



Universidade de Coimbra  
Faculdade de Ciências e Tecnologia

## DEPARTAMENTO DE ENGENHARIA INFORMÁTICA

Introdução às Redes de Comunicação

### IRC Project

2017/2018

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**Delivery date:** The work should be uploaded to Inforestudante until 08/12/2017.

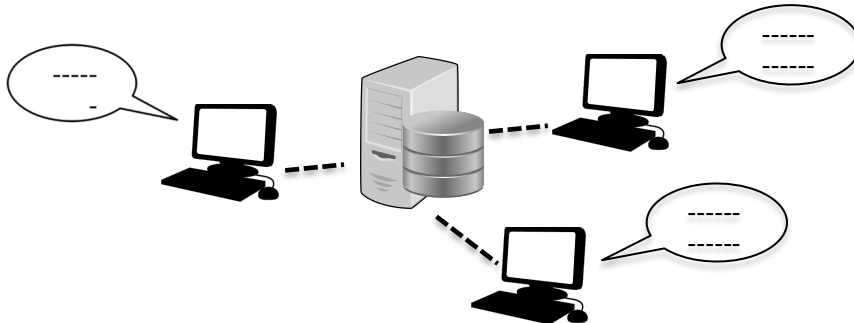
**Files to submit:** The submission should be a zip file containing all the sources of the project, a compiled version and a report in pdf. Do not forget to include the name of all the elements of the group in the final report.

**Groups:** Groups of 2 students are advised. No more than 2 students are allowed per group.

**Grading:** The work must be defended in a presentation where all members of the group must be present.

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### IRChat



In this project you will create a chat where multiple users can connect between them through a central server.

### ***Functionalities to implement***

- There should be two types of conversations: **private conversations** and **group conversations**. The first is established between a pair of users. The second can have any number of participants.

#### **Private conversations:**

- Any user may send private messages to any other user. To do it, he must know the name of that user in the network.
- On receiving a message from a new user, a new private conversation is created.
- Any user may send two types of messages: **normal messages** and **timed messages**. The second type of messages has an associated expiration (in seconds). After the amount of seconds specified, the message will disappear from the chat history and no other user can see it.
- A user can block any other user. This blocking only works in private messaging. That user may be unblocked later.

**Group conversations:**

- The creator of a group is the user that first invites a third person to a conversation, therefore creating a group.
- Each user belonging to a group may add any other user to the chat. No user can by itself join an existing group.
- The creator of the group may ban any user from the group conversation. To get back to the group the banned user must be added by any group member.
- Any user may send two types of messages to the group: **normal messages** and **timed messages**.

**General:**

- Any user may list his private conversations and group conversations. The list should present the conversations with more recent messages first.
- Any user should be notified when there are new messages to read.
- Chat history is saved in the server.
- In this project, the users will not have any chat history saved in the clients.
- When reading messages from server, the private conversation or group conversation will be all downloaded from the server and shown in screen.