Social Coding
A Case Study with Julia

Design

Mockup

JuliaSocial

| Prompt | Editor | Run Code |

```
       _
   _   _ _(_)_      |
  (_) | (_) (_)     |   A fresh approach to technical computing
   _ _   _| |_  __  |
  | | | | | | |/ _` |   Version 0.0.0-prerelease
  | | |_| | | | (_| |   Commit 3fd3106f36 (2011-10-27 19:29:28)
 _/ |\__'_|_|_|\__'_| |
|__/                 |

[Jeff] a = 1+2
[Jeff] ==> 3
[Bob] b = a+2+3
[Bob] ==> 8

Eddy> b+a
```

Online Users

James

Jeff

Bob

Alice

Object Model
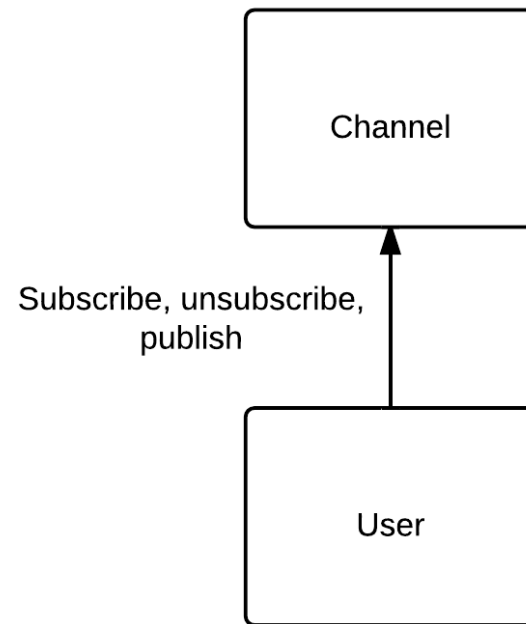
Implementation

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
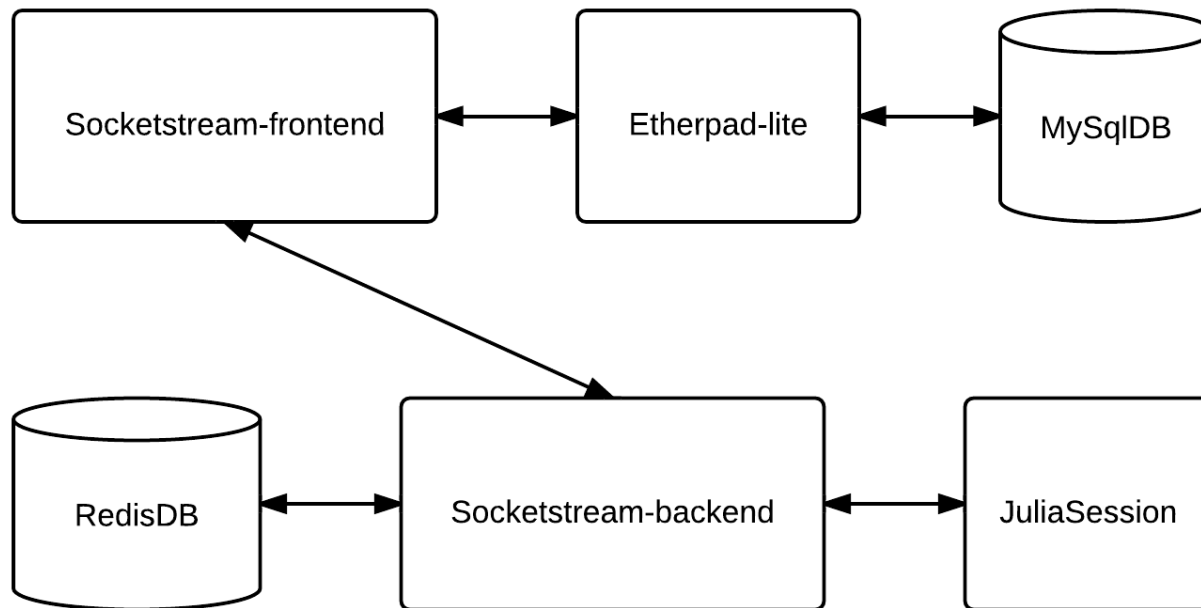
Library

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")
```

```
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
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Quick Reference

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

Run Code In Prompt

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

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?

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