

Achtatou

Sean

# **Principle of Software Development**

## ***Android Application***

# 1. Introduction of the Project

The goal of the project was to develop a friendly application allowing phones users to chat when being near to each other's. The particularity is that all the communications have to be secret and not persistent, meaning the chat is not saved and the people identity stays hidden to each other's. In order to achieve this, we had the possibility to work with two possible technologies: Internet or Bluetooth.

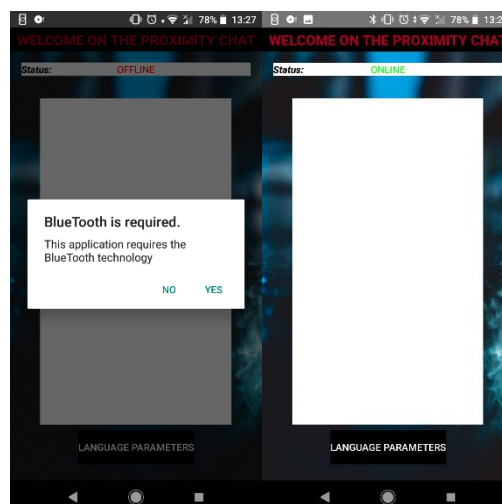
## 2. Android Application

Our application has been named "Proximity Chat", allowing the users to understand that this application is intended to be used in order to chat with the people that are at proximity.

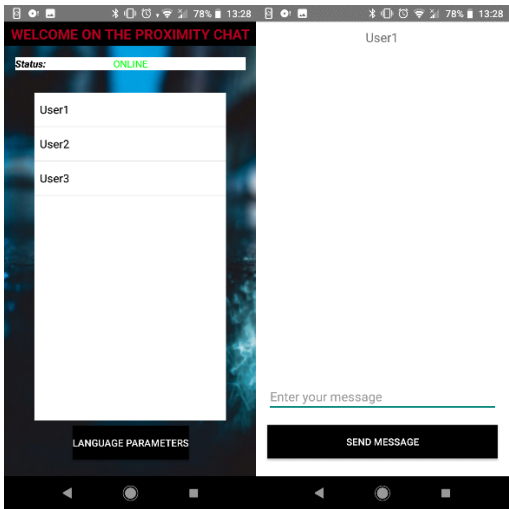


When launching the application, the users are shown the main part of the application. On the main screen, it will be displayed the actual status of the user, if he/she is connected (Bluetooth) via an ONLINE/OFFLINE status. Below, the user will find the table where each of others users using the application will be displayed if their status is set to ONLINE. For each of these users, the user will be able to click on it to go to the chat window (will be explained further). And finally, in order to be able to satisfy people having issues in the English language, we have added a language parameter to switch between French and English.

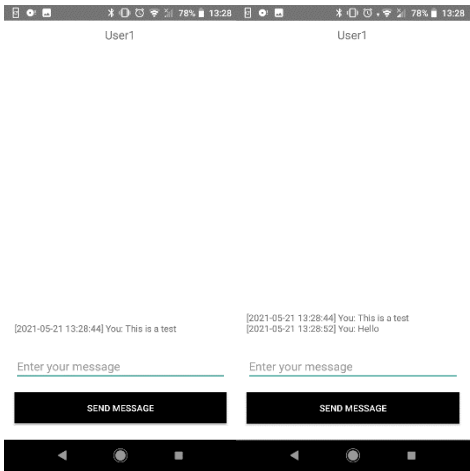
As said, the first thing, that will be prompted is to know if the user is connected, this the application will ask the user to activate the Bluetooth in order to properly use the application. If the user says "No", thus his status will be set to OFFLINE, and none of the user around him will be displayed, and he won't be shown on them neither. However, if the user says "Yes", the application will take care to activate the Bluetooth, set the status to ONLINE and start looking for people around it.



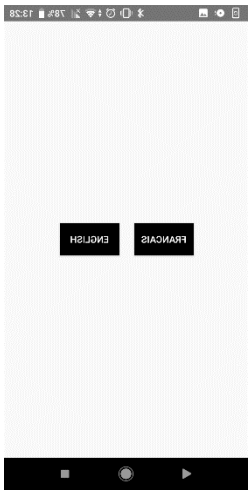
Once someone is found, the user will be alerted via a notification on his phone. And the found users will be displayed on the table. Each of these users will be clickable and will bring the user to the chat room.



In the chat room, each of the user will be able to communicate to each other's, displayed the date and time at which each message has been sent. If one of the users leave the room, then the messages will disappear forever.



Finally, we have added a language parameter in order for the people have issues with English language to use the application in French.



### 3. Concepts in Class used

We have tried to use the most concepts seen during the class of "Principle of Software Development". From these, we have the concept of "Activity" corresponding to each window being visible to the user when interacting with the application.

We have used the concept of "Service", one of the services is used in order to find people near the user of the application, even if he/she is not directly interacting with the application, thus it is running in the background until the application is killed.

Finally, we have used the concept of "Broadcast receiver", one of the broadcast receiver job is to wait for the "Service" to have found a user, this one will send a broadcast through the application, and this broadcast will be received by the "Broadcast receiver", which will display the notification and add the user to the table.

