

Team Number: May15-31
Project Name: CoderLab
Client / Advisor: Joe Zambreno
Due: 9/29/2014

Week 4 Report (9/23/14 - 9/29/14)

Name (Role)	Team Meeting (9/29)	Advisor Meeting (9/25)	Week Hours	Total Hours
Jake Bertram (Comm)	P	P	5	15
Dan Smith (Key Concepts)	P	P	5	13
Kyle Tietz (Lead)	AE	P	4	12
Jacob Wallraff (Webmaster)	P	P	4	12
Erich Kuerschner (Webmaster)	P	P	5	13.5
Bryan Passini (Comm)	AE	P	5	15.5

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

Advisor Meeting Notes (9/25)

- Tasks:
 - Erich: sharejs
 - Jacob: website && contact csg about servers && start project plan (9/25)
 - Dan: togetherJS
 - Jake: docker service && support
 - Kyle: looking for university vps provider
 - Bryan: in-browser shell research
- Todo: more work / research / proof-of-concepts

Meeting Minutes (9/29)

- Looked at project website on weebly
- Went over individual accomplishments during the past week
- Finished first draft of project plan

Group Accomplishments

- Completed first draft of project plan

Individual Accomplishments

Jacob Bertram

- Docker - Writing a service for docker containers to accept code and run it
 - Similar to this idea I shared last week:
<http://blog.remoteinterview.io/post/89639823776/how-we-used-docker-to-compile-and-run-untrusted-code>
 - Source/Docs: <https://git.ece.iastate.edu/coderlab/docker-server/tree/master>
 - Docker is incomplete, the server can compile/run a single C file
 - See the README.md
- GitLab - Spoke with CSG about our missing Group, Kyle helped sort it out
- SSO - Still waiting for reply, I'll send another email once we get more technologies sorted out
- Will be offering help with NodeJS as needed

Dan Smith

- TogetherJS
 - Building a local server/set of assets was a failure
 - Not sure whether my environment was broken or if the build is broken
 - Uses a Mozilla-hosted hub server by default to pass messages to clients
 - Can be changed to a local server that we host
 - No persistence built in
 - Click indicators can be disabled both globally and per-element
 - Supports sending arbitrary messages triggered by events of our choosing
 - Visuals do not appear to be very configurable
 - No support for text cursors (?)
 - Not really intended specifically for collaboratively editing text/code (although support for it exists)
 - Watches events from the entire document
 - Meant more for generic real-time collab
 - Needs testing with CodeMirror/Ace
- Goal for this week:

- Create mockups for TogetherJS using Ace/CodeMirror to determine compatibility with advanced features

Kyle Tietz

- Looked at several cloud service solutions that we could use to get started
 - Microsoft Azure, Google, Amazon Web Services
 - Amazon Web Services (AWS) looked best, will get started with free trial
- Managed group and projects on GitLab

Jacob Wallraff

- Created project plan outline
- Sent email to CSG asking about server resources and how to go about getting them
- Hosting an ASP.NET project on linux:
 - Port: <http://www.mono-project.com/docs/web/porting-aspnet-applications/>
 - Mono project: <http://www.mono-project.com/docs/about-mono/>
- Completed project website with Erich
- Goals for this week
 - get project website hosted on ECE provided space
 - Get an ASP.NET project hosted on linux with Mono project

Erich Kuerschner

- Started work on Project Plan with Jacob
- Completed project website with Jacob
- Started researching ShareJS
 - could be a reasonable option for us from a first glance
 - Server runs on NodeJS
 - fairly simple client-side API
 - should be able integrate nicely with an ASP.NET web app (if thats the direction we end up heading for the front-facing site)
- Goals for next week:
 - Have a solid understanding of ShareJS and its supporting technologies
 - Start work on front-facing site (basic concepts for look and feel)

Bryan Passini

- Looked into different technologies for our in-browser console

- Shellinabox
 - web-based terminal emulator using AJAX
 - similar to an ssh client, but shellinabox needs to be installed and started on the server
 - would be able to use any commands supported by the server
 - not sure how this would work with docker
 - need to look further into how shellinabox handles multiple users - may need to spin up a new container for each new user
- jqconsole
 - jquery library that gives you the look and feel of a terminal, but not the features of a terminal
 - provides built in functions to manipulate the look and feel of the terminal, as well as to handle input and output
 - would rely on redirecting user input to the server and redirecting server output to the user
 - I am pretty sure coderpad.io uses this library
- Built a prototype that has one div using shellinabox and another div using jqconsole

Pending Issues

- Continue working on project plan
- More research / development is needed to help with planning in the future.

Plans for Upcoming Week

- Does prof. Zambreno want to have access to CoderLab group / LabCoders team on gitlab?
 - We didn't ask, but most likely. We'll be adding him soon.
- Continue the project plan, talk with Joe Zambreno about it at Thursday's meeting.