

Intro to Grails

Code and Slides

Git Branch: [grailsIntroStart](#)

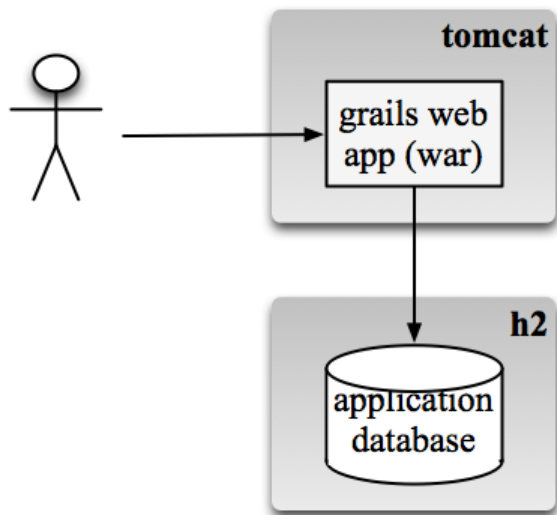
Slides: [03 Intro to Grails](#)

At the end of this session

You will be familiar with

- Grails/Spring/Hibernate stack and patterns
- Grails project layout
 - What there is
 - Where it's located
- Grails targets and the command line

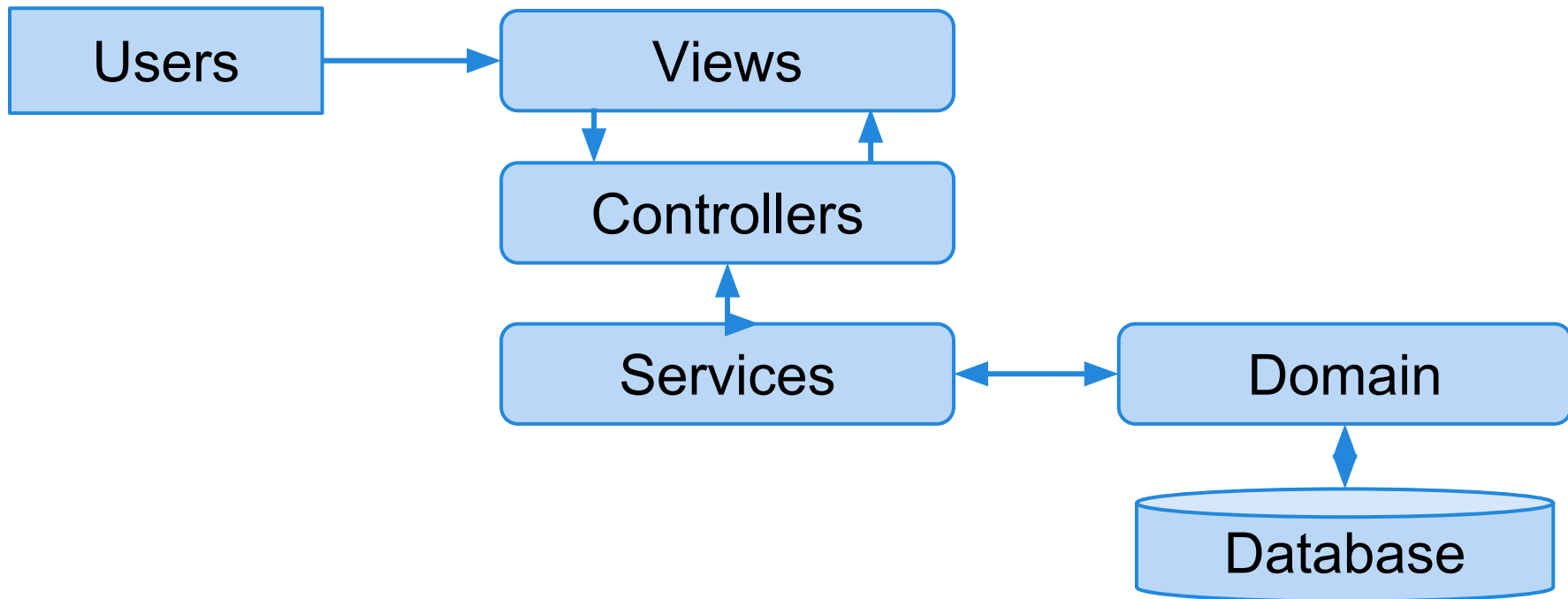
Grails Applications



A Web Application - Vertical Slice

javascript	- Dynamic behavior in the browser
servlets	- HTML page generation
controllers	- Application Form Controllers + Tests
command	- Display objects + Tests
validation	- Validation and constraints + Tests
services	- Service Layer + Tests
queries	- Data access + Tests
domain	- Domain Model + Tests
DDL	- Database Schema

Simplified Grails Application Stack



Step 1: Diving Right In

```
> grails create-app questionApp
```

Step 2: rails create-domain-class

```
> rails create-domain-class com.opi.Question
```

While you wait, Rails is downloading and installing required resources...

Step 2: rails create-domain-class

```
rails-app/domain/com/opi/Question.groovy
```

```
package com.opi
```

```
class Question {  
    String question  
    String answer  
    String username  
  
    static constraints = {  
    }
```

Step 2: rails create-domain-class

test/unit/com/opi/QuestionSpec.groovy

```
import grails.test.mixin.TestFor
```

```
import spock.lang.Specification
```

```
@TestFor(Question)
```

```
class QuestionSpec extends Specification {
```

```
    def setup() {
```

```
    }
```

```
    def cleanup() {
```

```
    }
```

```
    void "test something"() {
```

```
    }
```

```
}
```

Create a Controller

```
> grails create-controller com.opi.Question
```

Edit the Controller

```
package com.opi

class QuestionController {
    static scaffold = true
}
```

Scaffolding

```
static scaffold = true
```

- Part of the Grails framework
- Only for very simple use cases
- Generated dynamically at run time

Grails Targets

```
grails clean
```

```
grails run-app
```

```
grails test-app
```

```
grails help
```

```
grails help 'target-name'
```

```
grails
```

will enter you into the grails 'interactive mode'

keeps the jvm running, speeds up grails scripts, and
provides autocomplete

Step 3: rails generate-all

```
> rails generate-all com.opi.Question
```

Note the package name.

This will generate the scaffolding Grails was generating at run time.

Step 3: rails generate-all

```
rails-app/controllers/com/opi/QuestionController.groovy
```

```
rails-app/views/question/
```

```
  _form.gsp
```

```
  create.gsp
```

```
  edit.gsp
```

```
  index.gsp
```

```
  show.gsp
```

```
test/unit/com/opi/QuestionControllerSpec.groovy
```


Running the app

```
> rails run-app
```

| Running Grails application

| Server running. Browse to <http://localhost:8080/questionApp>

Controller

```
def index(Integer max) {  
    params.max = Math.min(max ?: 10, 100)  
    respond Question.list(params),  
        model: [questionInstanceCount: Question.count()]  
}
```

Controller to View

Grails locates the view by Convention.

In this case, the index action was called, so Grails looks in the views/question directory for a gsp named index.gsp

URL Mapping

grails-app/conf/UrlMappings.groovy

```
"/$controller/$action?/$id?(.$format)?"
```

```
"/"(view: "/index")
```

```
"500"(view: '/error')
```

URL Mapping

Add

```
"/showQuestions" (controller: "question", action: "index")
```

Auto reloading

Add to the QuestionController

```
def hello() {  
    render "I am here!"  
}
```

Adding to Controllers

Go to `/questions/searchByUsername`

Adding to Controllers

Add the method

```
def searchByUsername() { ... }
```


Dynamic Finders

- `InList` - In the list of given values
- `LessThan` - less than a given value
- `LessThanEquals` - less than or equal a give value
- `GreaterThan` - greater than a given value
- `GreaterThanEquals` - greater than or equal a given value
- `Like` - Equivalent to a SQL like expression
- `ILike` - Similar to a `Like`, except case insensitive
- `NotEqual` - Negates equality
- `InRange` - Between the `from` and `to` values of a Groovy Range
- `Rlike` - Performs a Regexp LIKE in MySQL or Oracle otherwise falls back to `Like`
- `Between` - Between two values (requires two arguments)
- `NotNull` - Not a null value (doesn't take an argument)
- `IsNull` - Is a null value (doesn't take an argument)

The Grails Console

```
> grails console
```

```
—
```

The Grails Console

```
import com.opi.Question

Question q1 = new Question()
Question q2 = new Question(
    question: "What?",
    answer: "Me worry.",
    username: "doug")

Question.findAll()
```

The Grails Console

```
import com.opi.Question

Question q1 = new Question()
Question q2 = new Question(
    question: "What?",
    answer: "Me worry.",
    username: "doug")

Question.findAll()

q1.save()
```

The Grails Console

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import com.opi.Question

Question q1 = new Question()
Question q2 = new Question(
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    username: "doug")

q1.save()
Question.findAll()
```

Finding answers

<http://grails.org>

<http://grails.org/Documentation>

<http://grails.org/doc/latest>

Grails user mailing list - not active anymore,
moving to [StackOverflow](#)