

Social Coding

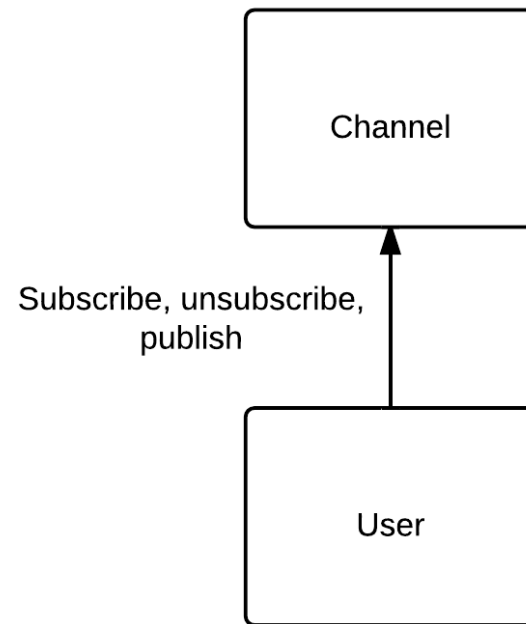
A Case Study with Julia

Design

Mockup

The screenshot shows a web browser window titled "Julia Social" with the URL `http://juliasocial.mit.edu?sessionId=1`. The page features a dark header with the "JuliaSocial" logo. Below the header is a navigation bar with three buttons: "Prompt", "Editor", and "Run Code". The main content area is split into two columns. The left column contains a stylized ASCII art logo for Julia, followed by a list of user interactions: "[Jeff] a = 1+2", "[Jeff] ==> 3", "[Bob] b = a+2+3", "[Bob] ==> 8", and "Eddy> b+a". The right column contains a list of "Online Users" with the names James, Jeff, Bob, and Alice, each on a separate row with a light gray background. The browser's address bar and navigation icons are visible at the top.

Object Model



Implementation

Software stack

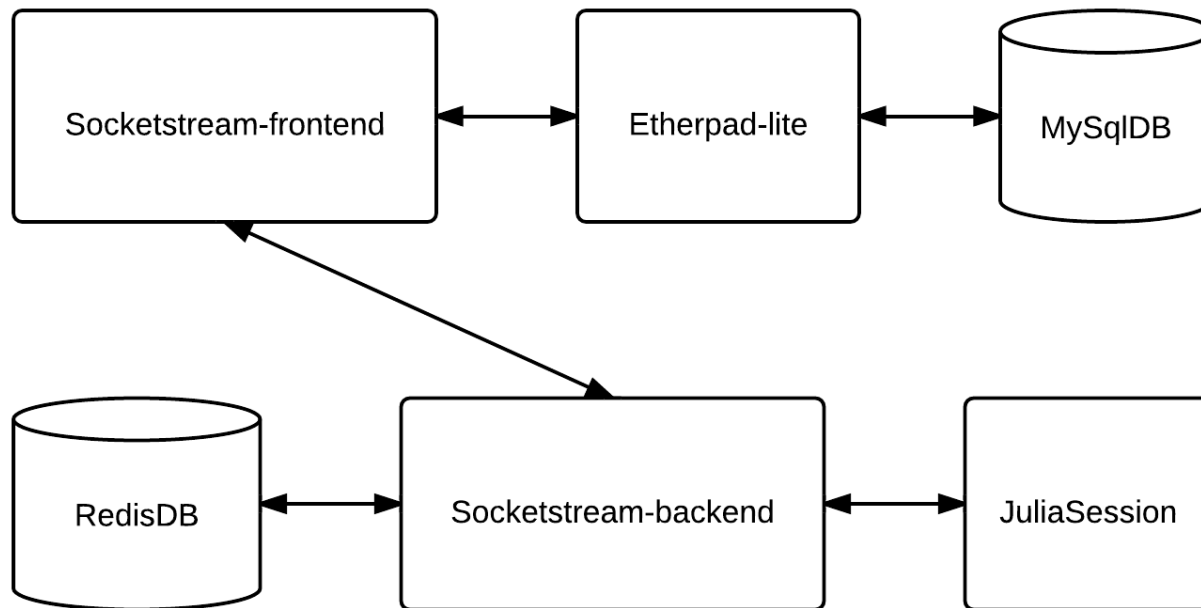
Socketstream Framework

- NodeJS, server-side javascript
- CoffeeScript, syntactic sugar of javascript
- Jade+Mustache template engine
- Stylus, syntactic sugar of css
- Socket.IO, websocket protocol with fallback
- Scalable with ZeroMQ, a transport layer protocol
- Redis DB, an open-source, networked, in-memory, key-value data store with optional durability

Etherpad-lite for IDE

- MySQLDB

Architecture



Library

jq-ui for ui elements

jq-console for the console

jq-ui-chatbox for the chatbox

jq-purr for notification

Stephan's Julia web design

Demo

The Julia Language

- [Interactive Prompt](#)
- [Editor](#)
- [Documentation](#)
- [Julia Home](#)

Quick Reference

For help, try one of these:

```
help()  
help(function)  
apropos("string")
```

Restart Julia

```
Welcome to Julia Social.  
Your name is au.  
au> 1+2+3  
[au] 1+2+3  
[au] ==> 6  
au> █
```

People Online

1 users online

The Julia Language

- Interactive Prompt
- **Editor**
- Documentation
- Julia Home

Quick Reference

For help, try one of these:

```
help()  
help(function)  
apropos("string")
```

Run Code In Prompt



```
function foo(n)  
    a = randn(n,n)  
    x = rand(n,1)  
    return a*x  
end
```

People Online

1 users online

What's next?

Julia Syntax Parser

Multiple Rooms

Multiple Languages

Facebook/Twitter Integration

Julia Syntax Highlighting

Julia Mobile

Thank You

Professor Alan Edelman, Jeff Bezanson, Stephan Boyer, Julia developers and the class.

Questions, Suggestions,
Comments?

MIT OpenCourseWare
<http://ocw.mit.edu>

18.337J / 6.338J Parallel Computing
Fall 2011

For information about citing these materials or our Terms of Use, visit: <http://ocw.mit.edu/terms>.