We have an HttpServelt likewise Activity. The run software is Apache Tomcat.

We have MainServlet inheritance from HttpServlet like MainActivity inheritance from Activity.

Defined 2 fields:

List of messages and filed of Users, type of Map with 2 Strings, key and value, one for username and the other for password (the order is not important).

We are implementing a Hash Map (of users) in the method Init (), also we implement the ArrayList of the messages.

The HashMap recognizes users very fast (really fast). The method Init () likewise a constructor, she is running once when the first user will register.

* If I’ll update the version, then it will run again, but once.

I have the methods doPost () and doGet ().

This time we are using doGet () method. They have 2 parameters Request and Response (which they have a lot of methods) – example: getRemoteAddr – give me the IP address of the client.

getQueryString () – what came after the ? in the URL.

Made a check which the query is not to long (query.length), and then a check if I have a query at all (null or isEmpty() ).

Then I create an object (qs) of Map, and then I am using the method split(), to divide the key values at an array of String by “&”, and another split by the “=”, then I continue to next iteration, for letting the client to use lower and upper case letters.

Then I make a switch of “action”, with several cases:

If the action is null, I stop the all process. = return – finish the function doGet.

Then I am moving to check the action on the username and the password. There is a client and a server, client can run any function, he can make signup, login, and check (let me know which messages are existing).

SignUp – Boolean = false, then I am using the synchronized method for the users (for the chance of the same users will come at the same micro second (even we have several threads in the background). Users.containsKey – the user like this exists, checking as well the user name and the password, and check the Boolean success again to be true, for the 2 occasions, then like Toast, I am using the response.getWriter().write, to say if the creation of the username were succeed or not (error).

Login – Using the interface login for knowing of existing of username in the system.

Login function – parameters username and password, and I am checking for existing Password, by get by username, and more.

* Any access to the Internet or the hard disk, it’s very expensive action.

Send – Identify the user name by the login function, expect for a message from the user.

Check – identify the username the same as in Send, pull a number (from), and the messages are by order, and then I know from which message, change it to Integer (valueOf) - and these messages are unread, using StringBuilder for adding the new messages (by append).the second if to divide the last message “&”.

Client Side

I have a MainActivity, I define a final of Base URL with my http line, which I’ll use for the server (without the query string).

Handler helping you to change your UI, and you can’t do it at the Main Thread, only in other Thread for this I have the Handler.

At the on create () I run a XML with all the pointers views.

Initialize the new Array List of the message and my Adapter, then I set my adapter in the List Messages. Then I am using the Dialog Fragment for the username and the password by using a listener.

\*setCanceble (false) you can’t close the fragment. Then I show the fragment by fragmet.show. Also I define a XML for the fragment as well.

onCreate view I am inflating the fragmet\_login which I created.

I define a On click Listener for login Click Listener.

Pull String action – cause I want to know if it’s login or signup by v.getId ().

Create an new AsyncTask types – String, Boolean, String, and the execute () method which getting the action who could be or login or signup.

Then override the method doInBackground () – define HttpURLConnection and InputStream poniters, and a new class of URL, in order to connect to the URL.

The message I’ll receive will get in the array of the bytes I created in the buffer.

onPostExecute (Boolean result – actually my message) -