

(01PFPOV) Mobile Application Development  
A.A. 2023-2024



**Politecnico  
di Torino**

## **Lab. 01**

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**General description:**

We want to create an application to manage group work of university students. Students have a single space in which they can organize their group work by viewing, for each one, deadlines, related information, attached files and updates. Furthermore, for each team there is a chat through which each student can contact the other members of the group.

The users can share the link/QR Code to access the team.

The first user to join a team is the admin. He can decide whether the other team members are also admins or not. Admins can also change team settings.

For each team, members can create different tasks and related subtasks needed to complete the project. Each student can independently decide to "self-assign" a task, or the admins assign the tasks to others.

Each task and subtask have a deadline. The task progress is updated every time a subtask is marked as completed. Whoever is in charge of the task can also upload the relevant files and links. Other users in the group can give feedback in a similar way to Slack, creating a sort of "chat within a chat".

Additional features: the email associated with the account can be modified, so that, even in the event of a change of email, a person can maintain their account.

When a task is expiring, a notification is sent to the users associated with that task.

You can view a user's profile and the teams you have in common with them.

When you are working on a task, you can start a timer that counts the hours you spend working on that task. Everyone can see the time worked by each user on a task.

It is possible to create surveys, for example to plan the date of a meeting

Who commissions the project: ministry of education and universities

Who uses the application: Students (Middle School, High School, University), Researchers, Teachers

Purpose of the application: Facilitate interaction between members of a group to optimize the development time of a project. Provide a quick and simple method for the teacher to check the progress of the various groups

## **2a. User personas:**

Who are the users involved? Think about possible *personas*

University student:

- Age: 23
- Occupation: student
- Digital confidence: medium-high
- Devices: phone, tablet

High school student:

- Age: 15
- Occupation: student
- Digital confidence: medium
- Devices: phone, tablet

High school Teacher:

- Age: 40
- Occupation: high school teacher
- Digital confidence: medium-low
- Devices: phone, tablet

University teacher:

- Age: 50
- Occupation: university teacher
- Digital confidence: medium-high
- Devices: phone, tablet

Researcher:

- Age: 30
- Occupation: researcher
- Digital confidence: medium-high
- Devices: phone, tablet

## **2b. Usage flows:**

What are possible usage flows? The various use cases bring together different scenarios that define the use flows to be implemented by the app in the future. You can use a tool like FigJam.

See file *Lab01 - 2b Usage Flows.pdf*

### 3. Purpose of the application

Thinking of the users and the purpose of the application, identify what information needs to be collected and displayed on each screen.

- How are they going to be represented?
- Is some information more relevant than others?
- Are there any dependencies?

Abbreviation	Representation	Is relevant	Dependencies
Mail	Textual	Yes	-
Password	Textual	Yes	-
Name	Textual	Yes	-
Surname	Textual	Yes	-
Username	Textual	No	Name, Surname
Birth date	Textual	No	-
Number of tasks completed by a user in a team	Textual	No	Task state
Number of tasks assigned to a user in a team	Textual	No	-
Number of tasks completed by a team	Textual	No	Task state
Number of total tasks of a team	Textual	No	-
Number of teams a user belongs to	Textual	No	-
Team name	Textual	Yes	-
Team description	Textual	No	-
Chat messages	Textual	Yes	-
User role	Textual	Yes	-
Task title	Textual	Yes	-
Task description	Textual	Yes	-
Deadline date	Textual + color	Yes	-

Task category	Textual	No	-
Task tag	Textual	No	-
Task state	Graphical	Yes	
Task members	Textual	Yes	-
Task history	Textual	No	Subtask state
Task comments section	Textual	No	-
Task documents	Attachments and links	No	-
Subtask title	Textual	Yes	-
Subtask state	Textual	Yes	-

The username is automatically generated from “name.surname”. There may be duplicated usernames

#### **4. UI**

From requirements to screens.

See file *Lab 01 - 4 UI.pdf*

#### **5. UML Class Diagram**

Teamwork management application ER diagram.

See file *Lab01 - 5 Class Diagram.svg*