Embedded Systems Labs - Lab 1 - GO Chat

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Main Structure

Implemented by **React.js**

Main support modules: socket.io, bootstrap, webpack.

Main Features

1. User Login

every connected user can simply type a name and join Go Chat.

If the user enters empty string, then there will be a warning sign:


2. Chatroom

Summary:

    a. **User list/profile images:** showed on the right side, real-time sync among users.

b. **Message input area:** on the bottom side.
c. **User's messages:** listed on the right side of text area.
d. **Others' messages:** listed on the left side with the name of users.
e. **System messages:** centered in the text area, indicating the log in/out events.
f. **Update profile image:** by clicking user's own name, user can update his/her profile image by valid url. The image will be sync to every user instantly.
g. **GO Invitation:** by clicking others' name/image on user list.
   ● Inviter can choose to play black or white and send the invitation.
   ● The invited user will get an invitation and choose to accept or reject.
   ● User can only send one invitation at one time.
   ● If rejected, the sender will get the rejection message.
   ● If accepted, both users start play GO.

Walk-through:

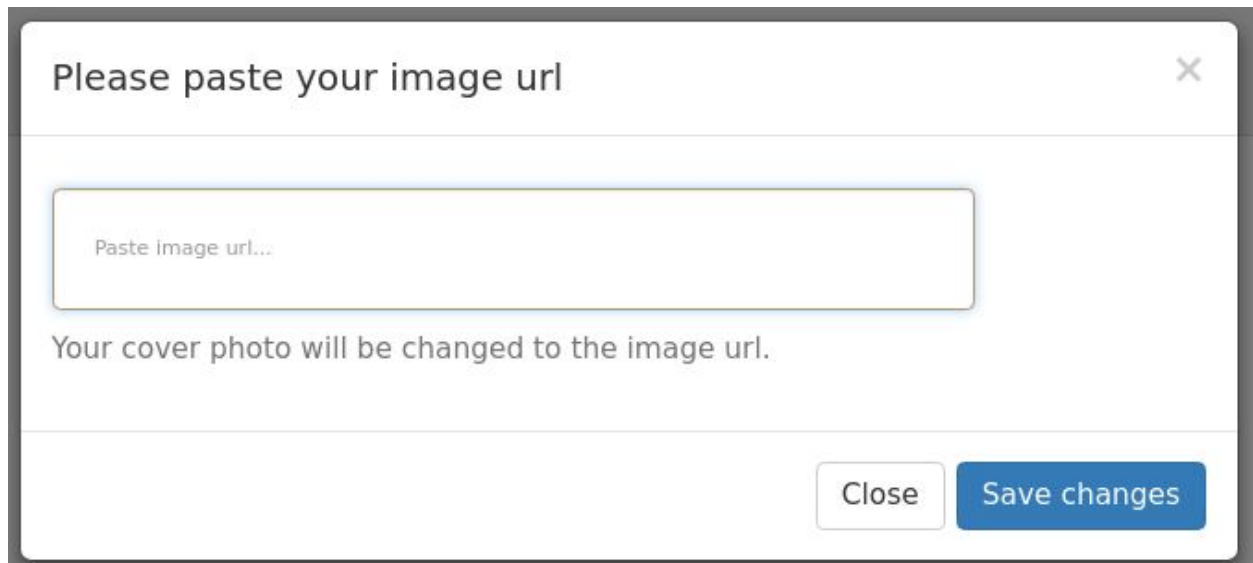After entering a valid username, the website will enter this window:
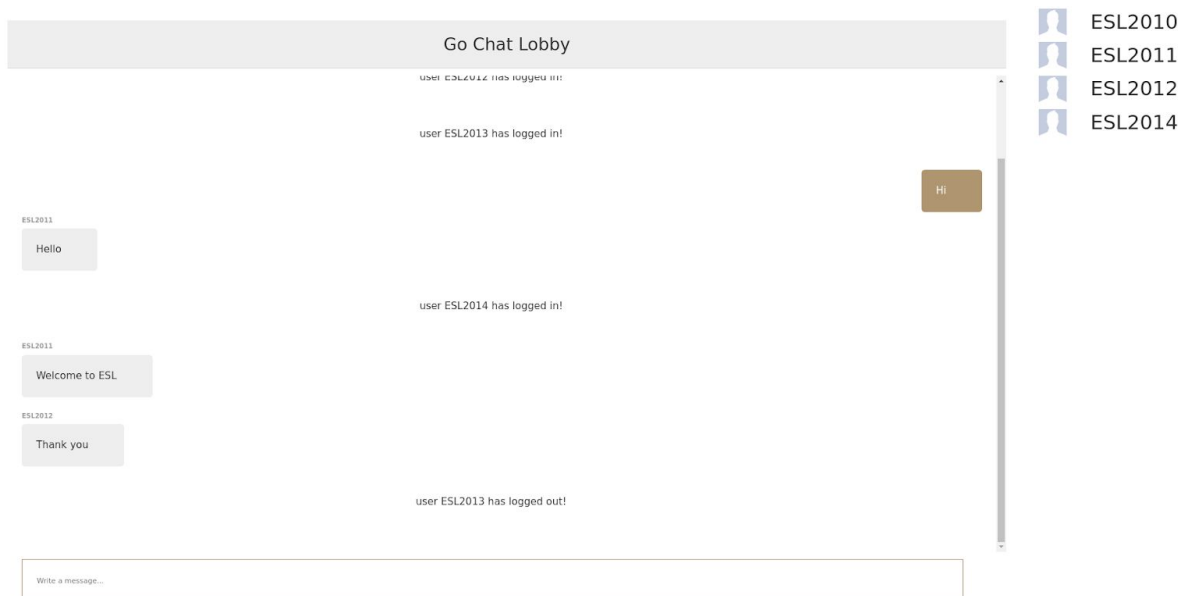
On the left-hand-side, there is a title "Go Chat Lobby" at top, then the messages body in the middle, finally the message input box at the bottom. On the right-hand-side, there is a list of all users logged in currently.
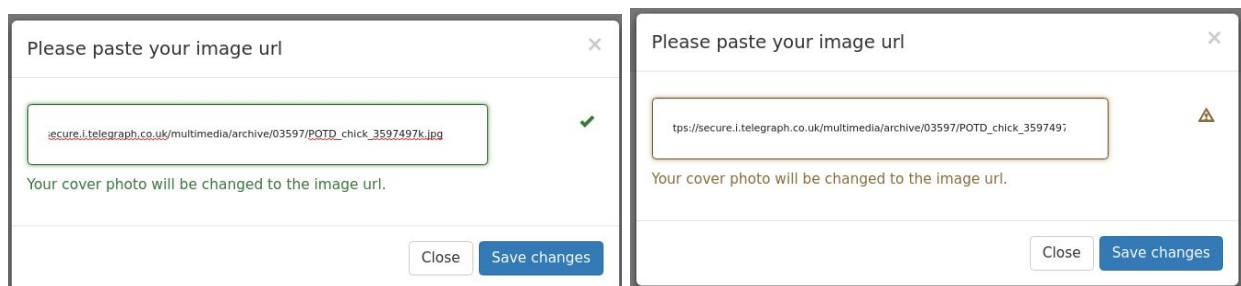
In the messages body, the messages send by yourself and others have different position and colors. Also note that there is a small name above each message sent by others as shown below:
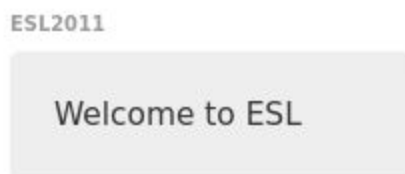
The user can change its own photo by clicking on its own user-bar on the right-hand-side. Then, a text-box will appear and ask for the user to enter an image url link:

If the user has entered invalid image url, there will be an error, while valid image url will show a green tick:

If you click on other users, you may invite them to play GO with you. If they accept your request, you will both enter the Go zone.

3. GO
<u>Summary:</u>
   a. **The playboard and dashboard is sync on both side.**
   b. **Title:** player's name vs opponent's name
   c. **Main playboard:** rules are implemented by react.js.
      ● Put stones by clicking the board directly.
      ● If the clicked position is not available, shows the message on dashboard.
   d. **Dashboard:** with two constant objects and show the game message.
      Status Indicator

YOUR TURN	Player can put stone or pass.
OPPONENTS TURN	Player cannot put stone or pass.

OPPONENTS PASS	Opponent just passed, and player can put stone or pass.
EXIT	If both side pass, the game ends. User can move back to the chatroom by click EXIT.

PASS button

When user want to finish the game, user can click PASS button.
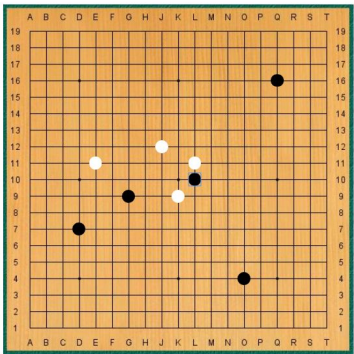
GAME message

Indicate the invalid operation

Such as: "Not you turn.", "Invalid position.", "GAME END"

RULE - by react.js

- Eaten area algorithm.
- Invalid position detection algorithm.
- KO(劫) situation.

Walk-through:

The GO board will be on the upper-left corner. Below the board will show "player1_name v.s. player2_name". On the right side, there are two text boxes. One will show whose turn it is. Another allows the user to pass this round. If both users pass consecutively, then the game ends.
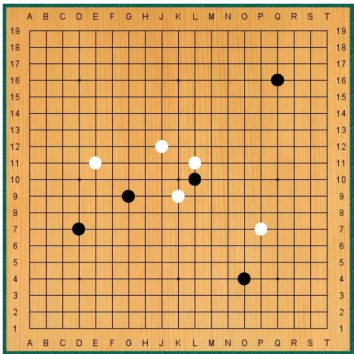
ESL2017 vs ESL2018

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