#### **EE402**

# **Assignment 2 – Client/Server Programming**

## 1 - Description of the Application

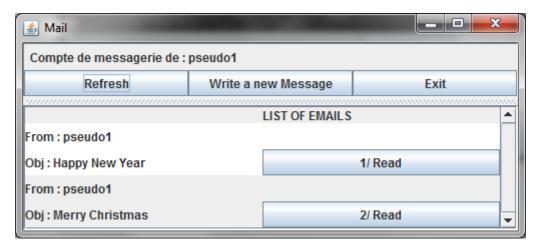
## <u>1.1 – Connection interface</u>

When a client runs the application, he arrives on the connection interface. He can enter his login and his password to start the connection with his mail box. I have pre-record two members in my application (pseudo1 and pseudo2).

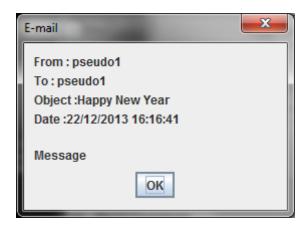


#### 1.2 – Home page of a client

After the authentication the client arrives on a page that contains all his messages. He can read a message or write a new message. If he want to receive his new messages, he need to refresh the page.



If the client clicks on the button « Read » the full message appears in a pop up.



## 1.3 – Creation of a new message

If the client clicks on the button "Write a new message", he arrives on a new window where he can write his message and send it.



### 2 - Interesting code segment

#### 2.1 - Code of the connection interface

```
//INTERFACE
public void window()
 /Creation of windo
this.window = new JFrame();
 /Window title
this.window.setTitle("Mail");
                                                                                 Creation of the window
this.window.setSize(800, 200);
this.window.setLocationRelativeTo(null);
//End of Application if red cross
this.window.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE
/* Connection Interface */
this.window.setLayout(new GridLayout(3,2));
this.mail = new JTextField();
this.labelMail = new JLabel("Identifiant");
                                                                             Creation of the elements:
this.pass = new JTextField();
                                                                             2 labels
this.labelPass = new JLabel("Password");
                                                                             2 textfields
                                                                             1 button
this.connexion = new JButton("Connexion");
this.connexion.addActionListener(this); //Action of
this.window.getContentPane().add(this.labelMail);
this.window.getContentPane().add(this.mail);
this.window.getContentPane().add(this.labelPass);
                                                                             Add every elements to the
this.window.getContentPane().add(this.pass);
this.window.getContentPane().add(this.connexion);
                                                                             window
//Make the window visible
this.window.setVisible(true); Set the window visible
```

#### 2.2 – Code of the creation of a new client.

```
public static void main(String args[])
           arg = args;
   String rep=null, pseu=null;
System.out.println("** ASSIGNEMENT 2 : Mail Box **");
           if(args.length==1){
                                                               Creation of a client
                   Client theApp = new Client(args[0]);
                   theApp.window(); } Launch of the interface
                  while(theApp.info[0]==null)
                                                                 Wait the connexion of
                   System.out.print("");
                                                                 the client
                  System.out.print(theApp.info[0]);
                                                        Verification of the identifiant and the
               theApp.connectionClient(); 
               pseu=theApp.pseudo;
                                                        password by sending them to the Server
               rep=theApp.reponse;
               // GO WINDOW
              if (rep.equals("oui"))
                                                                         If the identification works,
              theApp.window.dispose();
                                                                         launch the main interface
           UserLogin neww = new UserLogin(theApp.info[0]);
           else
                   System.out.println("Error: you must provide the address of the server");
                   System.out.println("Usage is: java Client x.x.x.x (e.g. java Client
192.168.7.2)");
                                          or: java Client hostname (e.g. java Client
localhost)");
           System.out.println("**. End of Application.");
```

#### 2.3 – Sending Information from the Client to the Server

```
Client
 private void connectionClient(){
                                           Creation of a table that will be send
   String tab[]=new String[3];
tab[0]="connexion";
                                           to the Server with the command to
    tab[1]=this.info[0];
    tab[2]=this.info[1];
                                           do and some variables.
   System.out.println("01. -> Sending Command (" +
tab + ") to the server...");
                                   Send the table to the Server
    this.send(tab);
         trv[
         this.reponse = (String) receive();
                                                     Response of the Server
                System.out.println("05. <- The
Server responded with: ");
                System.out.println("
this.reponse);
         catch (Exception e){
                System.out.println("XX. There was
an invalid object sent back from the server");
         System.out.println("06. -- Disconnected
from Server.");
    }
```

### 3 - What does not work and why?

The application works on the computer if I simulate a server but I don't know why I cannot run the application from the Beaglebone. As the application cannot be run on the Beaglebone, I did not manage the parts of the assignment about the LED.

#### 4 - How to run the application

You need to put all the files from the bin in your own user files (for me it is C:\Users\Camille).

Then open cmd.exe and write the following text.

```
C:\Windows\system32\cmd.exe-java messagerie.Server

Microsoft Windows [version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. Tous droits réservés.

C:\Users\Camille\java messagerie.Server
New Server has started listening on port: 5050

**. Listening for a connection...
```

The Server waits for a Client connection.

Open a new cmd.exe to create a client.

```
C:\Windows\system32\cmd.exe

Microsoft Windows [version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. Tous droits réservés.

C:\Users\Camille>java messagerie.Client localhost
```

This commands run the connection interface. You can connect yourself to this interface by using the using the following logins:

- Identifiant: "pseudo1" password: "pass1"
- Identifiant: "pseudo2" password: "pass2".

You can open as many clients as you want by opening new cmd.exe.