Team Number: May15-31
Project Name: CoderLab
Client / Advisor: Joe Zambreno
Due: 11/17/2014

Week 11 Report (11/11/14 - 11/17/14)

Name (Role)	Team Meeting (11/17)	Week Hours	Total Hours
Jake Bertram (Comm)	P	6	56
Dan Smith (Key Concepts)	P	4	45
Kyle Tietz (Lead)	P	5	46
Jacob Wallraff (Webmaster)	P	3	40.5
Erich Kuerschner (Webmaster)	P	5	44
Bryan Passini (Comm)	P	3.5	54.5

Key: P - Present AE - Absent, Excused AU - Absent, Unexcused

Team Meeting Minutes (11/17)

Discussion

- Discussed weekly accomplishments
- Plan to meet to integrate individual work into one demo for thursday
    - Tuesday after class for a little while
        - Dan: Out of town
    - Wednesday @ 6pm
        - Dan: Out of town
- Discussed plans for the week
- No meeting next week. Enjoy break!

Individual Accomplishments

Jacob Bertram

- Figured out the firewall on our VM to open up some ports so our servers we write can listen and receive traffic (on coderlab.ece.iastate.edu):
    - Ports 3000 to 3100 - Note that I typically use 3000 to 3010 for docker containers, so don't be surprised if you get an error stating they're in use.
    - Ports 9000 to 9010 - Some random port range
    - Note that you must be on the iowa state network or vpn to access, I think because of NAT settings.
- Merged the websocket docker container code into my docker manager branch.
    - The result: People may log in, start containers, or join existing containers, and a shell will appear.
    - Demoing at Monday (11/17) Meeting
- Need to see about tweaking terminal streaming so it is better-supported
    - Crashes sometimes using things like vi or less. But not when anyone but me is looking at it

Dan Smith

- Integrated shell code with sharejs-project repo
    - Replaced connect framework with express (express has the same functionality and more, express used to be based on connect)
- Started fiddling with TermJS to try to find its limits
    - Resizing is a pain, ignores container size in favor of cols/rows
    - vim/less-style programs cause loads of glitches

Kyle Tietz

- Updated shareJS master branch to last week's demo
- Reworked the user login code
    - Piggybacks off of the fileserver
    - Sends commands to all clients when user logs in / out
    - File server now keeps list of clients / users

Jacob Wallraff

- Still working on more streamlined interface
    - Trying to determine if bootstrap will integrate well with the method for resizing areas that I have worked on
- Fleshing out other supporting pages (login, etc.)

Erich Kuerschner

- Added lots of features to the shareJS/ace demo
    - Creating a file now actually creates a file on the server through the file server - duplicate file names are handled and an error is sent back to client if that situation arises. (TO DO: have different file types supported when creating a new file, right now .txt files are created every time)
    - Saving files works and an auto saving feature has been implemented. Every 10 seconds the contents of the shareJS document is saved to the physical file on the fileserver
    - The default editor is now just a ace -text editor (TO DO: when clicking save when the default tab is focused will result in a "save as" type reaction)
    - Tabs are able to be closed (TO DO: end shareJS doc stream for closed tabs)
- Ported Weebly site over to ISU server

Bryan Passini

- Started to look into integrating the ace editor with sharejs 0.7.
    - Right now, attempting to re-write sharejs 0.6 ace.js file using 0.7 syntax. There are a few files online that attempt to do this, but none are perfect. I am using these as a reference though. I think I am getting close, but there are still a few errors I need to flush out. Once I get all the errors straightened out, I think it should work!
    - If this does not work, I have found a plan b: allow ace to work on a div.

Pending Issues

- Shell streaming / Filesystem Concerns:

  - Do we need to allow for users to spawn their own shells within the classroom container?
  - Do we need to have a concept of “syncing” the ShareJS documents onto the filesystem?
  - Followed up with Joe Zambreno: Our main concern was with the number of users doing thing at the same time, and Joe
- Demo
  - The demo still doesn’t look very pretty
  - Trying to use techniques that will be easy for a beginning programmer to pick up on - intuitive website design
  - Can we save files other than .txt files with the demo? Seems like it may not be possible to save .java or .js files using node file server yet.
- ShareJS 0.6 vs 0.7
  - Several cool features in 0.7, such as
    - Querying for open documents
    - Unsubscribing from documents
  - However, some things would be lost from 0.6
    - Out-of-the-box ShareJS integration with Ace editor
  - Currently we are using 0.6 for the working demo
- Should users management have its own server?
  - Right now it currently uses fileserver
  - Will need to connect with ShareJS component to allow or disallow edits to documents

Plans for Upcoming Week

- **Everyone**
  - Meet to integrate new modules to site
  - Think about the upcoming presentation
    - General order of topics, how much time to spend on what, etc.
- Jake Bertram
  - Work on terminal support - make it less fragile
  - Work on filesystem support

        - Docker containers need to share a filesystem with the host system
        - Will help to integrate all the shareJS stuff with the docker stuff
- Dan Smith
    - Note: Out of town Tuesday and Wednesday
    - Make connection to shell servers more graceful
        - Show shell while connecting
        - Retry requests to connection info API
        - Give info messages to user on connection status
        - Attempt reconnect on disconnect
    - Integrate connection info API with room manager to get real connection info (or just use what Jake wrote if applicable)
- Jacob Wallraff
    - Integrate updated modules with the web page
    - (Will be a part of the meeting to integrate different parts)
- Kyle Tietz
    - Figure out how to logout user on refresh (will not be what we ultimately want, but want to be able to work with refreshes)
    - Add permissions to users to allow or disallow edits in ShareJS
- Erich Kuerschner
    - Continue fleshing out features in the shareJS demo. Some big work items are mentioned in my section above.
    - Clean up and organize code
    - Fix bugs from added features (regression testing)
- Bryan Passini
    - Finish trying to make ace.js work with sharejs. This can end by concluding that it is or is not possible. This will help us decide which version of sharejs to use.