

## Mobile Devices Programming

Practical Assignment - Option C, Winter Semester 2024/2025

Delivery date: december 21, 2024

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This document contains the specification of the requirements for **Option C** of this course's practical assignment. In this option, the goal is to implement the **ChIMP (Chelas Instant Messaging Platform)** application, whose main functionality is the exchange of instant messages between users. **In this option, it is assumed that an HTTP API is developed by the students within the scope of the DAW course, whose requirements are described in the corresponding assignment description.**

The **ChIMP** application brings the functionalities of the instant messaging platform developed within the scope of DAW to Android mobile devices. Message exchange occurs by sending messages to a channel, which are received by all users registered in that channel. There are two types of channels: public and private. Public channels are accessible and visible to all users of the platform, while private channels are restricted to invited users only. To use the platform, users must be authenticated.

A aplicação **ChIMP** contém, no mínimo, os seguintes ecrãs:

- Screen for collecting the user's credentials;
- Screen for displaying the list of channels the user is subscribed to;
- Screen for displaying a specific channel;
- Screen for displaying the available public channels;
- Screen for displaying information about the application's authors.

The screen for collecting the user's credentials is used to gather the necessary information for interactions with the HTTP API. If the API requires prior registration, this registration can also be completed within this screen.

The screen for displaying the list of channels the user is subscribed to includes the functionality of selectively displaying these channels, for example, based on the desired channel name. Selecting one of the channels from the list navigates to the channel screen.

The screen for displaying the channel is used to view the messages in the channel and to send new messages, if the user has the required permissions.

The screen for displaying the available public channels allows the user to join the displayed channels.

The screen for displaying information about the authors of the application contains the identification of all members of the group. The identification of each element consists of the student number and first and last names. The screen also contains a button to send an email to the group members, for example to congratulate them on their excellent work. 😊 The emails to use are those assigned by ISEL.

The remaining details related to the user experience, such as the general appearance of the UI, which orientation is used on each screen, and other navigation details between screens, are left to the authors' discretion.

Optionally, the application allows the user to view the most recent messages from the channels they participate in, **even if the device does not currently have network access**. Additionally, the application can

optionally display notifications if messages are received in the channels the user participates in when the application is not being displayed on the device's screen.

Delivery is carried out by creating the “chimp” tag in the group’s GitHub repository. The repository is created within the scope of GitHub Classrooms by the teacher of each section group and **must contain at its root the README.md file with the identification of the group's members and the link to the video demonstrating how the application works.**

**Due date**

december 21, 2024

ISEL, september 16, 2024