id of the task.

Unselect a task

As a user can select only one task at a time, we just need to send their user name to the server to allow them to work on another task.

Timer

The timer can be launched whenever a developer has chosen a task, then the phone sends a message to the server saying that someone is working on this task so the server will save a timestamp. Then, the phone will send a message to the server at regular intervals to tell it that the timer is still running. Every time the server receives a message, it will update the time spent on this task, by this way, if the connection is broken, the server will know the last time sent. However, if the connection cannot be established again, the phone will keep the time spent, waiting for a new network to be available and will send an update message. The message should contain the time elapsed since the last message as this time will be added to the current time. This would prevent any problem when several developers are working on the same task.

Change the status of a task

The status of a task cannot be changed if no one has ever worked on this task. A message will be sent to the server, giving the name of the user, the id of the task and its new status.