Rapid Web App Development

Using Spring Roo & Heroku

Vasu Durgavarjhula

@d_vasu

dvasu@yahoo.com

Why ??

- Developer productivity is a key competitive advantage
- Focus less on developing the *right way* and more on developing the *right it*
- Modern frameworks incorporate the right way (aka best practices) as part of their offering
- Time saved can be channeled toward creativity, innovation and getting products in front of customers faster

Introduction

- Spring Roo (started in late 2009)
  - No engineering trade offs in using Roo
  - No run time impact
  - No additional memory or CPU consumption
  - No lock in; can remove Roo in a few minutes
- Heroku (founded in 2007)
  - Cloud platform as a service which runs on AWS
  - Free to start (512 MB RAM, 1 GB SWAP, similar to small EC2 instance)
  - No deployment scripts
  - Scaling is easy
  - No sys admin required
  - Erosion resistant

What we will do today

- Build a web app from scratch
- Generate Automated Tests
- Expose RESTful JSON web services
- Deploy the app to the cloud
- Feature tour

What you need

- Make sure you have Maven and Java 1.6 or higher
- GIT
- Download Spring Roo http://s3.amazonaws.com/dist.springframework.org/release/ROO/spring-roo-1.2.2.RELEASE.zip
- For this demo, install PostgresSQL locally (http://www.postgresql.org/download/)
- Open an account on Heroku (http://www.heroku.com/).
- Install Heroku Toolbelt which includes the Heroku command line tool (https://toolbelt.heroku.com/)

Our App

- Quote Service: Quote service generates sales quotes for a given list of products. This can be used to enable sales of software products over the web

Model

- Quote
- SKU
- SalesOrder
- Category

DEMO

Let's Roo

Under the hood

- How Spring Roo Works
  - AspectJ
  - Customizing look and feel
  - Integration Tests and Selenium tests
- How Heroku Works
  - Cedar stack

Feature Tour

- Review some Spring Roo Commands (http://static.springsource.org/spring-roo/reference/html/command-index.html)
- Spring security
- Persistence
- Examples of Add Ons
  - Solr , Twitter, Maps, Email, Video, Photos
- Spring MVC
- Database reverse engineering
- Extensible. You can add your own add ons

Heroku Feature Tour

- How does it work
  - Dyno (virtual machine)
  - Stack (deployment environment including language runtime, OS etc)
  - Slug (application package)
- Collaboration
- Add Ons
- Cedar Stack
- Staging and production environments

Homework

- Follow the README file to setup the Quote app locally
- Develop a Roo add-on to auto generate Fitnesse tests a Maven task to run those tests locally
- Add-on to setup the your organization specific project artifacts
- Add Solr text search to the quote app