Cours IUT – CSID 2012

An Introduction to Spring Roo

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Outline

- What is Spring Roo ?
- Self-trained, documentations
- 5 Minutes demo
- Explained design principles
- Eclipse and Roo

In few Words

- Tool to Create a complete Web application
  - In 2 Minutes
  - Including Database Persistence
  - With standards JAVA libraries only
  - No runtime dependency

- Make Java FUN, FAST, EASY

http://www.infoq.com/presentations/Introducing-Spring-Roo

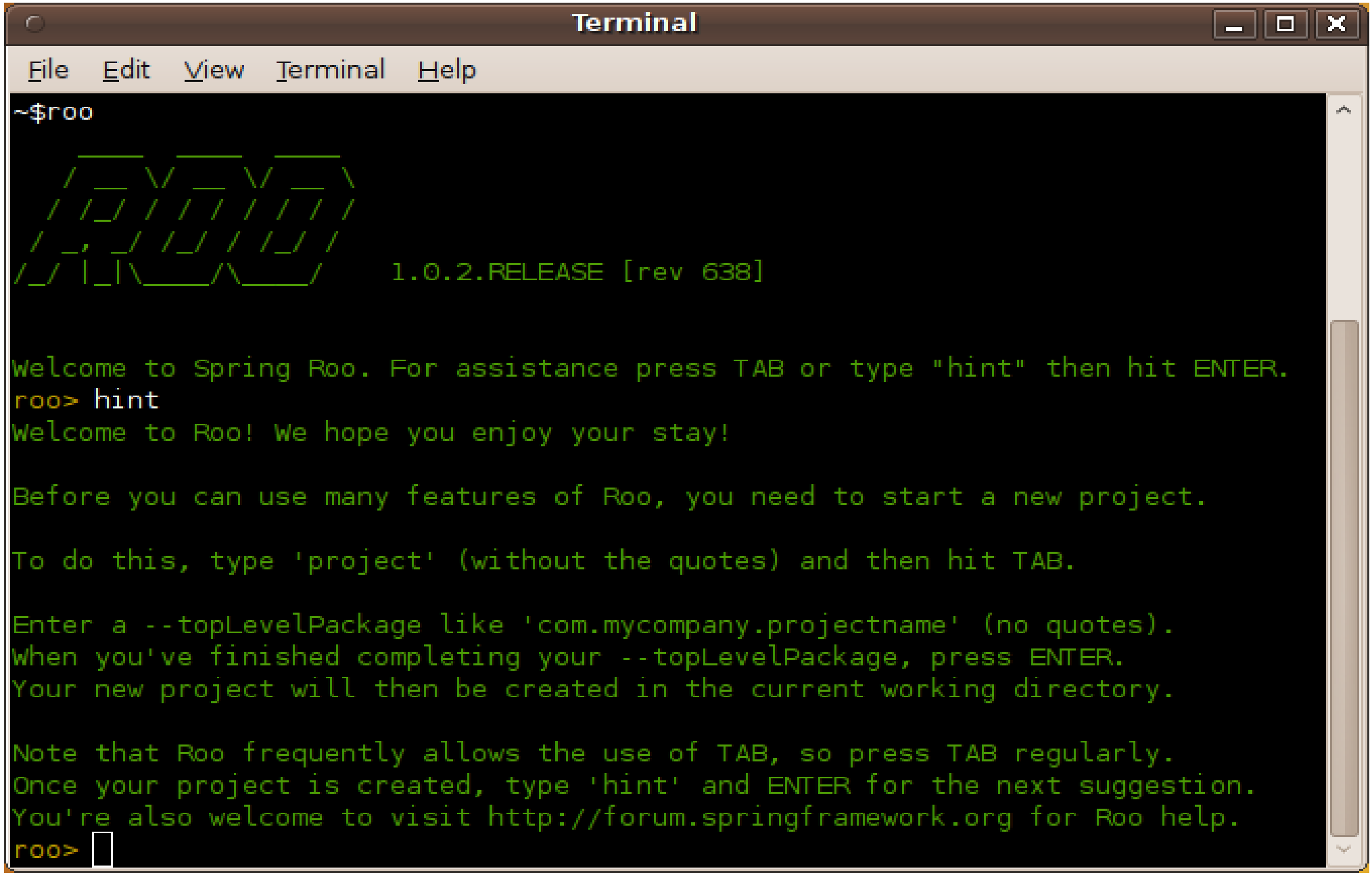
What Is Roo?

- Roo is an extensible, text-based RAD tool for Java
- Roo is development-time only (no Roo runtime)

```
balex@lucky:~/helloworld$ roo
    ____  ____  ____
   / __ \/ __ \/ __ \
  / /_/ / / / / / / /
 / _, _/ /_/ / /_/ /
/_/ |_|\____/\____/    1.0.0.RC2 [rev 321]

Welcome to Spring Roo. For assistance press TAB or type "hint" then hit ENTER.
roo>
```

Roo : Shell, Hint Command

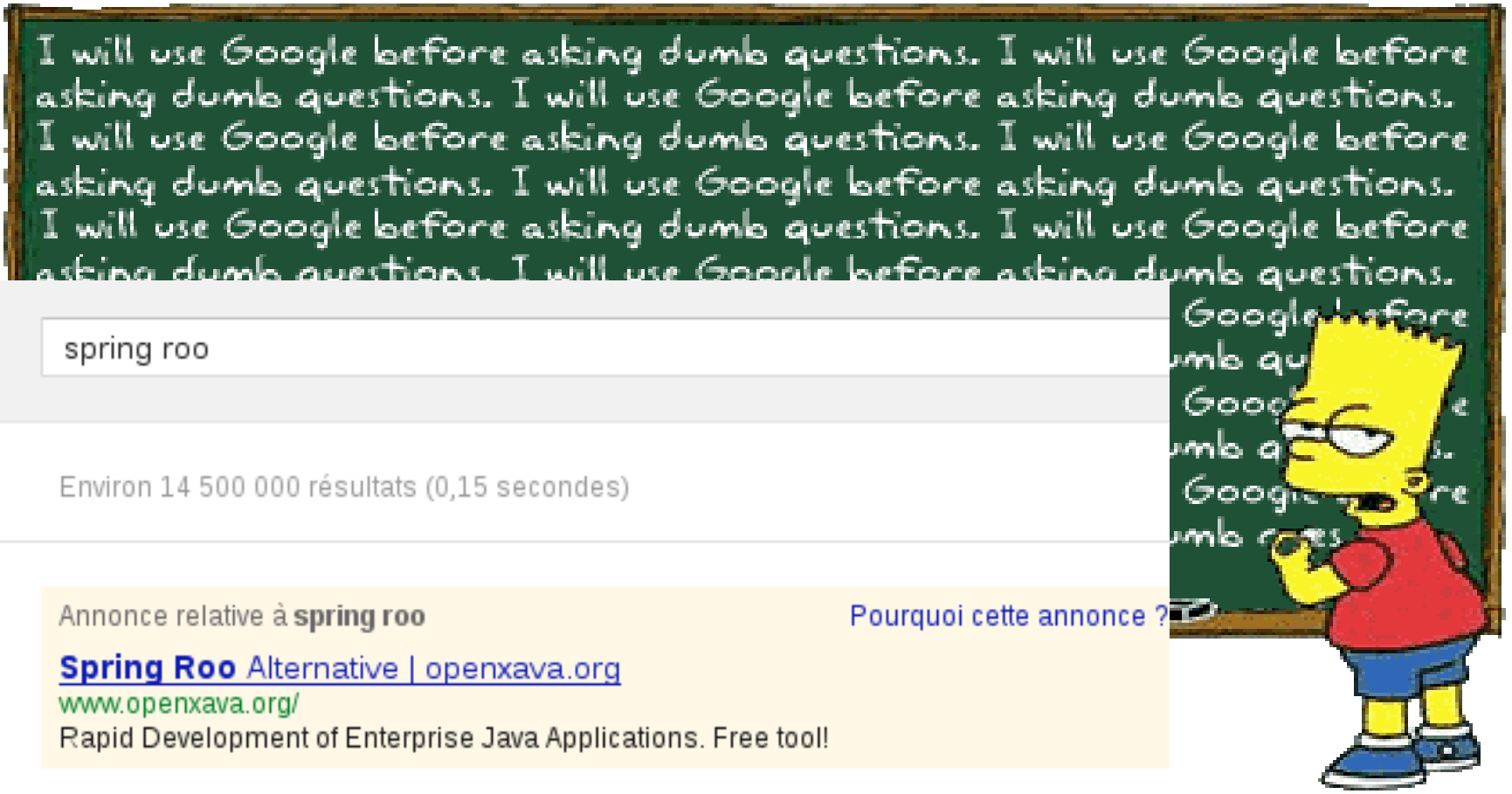


Why I didn't Heard About It Before ?

- Strange name …
  - ROO = Real Object Oriented
  - Now “Roo” … a name by itself
- Recent : 1.0.0.RELEASE in December 2009

- Concurrenced by Grails, Rails, Php
- Roo is “only“ a tool above java standards
  - Many many Java standards (spring, jpa, web, …)
  - Simple but underlying frameworks are “not”

Google - Spring Roo



Google spring roo

Recherche Environ 14 500 000 résultats (0,15 secondes)

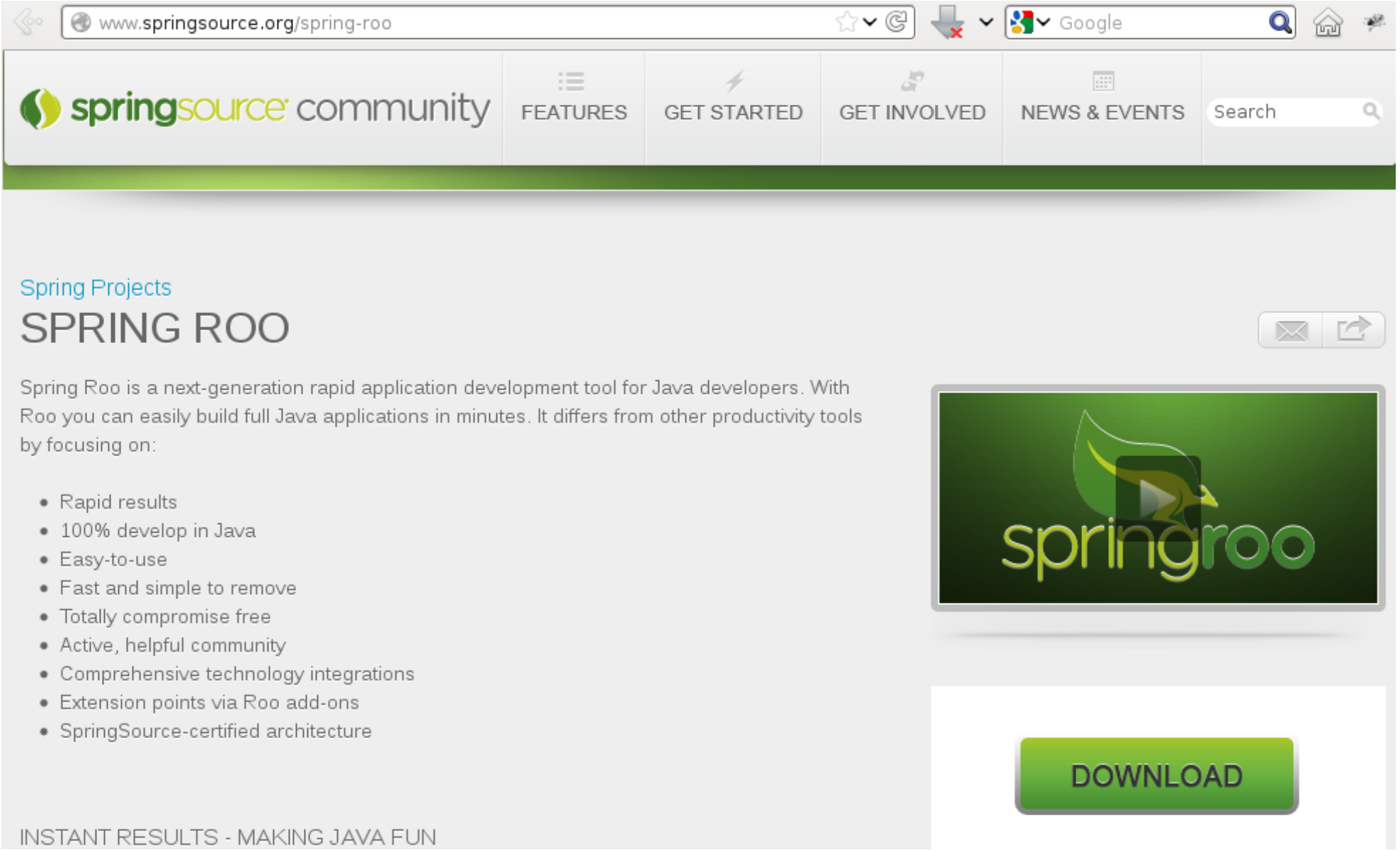
Web
Images
Maps
Vidéos
Actualités
Shopping
Plus

Annonce relative à **spring roo** Pourquoi cette annonce ?

Spring Roo Alternative | openxava.org
www.openxava.org/
Rapid Development of Enterprise Java Applications. Free tool!

Spring Roo | SpringSource.org
www.springsource.org/spring-roo/ - Traduire cette page
Spring Roo is a next-generation rapid application development tool for Java developers. With Roo you can easily build full Java applications in minutes. It differs ...
Download - Documentation - Discussions - Why Spring Roo?

Roo Home: http://www.springsource.org/spring-roo



Wikipedia - Spring Roo

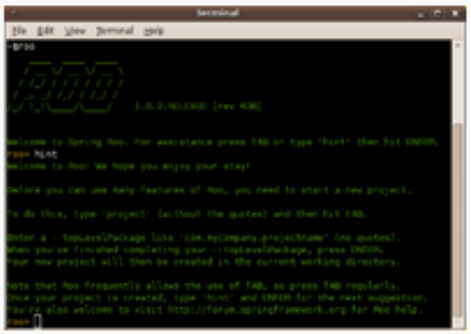
Spring Roo

From Wikipedia, the free encyclopedia

Spring Roo is an open source software tool that uses convention-over-configuration principles to provide rapid application development of Java-based enterprise software.[1] The resulting applications use common Java technologies such as Spring Framework, Java Persistence API, Java Server Pages, Apache Maven and AspectJ.[2] Spring Roo is a member of the Spring portfolio of projects.

Contents [hide]

Spring Roo



Spring Roo 1.0.2 showing the "hint" comm

Developer(s)	VMware (SpringSo
Stable release	1.2.1.RELEASE / Fe 2012; 5 months ag

Spring Roo Wikipedia Explained

From Wikipedia, the free encyclopedia

Spring Roo is an open source software tool that uses convention-over-configuration principles to provide rapid application development of Java-based enterprise software.[1] The resulting applications use common Java technologies such as Spring Framework, Java Persistence API, Java Server Pages, Apache Maven and AspectJ.[2] Spring Roo is a member of the Spring portfolio of projects.

In github
by springsource

shell window
+ code generator
.. NO runtime

Simplify code
(spring annotations ...)

Like Ruby-On-Rails, Grails

Standards JAVA

Roo = Java Standards

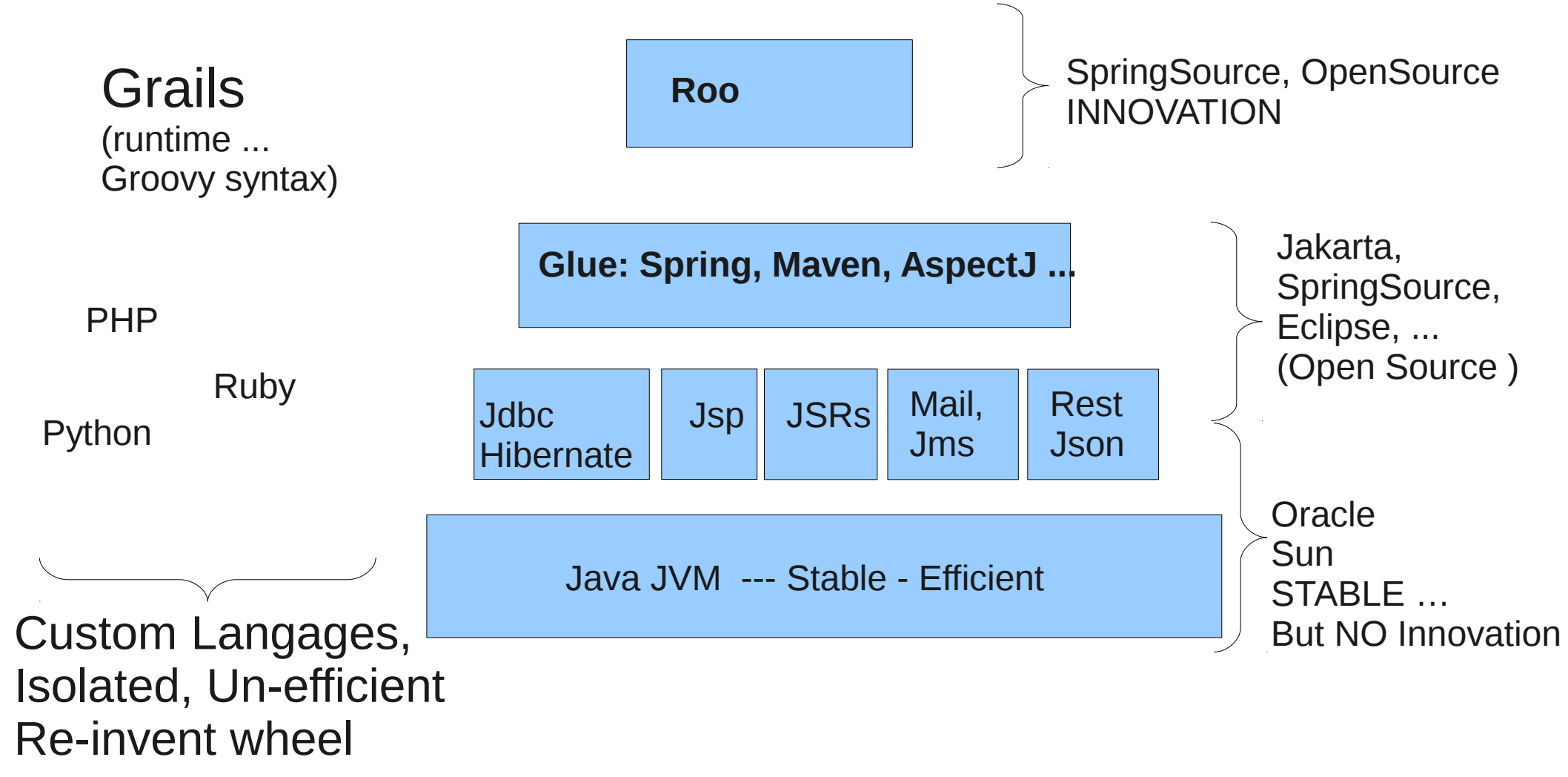
Standards and Technology Compatibility

Roo's default installation facilitates the creation of applications that comply with the following standards

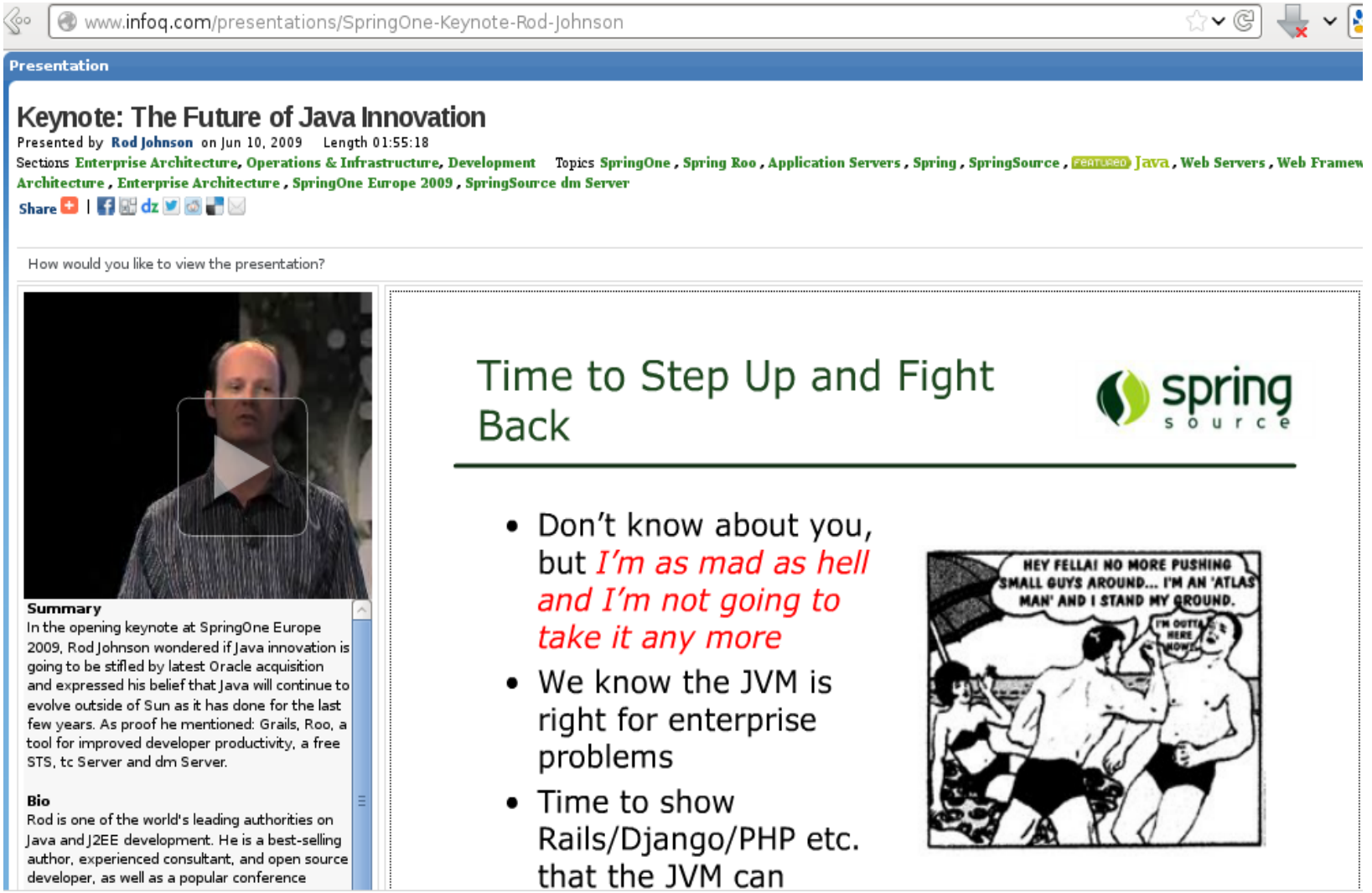
- Apache ActiveMQ (as an embedded JMS implementat
- Adobe Flex (via a SpringSource-provided plugin)
- Apache Maven (version 2.2 or above)
- Apache OpenJPA (as a JPA implementation)
- Apache Solr (search server)
- Apache Tiles (default MVC views)
- Apache Tomcat (hosted execution support)
- AspectJ (used for AOP plus mixins to achieve separati
- AspectJ Development Tools (Eclipse plugin)
- Cloud computing (via SpringSource Cloud Foundry,
- Dojo Toolkit (via Spring JavaScript)
- Eclipse IDE (concurrent execution and project metada
- EclipseLink (as a JPA implementation)
- Google Web Toolkit (since GWT 2.1, including GWT 2.1
- Hibernate (as a JPA implementation)
- Java Bean Validation (JSR 303) (including Hibernate
- Java Database Connectivity (for JPA usage)
- Java Message Service (both message producers and consumers)
- Java Persistence API (multiple implementations)
- Java Transaction API (via Spring transaction abstraction)
- Java (version 5 or above)
- Java Server Pages (default MVC views)
- Jetty (hosted execution support)
- JSON (methods in classes for serialization, deserialization and RES
- JUnit (automated tests for user projects)
- Log4J (installation and configuration)
- OSGi (the Roo tool is built on OSGi)
- Representational State Transfer (REST)
- Selenium (automated tests for user projects)
- Spring Framework (version 3 or above)
- Spring Security (version 3 or above)
- Spring Web Flow (installation and flow definition)
- SpringSource Tool Suite (STS has an embedded Roo shell and R
- Web application resource (WAR file) (for deployment packaging)

Extensibitly Plugins

Comparison Building Blocks – Strength



Rod Johnson: the Future Of Java Innovation



Install

Download and Easy Install

- Download Roo from www.springsource.org/roo
  - Simply unzip and add to your path
- Linux/Apple users would use something like:
  - sudo ln -s $HOME/spring-roo-1.0.0.RC2/bin/roo.sh /usr/bin/roo
- Windows
  - Add $HOME/spring-roo-1.0.0.RC2/bin to system PATH
- A public Subversion repository is also available
  - See readme.txt in root of checkout for dev installation

Getting Started

- Open shell window, Type “roo”

- Interactively :
  - Type “hint” for wizard
  - “tab” for autocompletion on mandatory args
  - “--” then “tab” for optional args
  - “help” : list all commands
  - “help <<command>>”

- Execute tutorial script “script <<file>>”

Sample Script

- Cf in roo/examples/<<project>>.roo
- Cf in your project log.roo
- Sample:

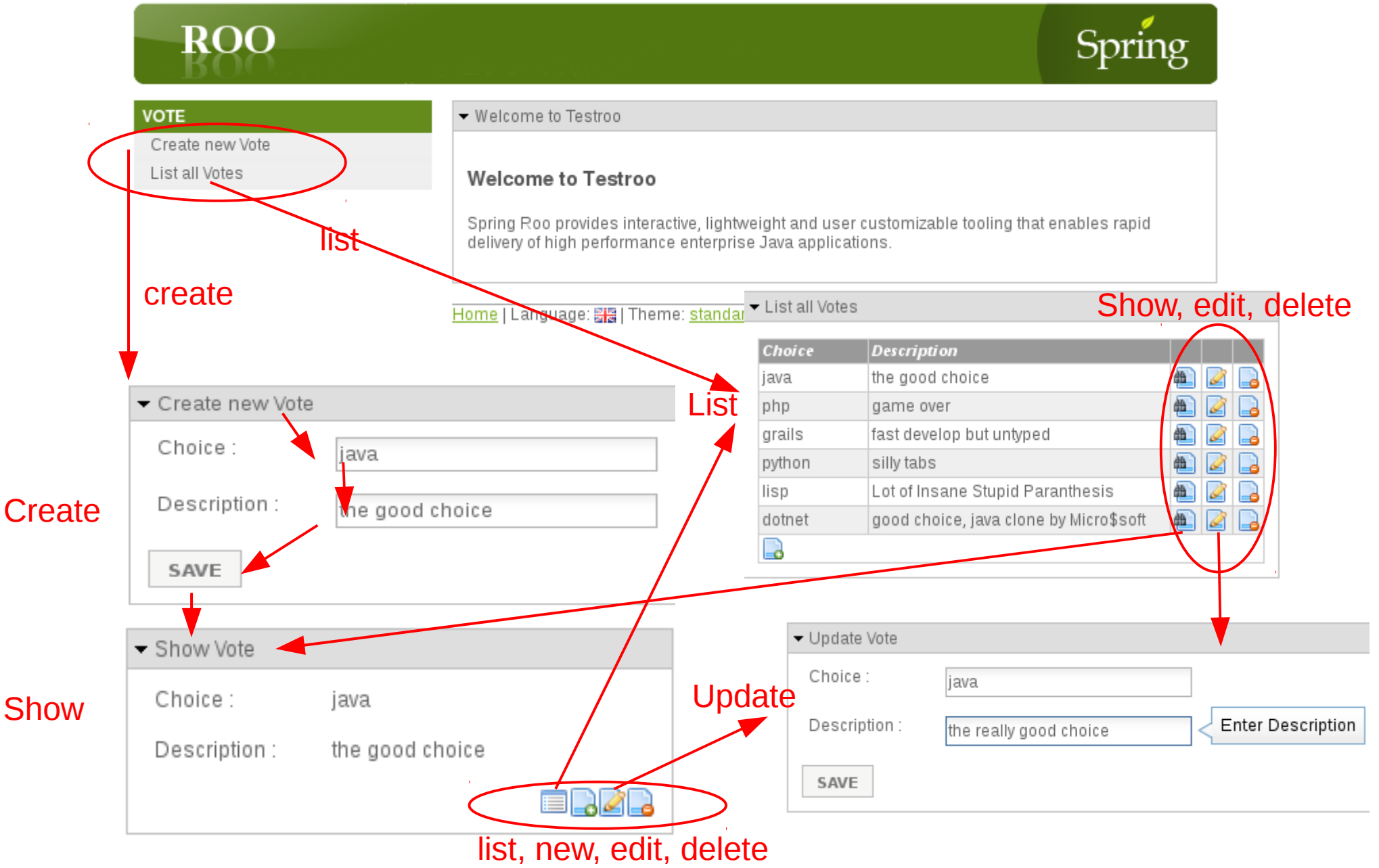
log.roo

```
// Spring Roo 1.2.0.RELEASE [rev 39eb957] log opened at 2012-08
hint
project --topLevelPackage fr.iut.testroo
hint
jpa setup --provider HIBERNATE --database HYPERSONIC_IN_MEMORY
hint
entity jpa --class ~.domain.Vote
field string --fieldName choice --notNull
field string --fieldName description
hint
hint web mvc
web mvc setup
web mvc all --package ~.web
```

Compile, Test & Run It

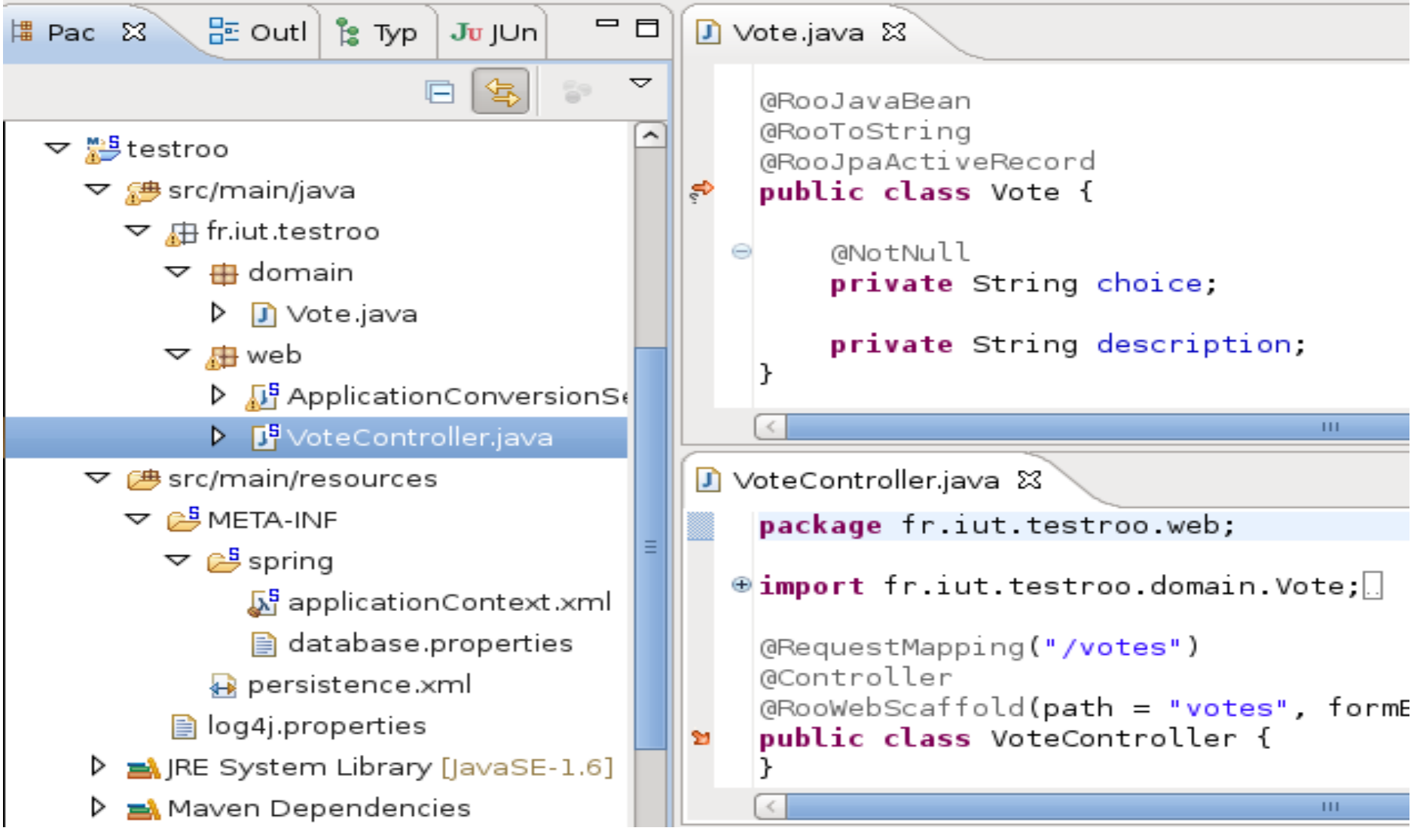
- Compile:
  - Use maven from shell: **$ mvn install**
  - From roo: roo> perform package
- Test:
  - **$ mvn tomcat:run**
  - open http://localhost:8080/test
- Import in Eclipse:
  - Using m2eclipse … import as maven project
  - (old: “perform eclipse” or “mvn eclipse:eclipse”)

Running CRUD !

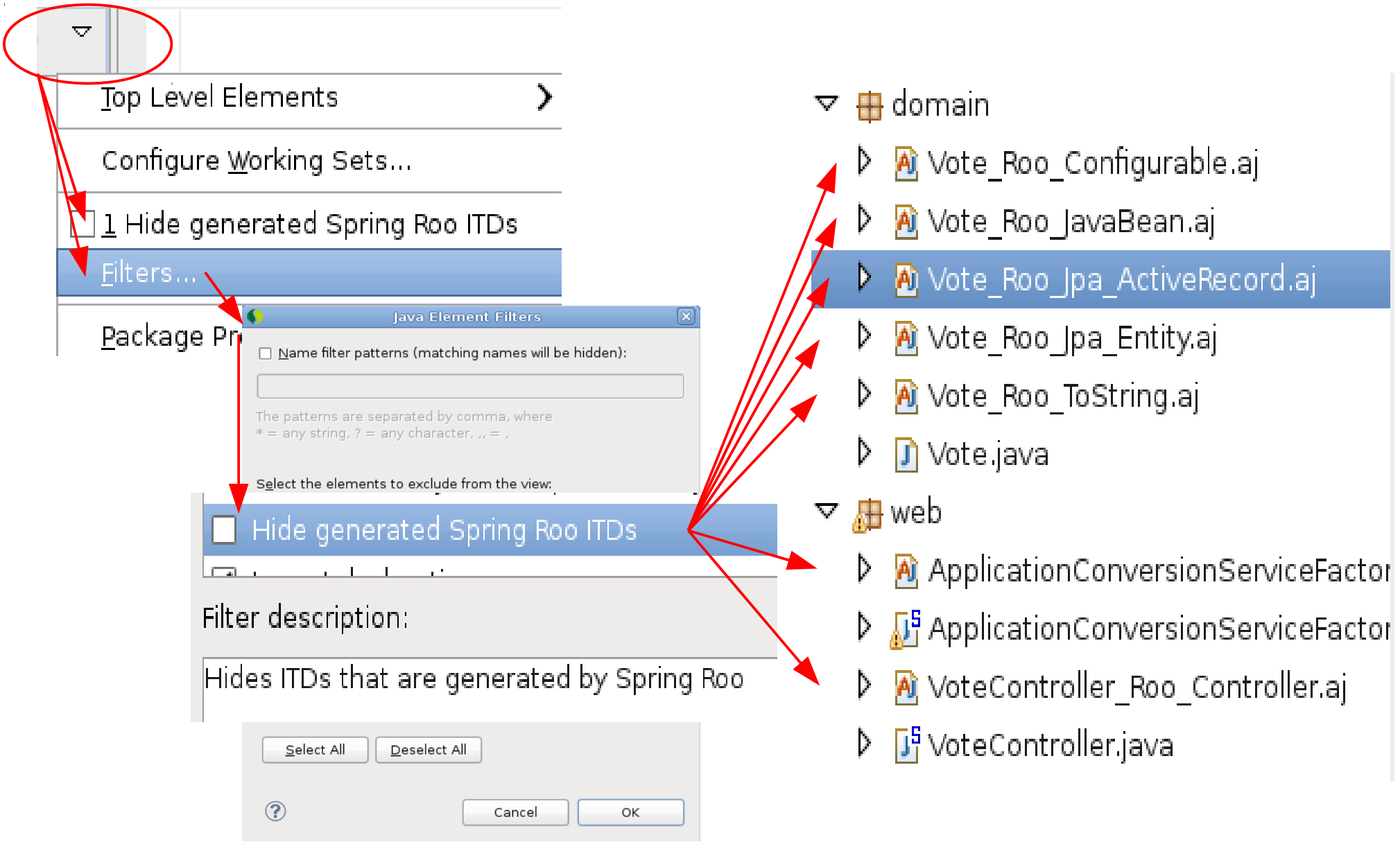


Small Is Beautiful … KISS

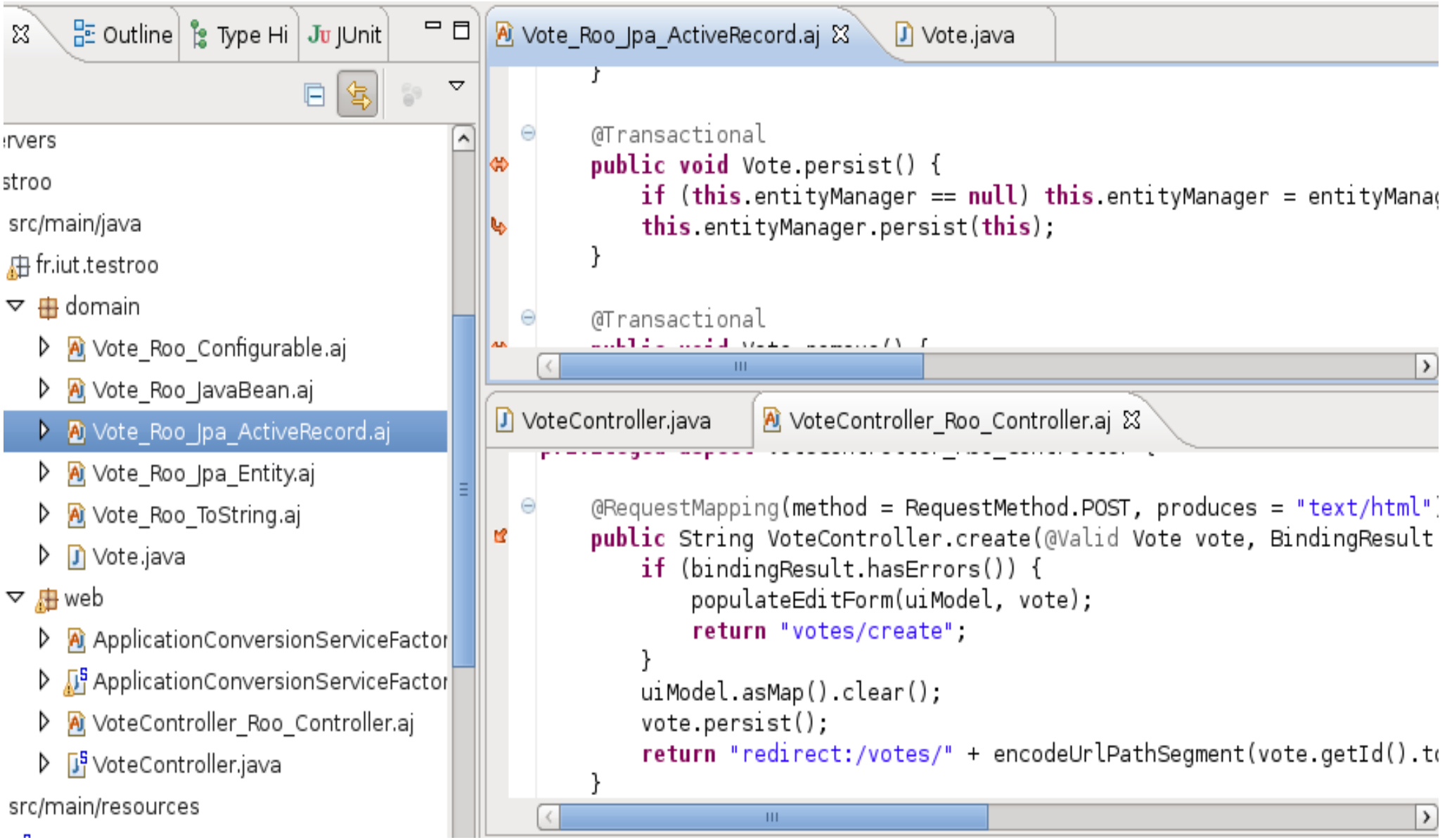
- See ALL User Code in Eclipse (not Generated)



Where Is The Magic ?



User Code + ITD ==AspectJ==> Bytecode



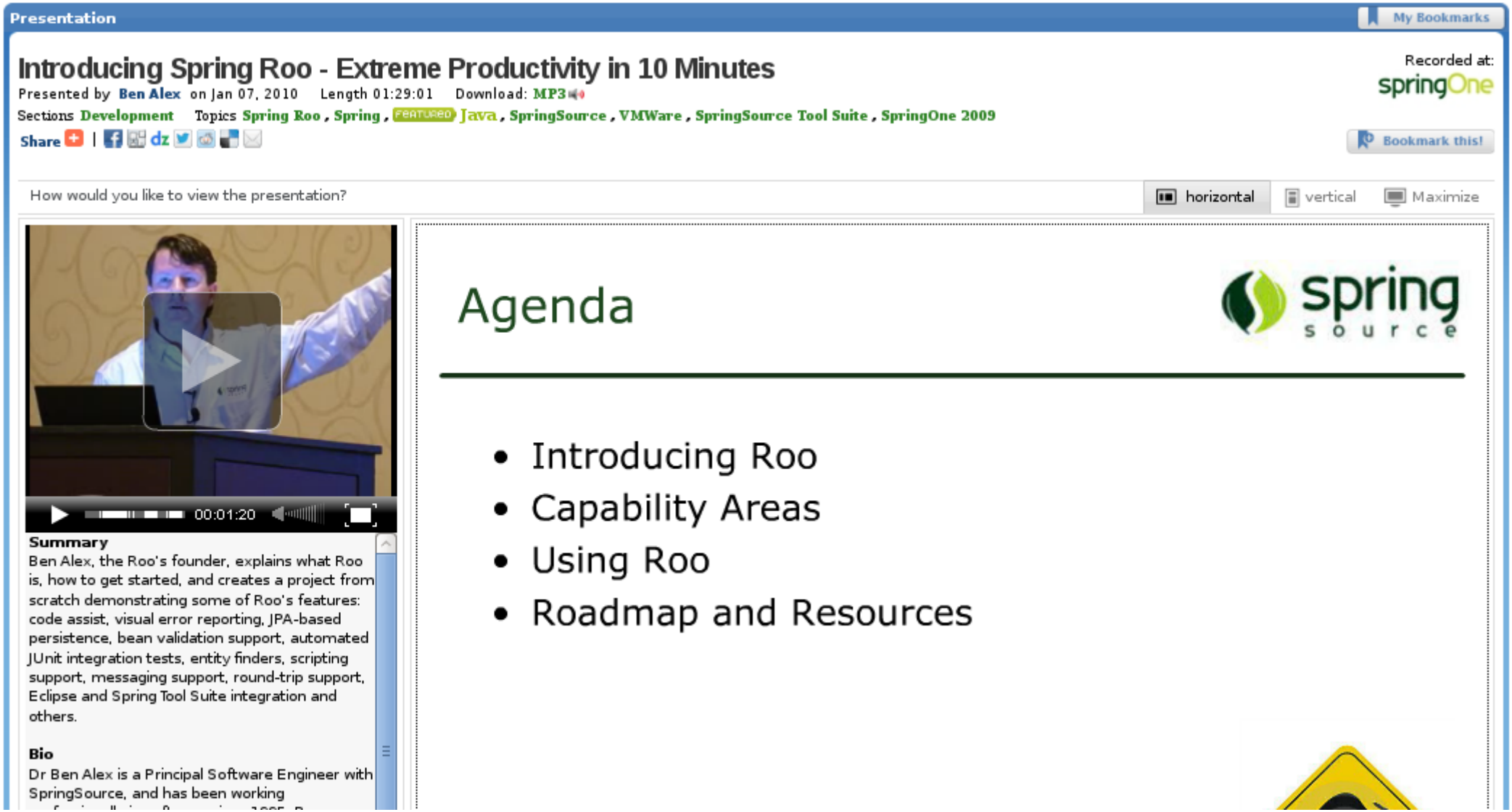
Video – Demo Tutorial

Cf from Home Page :

http://s3.springsource.com/MRKT/roo/2010-01-Five_Minutes_Roo.mov

Video from Ben Alex

http://www.infoq.com/presentations/Introducing-Spring-Roo



Tutorial

static.springsource.org/spring-roo/reference/html/beginning.html

Spring Framework

Chapter 2. Beginning With Roo: The Tutorial

In this chapter we'll build an app step-by-step together in a relatively fast side-steps to other sections of this manual.

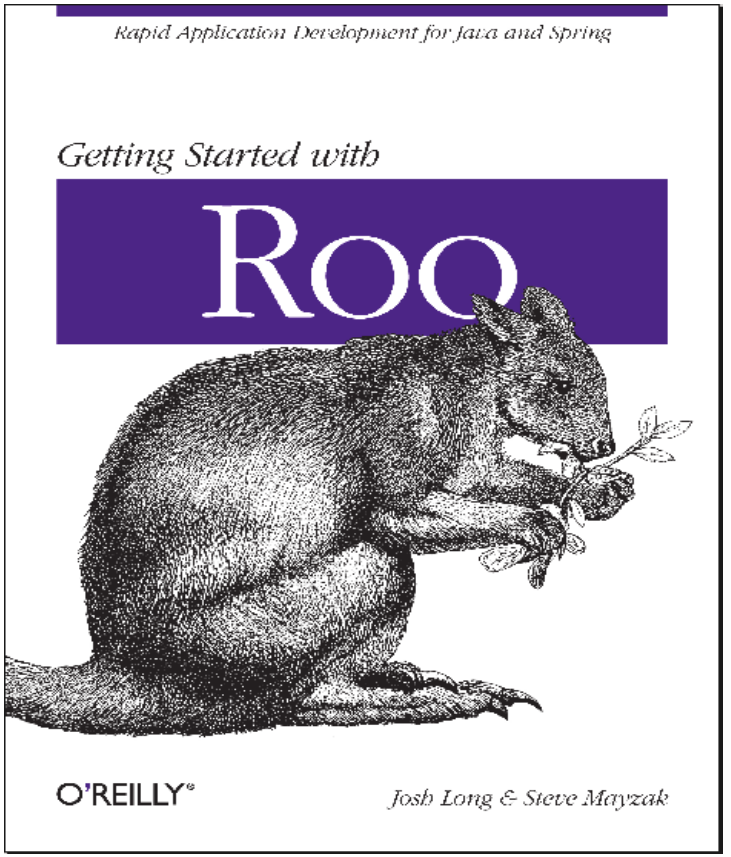
2.1. What You'll Learn

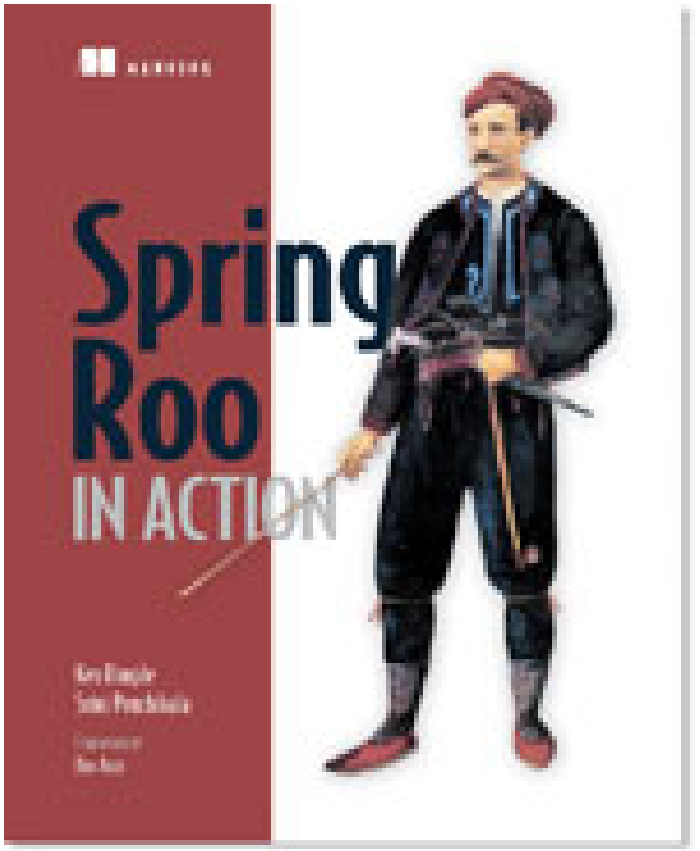
In this tutorial you will learn to create a complete Web application from scrat Roo. In particular you will learn how to use the Roo shell for:

- project creation
- creation and development of domain objects (JPA entities)
- adding fields of different types to the domain objects
- creating relationships between domain objects
- automatic creation of integration tests
- creating workspace artifacts to import the project into your IDE
- automatic scaffolding of a Web tier
- running the application in a Web container
- controlling and securing access to different views in the application
- customizing the look and feel of the Web UI for our business domain
- creating and running Selenium tests
- deployment and backup of your application

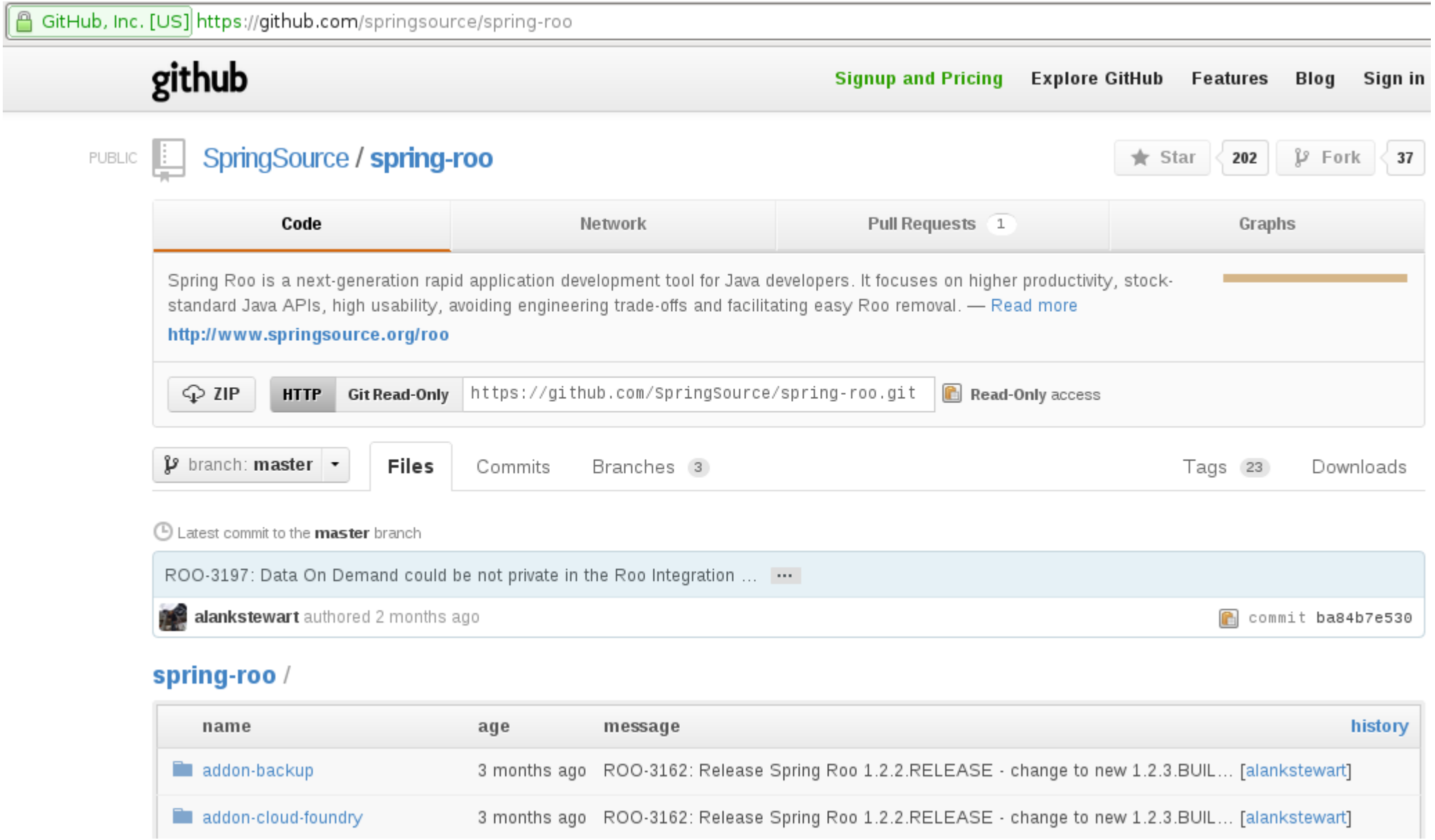
Books

http://spring-roo-repository.springsource.org/Getting_Started_with_Roo.pdf



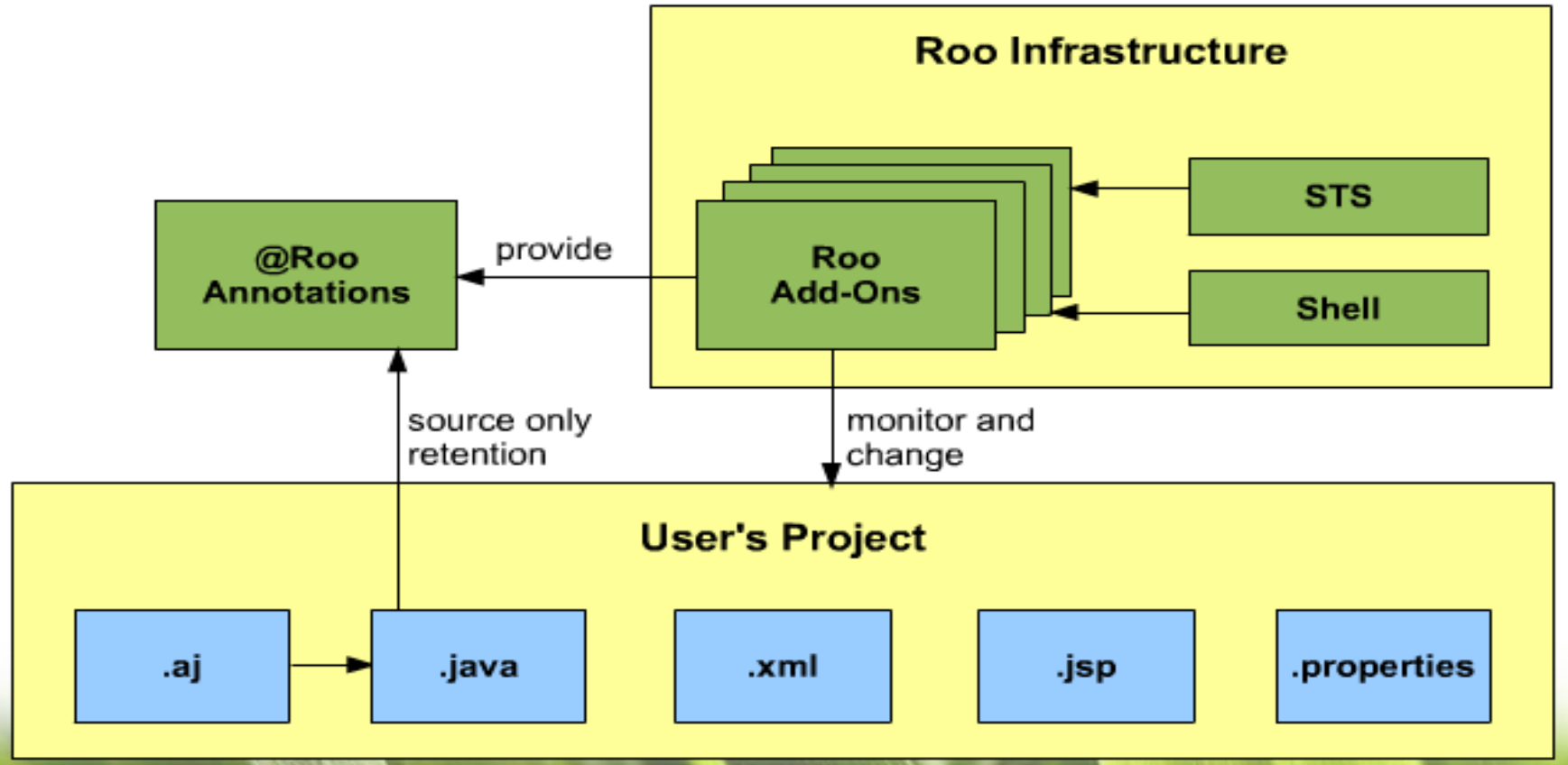


Source Code

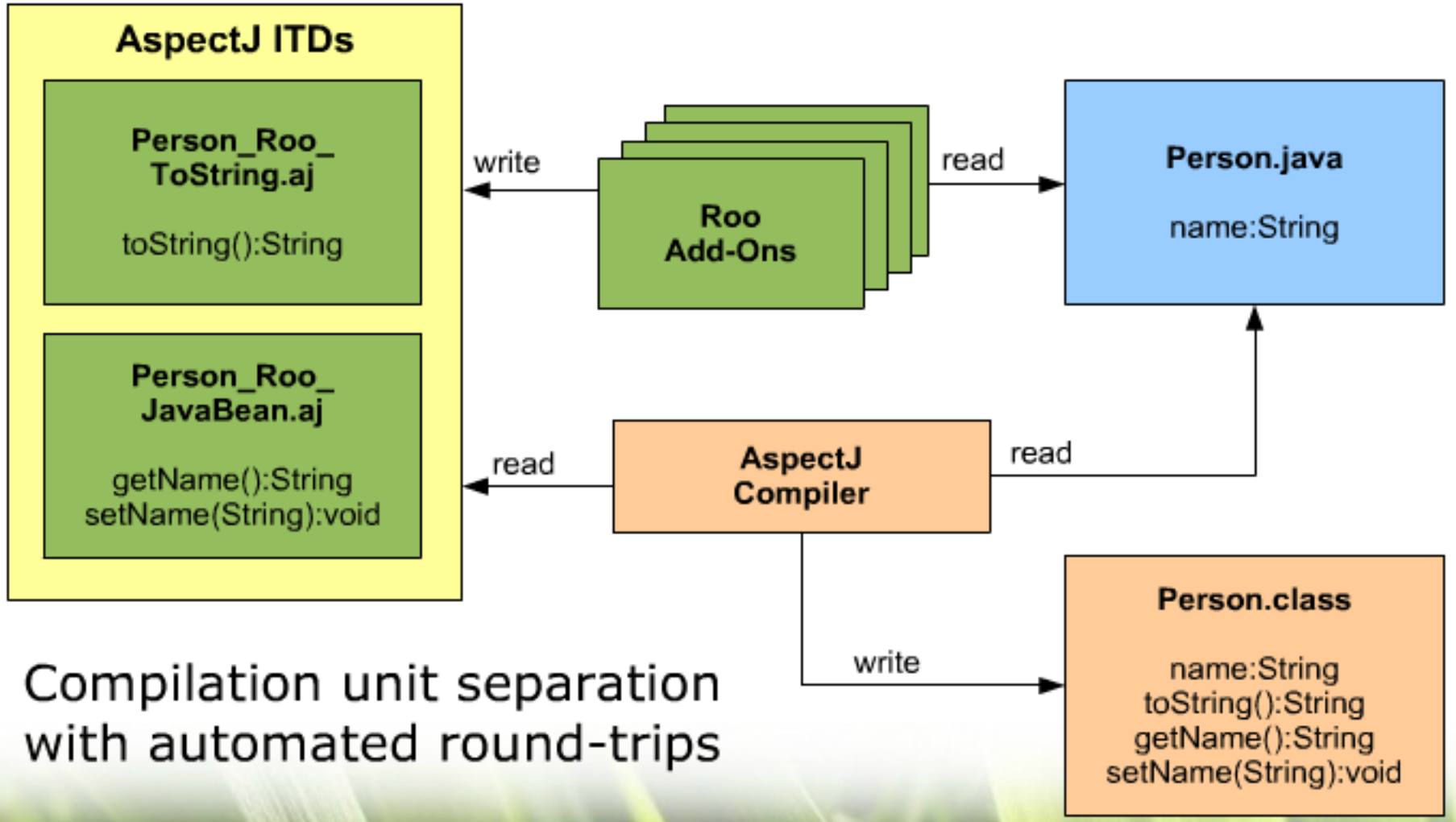

GitHub, Inc. [US] https://github.com/springsource/spring-roo
github
Signup and Pricing
Explore GitHub
Features
Blog
Sign in
PUBLIC
SpringSource / spring-roo
Star 202
Fork 37
Code
Network
Pull Requests 1
Graphs
Spring Roo is a next-generation rapid application development tool for Java developers. It focuses on higher productivity, stock-standard Java APIs, high usability, avoiding engineering trade-offs and facilitating easy Roo removal. — Read more
http://www.springsource.org/roo
ZIP
HTTP
Git Read-Only
https://github.com/SpringSource/spring-roo.git
Read-Only access
branch: master
Files
Commits
Branches 3
Tags 23
Downloads
Latest commit to the master branch
ROO-3197: Data On Demand could be not private in the Roo Integration ...
alankstewart authored 2 months ago
commit ba84b7e530
spring-roo /
name
age
message
history
addon-backup
3 months ago
ROO-3162: Release Spring Roo 1.2.2.RELEASE - change to new 1.2.3.BUIL... [alankstewart]
addon-cloud-foundry
3 months ago
ROO-3162: Release Spring Roo 1.2.2.RELEASE - change to new 1.2.3.BUIL... [alankstewart]

http://www.infoq.com/presentations/Introducing-Spring-Roo

Implementation Overview

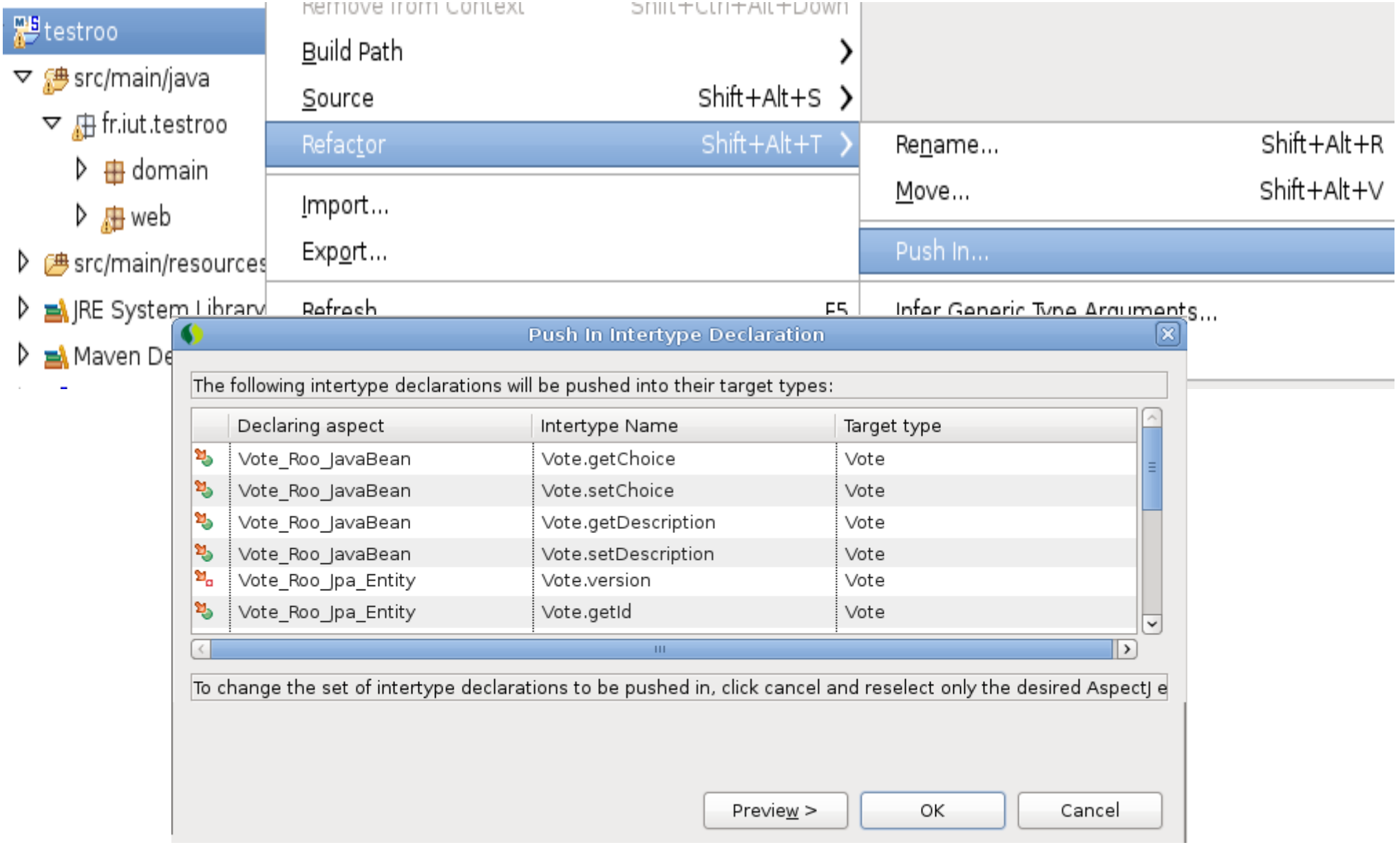


Active Generation

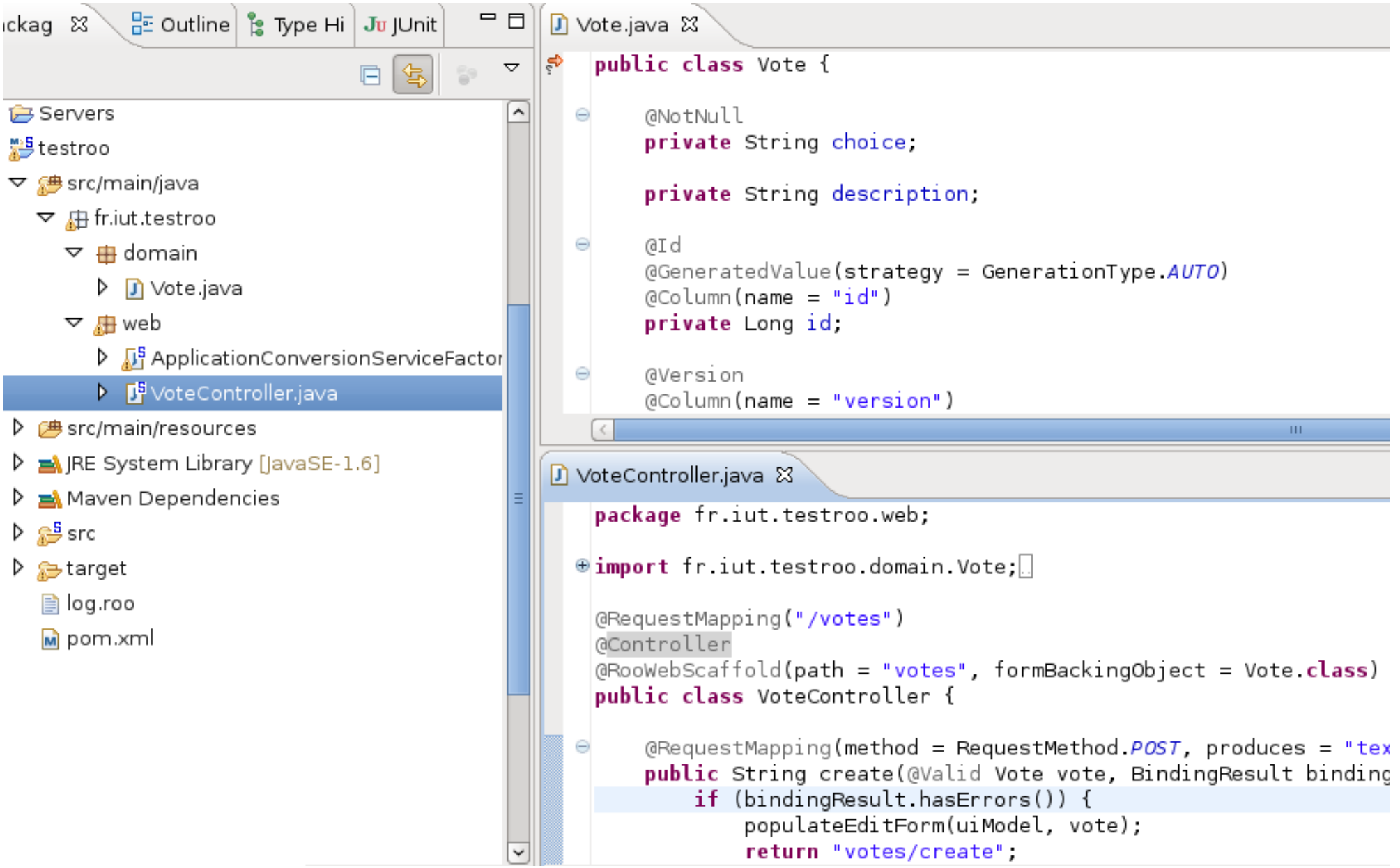


Compilation unit separation with automated round-trips

Eclipse AspectJ – Push In...



Happy Runtime End – Roo is gone



Conclusion

Spring Roo is Beautifull !!

Questions ?

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