Learning Web Programming via Haskell

Tad Doxsee
tad@planit9.com
www.linkedin.com/in/taddoxsee
Where I’m Coming From

• Mechanical Engineering background

• Developed and managed FORTRAN, C++ mechanical engineering software development
Learning through Play and Work

• Toy programs

• Familiar domain space (laminated composite materials, FEA solver for PDEs)

• Scripts, tools and prototypes for work
Web Programming

• Complete newbie

• Chose Yesod, because it had the best documentation and Michael Snoyman and Greg Weber are active bloggers

• Toy programs from the book
Another Itch

• Project management is a necessary evil.

• MS Project - the standard, super powerful, not fun

• Difficult to make it do what I wanted it to do

• Could I learn web programming and more Haskell by writing an app designed just for me?
Observations of a Newbie

• Steep learning curve

• Yesod and other Haskell libraries are documented assuming the reader has advanced web programming knowledge

• Yesod works very well for the server.

• Broad set of libraries exists

• Super helpful community. Easy to ask stupid questions and get excellent answers. (Yesod Google groups, Stack Overflow, Diagrams Google groups.)

• Have not yet explored Haskell -> JS for client
What’s the App For?

• Beyond the To Do list
• Defining, scheduling and tracking tasks
• Small teams needing a simple project management system
• First (or second) level functional managers who need to do some basic project management
• Teams where individual contributors are responsible for their own schedules
Architecture

Design goals: fast, easy to use, collaborative

Proxy
  WAI

Users server
  Yesod
  Project server

PostrgreSQL
  Persistent

Running on Amazon Web Services
Libraries Used

• Yesod ecosystem: shakespeare templates / persistent
• stripe (payment system)
• diagrams / blaze-svg (for drawing the Gannt chart)
• aeson
• cereal
• mime-mail (for invitations and status updates)
• Bootstrap, JQuery
Bottom Line: It’s Doable
Demo
Looking for Beta Users

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