

WebChat using WebSockets network protocol

Aim of the work:

The aim of this work is to implement some modifications to one of the previously written app of WebChat with conditions described in section WebServices (WebSockets).

Conditions:

In order to complete this project, it is required to implement the following features:

For the grade 3:

- “nick’s” support:
 - before joining the room there should be a form to provide a username (nick),
 - the front-end application should randomly suggest a integer number from the range of 1-99 and append it to the default username e.g. in form “user??” where ?? is the random number, nevertheless, the user should be able to change this name,
 - the specified username should be a prefix of each message send by the user e.g. “John: Hello”,
- the complete history of the conversation:
 - when the new user joins the existing room, server must provide the complete history of messages stored since the room opening,
 - when the last user leaves the room the history is not required anymore and can be forgotten.

For the grade 4:

- the conditions specified for grade 3,
- server shares with all users in the room the information about the event of joining or leaving the room by other user,
- the complete user list of the room should be permanently visible on the front-end app,
 - NOTE!! If you are also interested in implementing the conditions for grade 5, in this point you should be familiar with the conditions defined for feature “.. is writing ..” to design the common implementation,
 - the back-end app (server) should monitor the room membership and send the user announcements about any changes or the complete updated user list,

For the grade 5:

- the conditions specified for grade 4,
- the feature “.. is writing ..”:
 - the front-end app should continuously monitor the activity of the user and send the server (back-end app) the announcement about composing of the new message: this could be done by implementing the events of text field change,
 - server, when receives the above announcement, immediately shares it with the other users of the room,
 - next, the front-end app in a specific way should highlights such user on the list.

Other remarks

1. The project should meet all conditions mentioned above,
2. The errors and exceptions handling,
3. The readable and clean code.