



Scala ITR

Inspiring Tech Rally



Agenda

9:00	Introduction
9:30	Exercises
12:30	Lunch
13:00	tweetview
16:30	Discussion
17:30	Drinks

Morning Exercises

1. Basic Scala
2. The Almighty List
3. A Scala Twitter API

About 45 minutes per exercise

About 15 minutes show and tell

We probably have too many exercises... but you never know :)



Setup (I)

- All exercises on GitHub
 - web: <http://github.com/sgrijpink/ScalaTR>
 - *git clone git://github.com/sgrijpink/ScalaTR.git*
 - For sharing / pairing:
 - Fork on GitHub
 - Ask Sjors how to give users commit rights
 - SVN (last resort)

Setup (2)

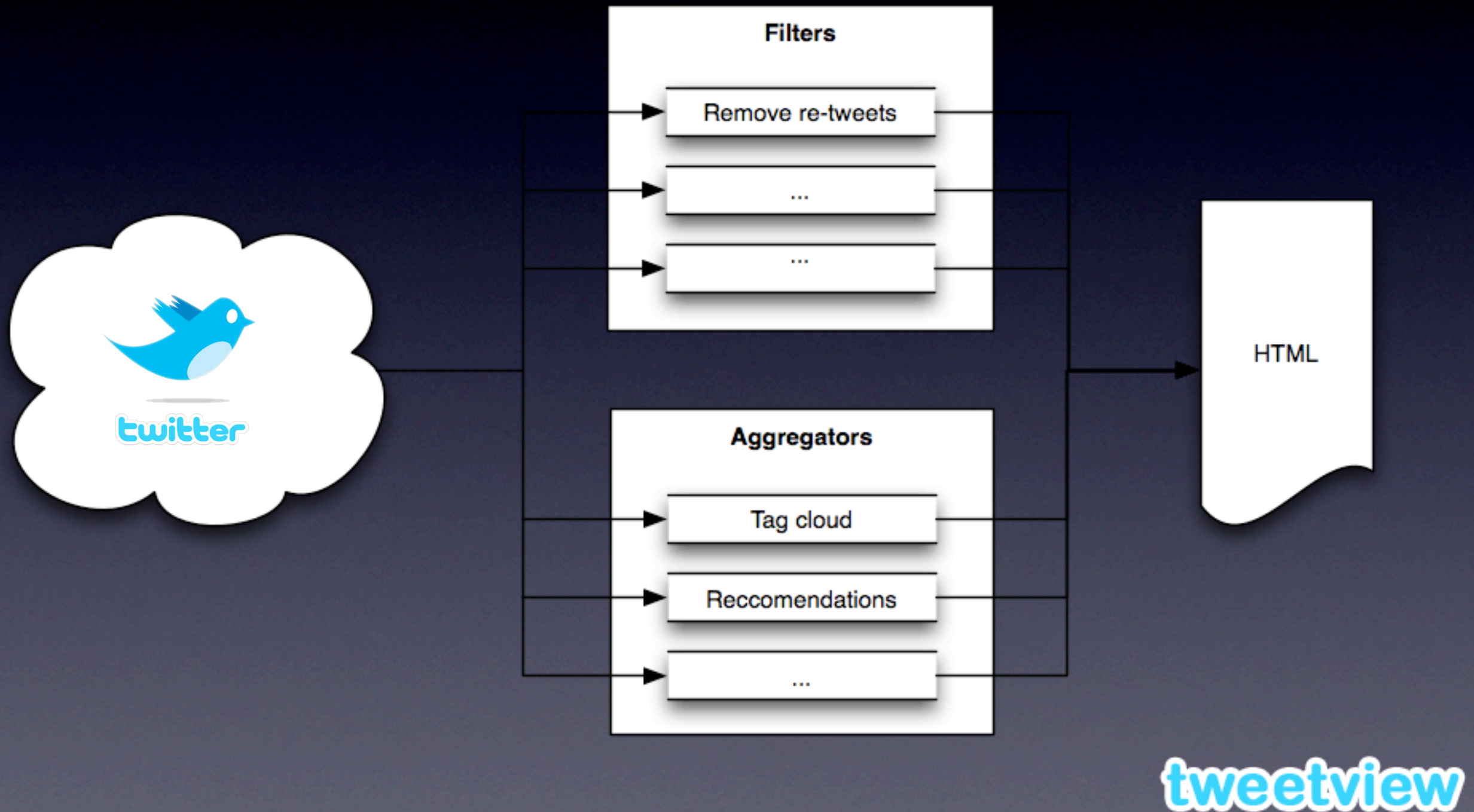
- Each exercise is a mvn/eclipse project
- Start with the failing unit test
 - It's ok to temporarily comment out some tests to concentrate on another one :)
- Make it work
- Solutions are available in separate projects

Have Fun !

But try to concentrate on Scala :)

```
git clone git://github.com/sgrijpink/ScalaTR.git
```


Tweetview (afternoon)



Tweetview

- Lift application
- `maven jetty:run`
- Placeholders for filters
- DEMO

Tweetview

- Lift application
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Many thanks to Arjan

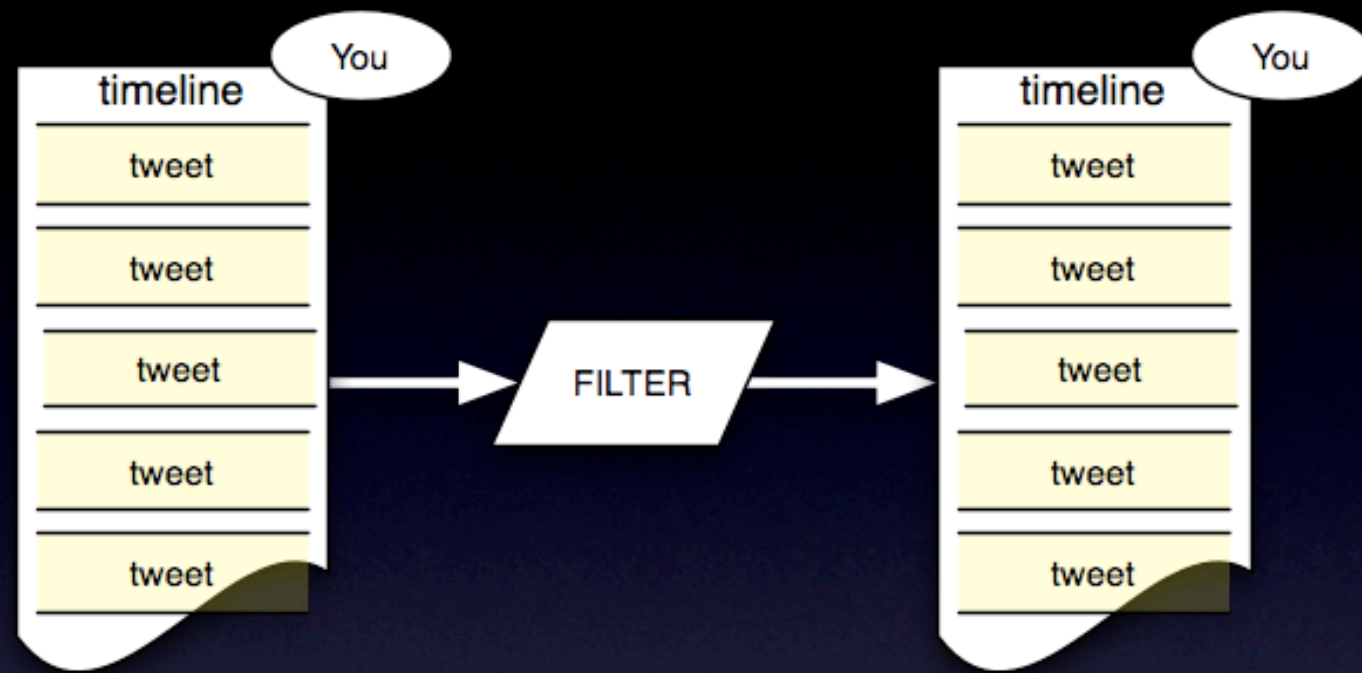
http://localhost:8080

- Show public timeline
- Show user timeline
- login
 - via page
 - via properties
- apply filters



Filters

- Retweet filter
- Around you filter
- Active filter* (bot)
- Suppress dominant people
- Only show tweets:
 - (not) containing certain words
 - (not) in a certain language



* the sky is the limit

Retweet filter

New Twitter supported
functionality

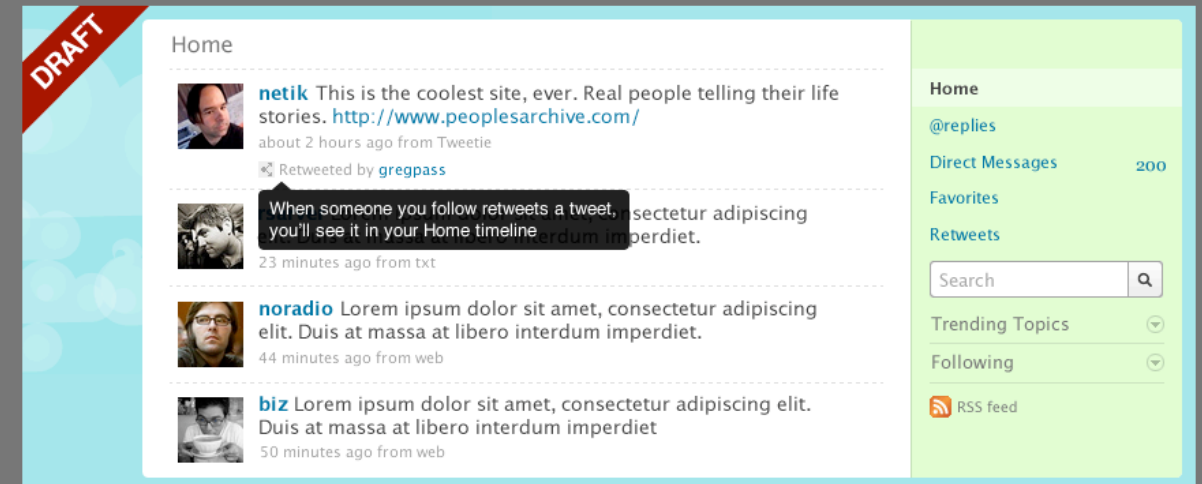
currently:

- RT @source: text
- text (via @source)

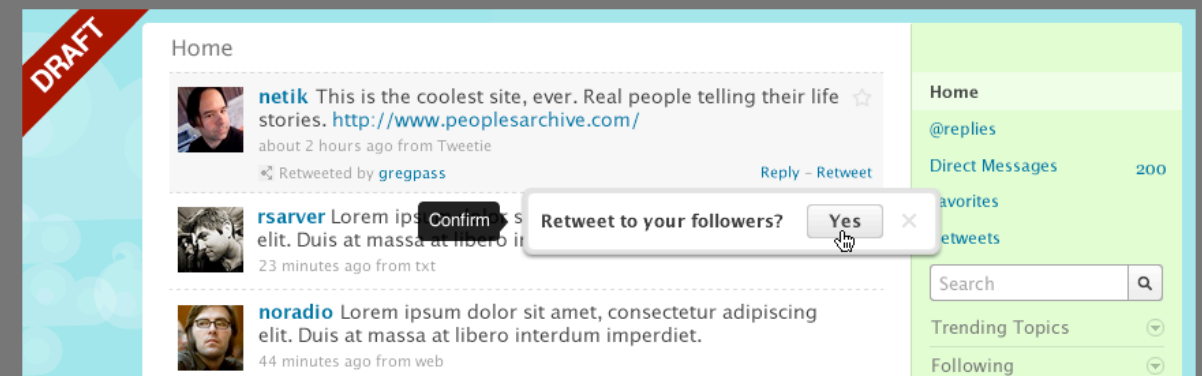
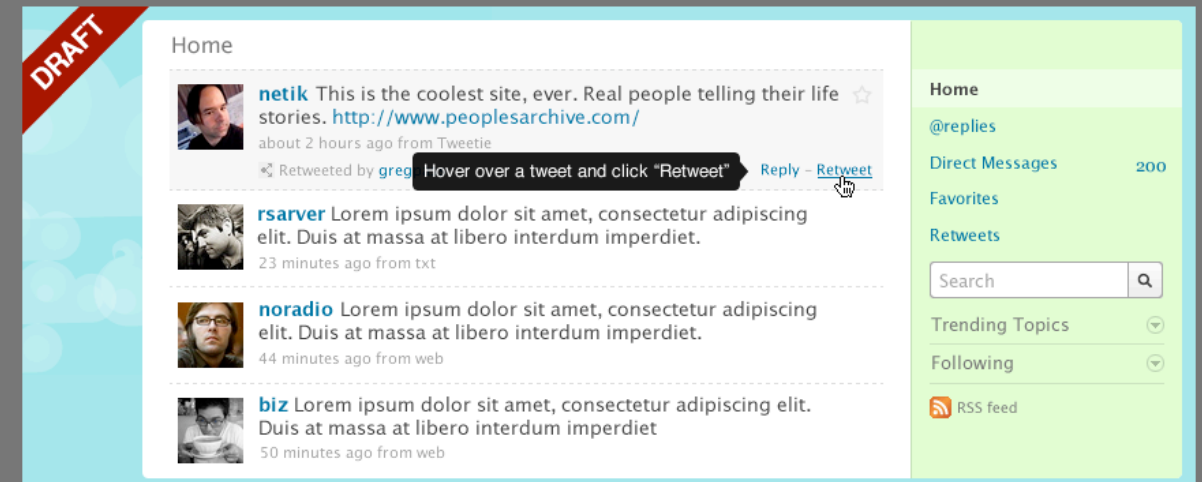
Retweet screenshots

twitter

Receiving a retweet



Retweeting to your followers



tweetview

Retweet filter

Basic Version: filter out the duplicate RTs

The image shows two side-by-side screenshots of the 'tweetview' web application, illustrating a basic retweet filter. A large blue arrow points from the left timeline to the right timeline, indicating the transition from an unfiltered view to a filtered view where duplicate retweets are removed.

Left Timeline (Unfiltered):

- Jonas Bonér: Congrats #Terracotta and @ikarzali @puredanger @gbevin @sharrissf and the rest of the team. Great news. (Tue Aug 18 12:49:15 +0000 2009)
- Stephen Fry: Another miniblog: <http://bit.ly/EirYX> (Tue Aug 18 12:43:26 +0000 2009)
- Debasish Ghosh: RT @puredanger Terracotta acquires Ehcache! Greg Luck's blog: <http://bit.ly/2M6IFK> My blog: <http://bit.ly/15DIHJ> (Tue Aug 18 12:35:12 +0000 2009)
- Stephan Schmidt: RT @puredanger: Terracotta acquires Ehcache! Greg Luck's blog: <http://bit.ly/2M6IFK> My blog: <http://bit.ly/15DIHJ> (Tue Aug 18 12:10:16 +0000 2009)
- Stephan Schmidt: True Flow neither knows pull nor push (Tue Aug 18 12:09:09 +0000 2009)
- Jonas Bonér: RT @puredanger: Terracotta acquires Ehcache! Greg Luck's blog: <http://bit.ly/2M6IFK> My blog: <http://bit.ly/15DIHJ> (Tue Aug 18 12:08:56 +0000 2009)
- Jonas Bonér: LOL. RT @codemonkeyism: What I also like: consultants who try to bury you under buzzwords if they haven't got an answer. Love it! (Tue Aug 18 11:46:40 +0000 2009)
- Stephan Schmidt: What I also like: consultants who try to bury you under buzzwords if they haven't got an answer. Love it! (Tue Aug 18 11:36:13 +0000 2009)
- Stephan Schmidt: One of my most important posts RT @codemonkeyism Rails, Scrum, CMMI and Survivor Bias <http://bit.ly/1wIW4> (Tue Aug 18 11:04:49 +0000 2009)

Right Timeline (Filtered):

- Jonas Bonér: Congrats #Terracotta and @ikarzali @puredanger @gbevin @sharrissf and the rest of the team. Great news. (Tue Aug 18 12:49:15 +0000 2009)
- Stephen Fry: Another miniblog: <http://bit.ly/FjrYX> (Tue Aug 18 12:43:26 +0000 2009)
- puredanger: RT – Terracotta acquires Ehcache! Greg Luck's blog: <http://bit.ly/2M6IFK> My blog: <http://bit.ly/15DIHJ> (Tue Aug 18 12:35:12 +0000 2009)
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- Stephan Schmidt: What I also like: consultants who try to bury you under buzzwords if they haven't got an answer. Love it! (Tue Aug 18 11:36:13 +0000 2009)
- codemonkeyism: RT – Rails, Scrum, CMMI and Survivor Bias <http://bit.ly/1wIW4> (Tue Aug 18 11:04:49 +0000 2009)
- asmartbear: RT – Guest Login – Startups + Marketing + Geekery <http://bit.ly/3yYoY3> (Tue Aug 18 10:50:35 +0000 2009)
- Stephen Fry: Server back in business They were patching one of the clusters. Tsk. Sorry about that. Miniblog post <http://is.gd/2mBvI> (Tue Aug 18 10:41:14 +0000 2009)
- codemonkeyism: RT – 7 Signs not to Work for a Software Company or Startup <http://bit.ly/y96IS> (Tue Aug 18 10:35:37 +0000 2009)

Retweet filter

Second Version: Add “retweeted by” to retweets

The image displays two side-by-side screenshots of the 'tweetview' application, illustrating the implementation of a retweet filter. A large blue arrow points from the left screenshot to the right one, indicating the transition from the first version to the second.

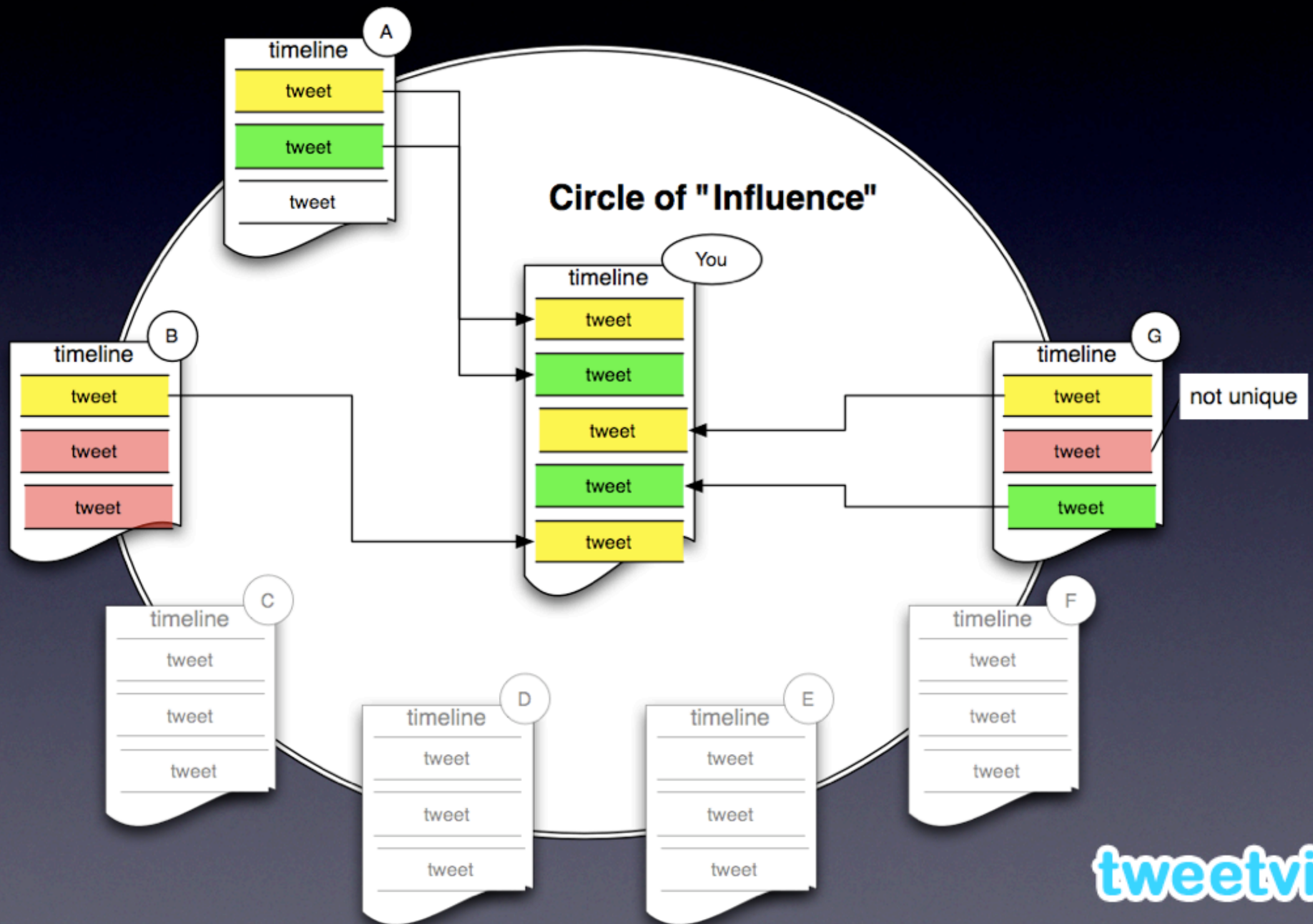
Left Screenshot (First Version):

- Twitter timeline
- Jonas Bonér: Congrats #Terracotta and @ikarzali @puredanger @gbevin @sharrissf and the rest of the team. Great news. Tue Aug 18 12:49:15 +0000 2009
- Stephen Fry: Another miniblog: <http://bit.ly/EirYX> Tue Aug 18 12:43:26 +0000 2009
- Debasish Ghosh: RT @puredanger Terracotta acquires Ehcache! Greg Luck's blog: <http://bit.ly/2M6IFK> My blog: <http://bit.ly/15DIHJ> Tue Aug 18 12:35:12 +0000 2009
- Stephan Schmidt: RT @puredanger: Terracotta acquires Ehcache! Greg Luck's blog: <http://bit.ly/2M6IFK> My blog: <http://bit.ly/15DIHJ> Tue Aug 18 12:10:16 +0000 2009
- Stephan Schmidt: True Flow neither knows pull nor push Tue Aug 18 12:09:09 +0000 2009
- Jonas Bonér: RT @puredanger: Terracotta acquires Ehcache! Greg Luck's blog: <http://bit.ly/2M6IFK> My blog: <http://bit.ly/15DIHJ> Tue Aug 18 12:08:56 +0000 2009
- Jonas Bonér: LOL. RT @codemonkeyism: What I also like: consultants who try to bury you under buzzwords if they haven't got an answer. Love it! Tue Aug 18 11:46:40 +0000 2009
- Stephan Schmidt: What I also like: consultants who try to bury you under buzzwords if they haven't got an answer. Love it! Tue Aug 18 11:36:13 +0000 2009
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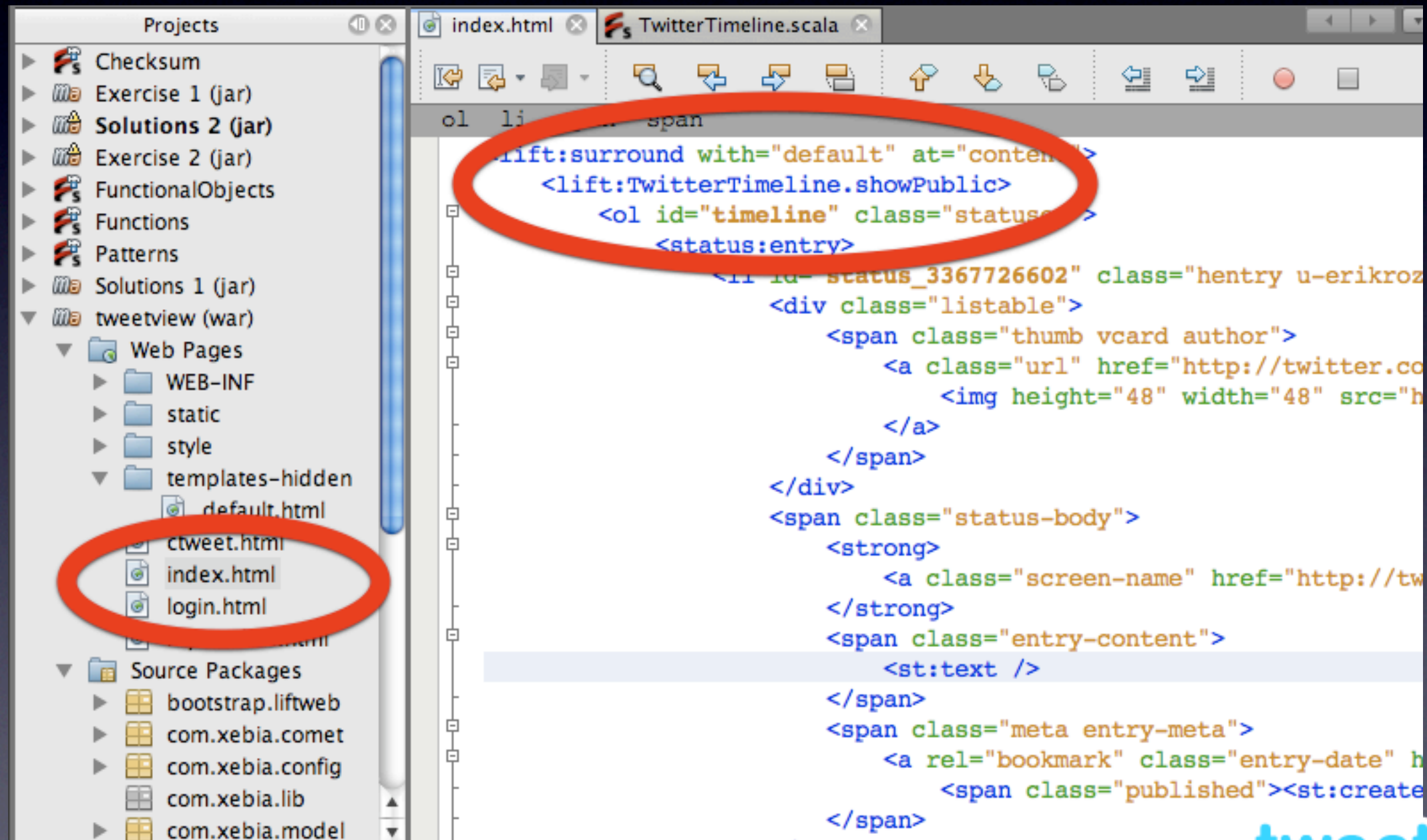
Right Screenshot (Second Version):

- Twitter timeline
- Jonas Bonér: Congrats #Terracotta and @ikarzali @puredanger @gbevin @sharrissf and the rest of the team. Great news. Tue Aug 18 12:49:15 +0000 2009
- Stephen Fry: Another miniblog: <http://bit.ly/FjrYX> Tue Aug 18 12:43:26 +0000 2009
- puredanger: RT – Terracotta acquires Ehcache! Greg Luck's blog: <http://bit.ly/2M6IFK> My blog: <http://bit.ly/15DIHJ> Tue Aug 18 12:35:12 +0000 2009
- Retweeted by gregpass
- Stephan Schmidt: Tue Aug 18 12:09:09 +0000 2009
- codemonkeyism: RT – What I also like: consultants who try to bury you under buzzwords if they haven't got an answer. Love it! Tue Aug 18 11:46:40 +0000 2009
- Stephan Schmidt: What I also like: consultants who try to bury you under buzzwords if they haven't got an answer. Love it! Tue Aug 18 11:36:13 +0000 2009
- codemonkeyism: RT – Rails, Scrum, CMMI and Survivor Bias <http://bit.ly/1wIW4> Tue Aug 18 11:04:49 +0000 2009
- asmartbear: RT – Guest Login – Startups + Marketing + Geekery <http://bit.ly/3yYoY3> Tue Aug 18 10:50:35 +0000 2009
- Stephen Fry: Server back in business They were patching one of the clusters. Tsk. Sorry about that. Miniblog post <http://is.gd/2mBvI> Tue Aug 18 10:41:14 +0000 2009
- codemonkeyism: RT – 7 Signs not to Work for a Software Company or Startup <http://bit.ly/y96IS> Tue Aug 18 10:35:37 +0000 2009

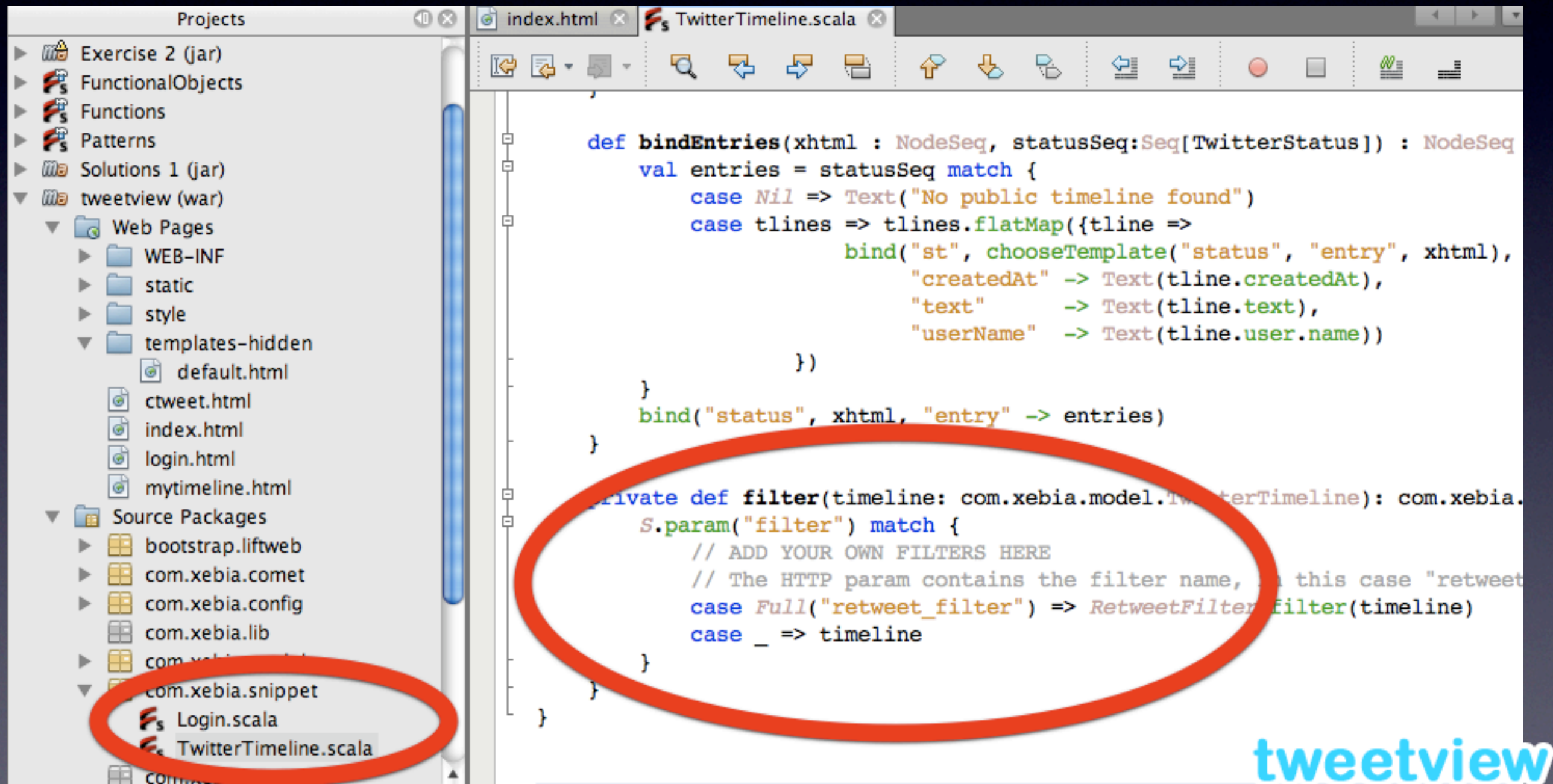
Around you filter



Tweetview filter Implementation (I)



Tweetview filter Implementation (2)



The screenshot shows an IDE with a project explorer on the left and a code editor on the right. The project explorer shows a project named 'tweetview (war)' with a 'Web Pages' folder containing 'index.html' and 'login.html'. The 'Source Packages' folder contains 'com.xebia.snippet', which is circled in red. The code editor shows the 'TwitterTimeline.scala' file. The code defines a 'bindEntries' function and a 'filter' function. The 'filter' function is circled in red and contains a match statement for the 'filter' parameter. The 'filter' function is defined as follows:

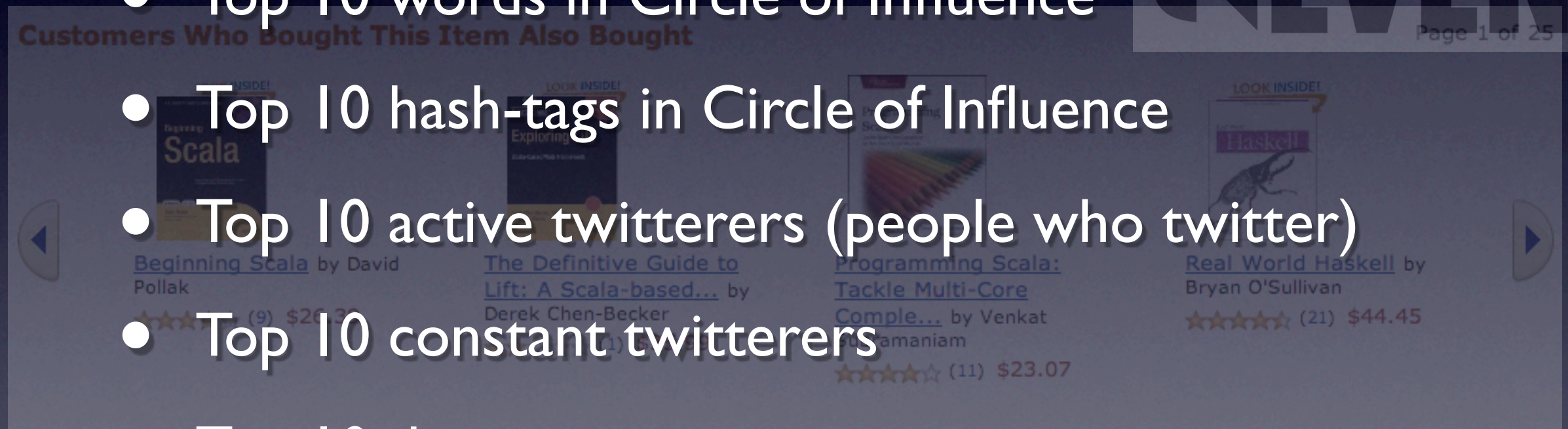
```
def bindEntries(xhtml : NodeSeq, statusSeq:Seq[TwitterStatus]) : NodeSeq = {
  val entries = statusSeq match {
    case Nil => Text("No public timeline found")
    case tlines => tlines.flatMap({tline =>
      bind("st", chooseTemplate("status", "entry", xhtml),
        "createdAt" -> Text(tline.createdAt),
        "text" -> Text(tline.text),
        "userName" -> Text(tline.user.name))
    })
  }
  bind("status", xhtml, "entry" -> entries)
}

private def filter(timeline: com.xebia.model.TwitterTimeline): com.xebia.model.TwitterTimeline = {
  S.param("filter") match {
    // ADD YOUR OWN FILTERS HERE
    // The HTTP param contains the filter name, in this case "retweet"
    case Full("retweet_filter") => RetweetFilter.filter(timeline)
    case _ => timeline
  }
}
```

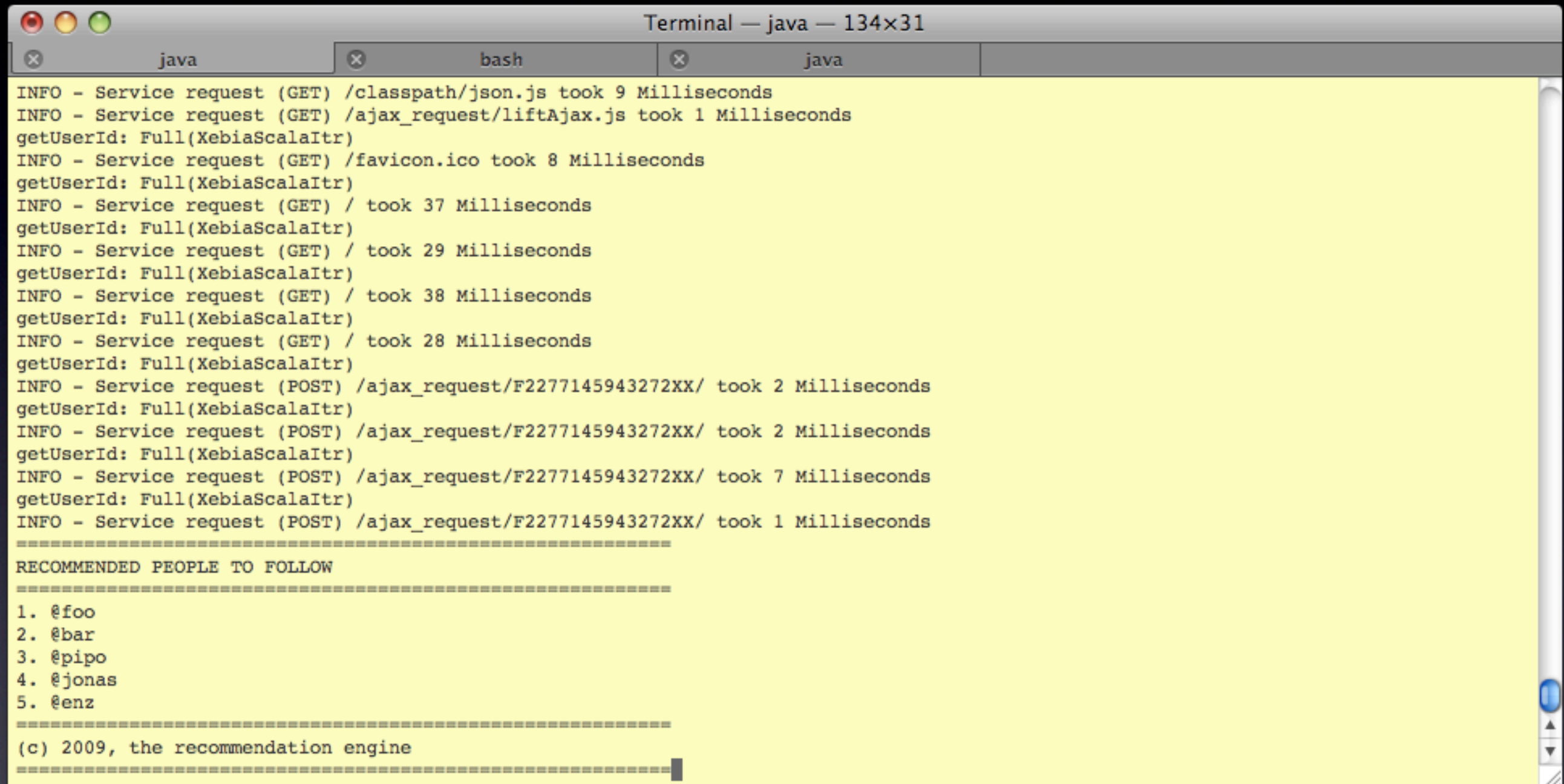
The 'tweetview' logo is visible in the bottom right corner.

Aggregators

- Recommend people to follow
- Top 10 words in Circle of Influence
- Top 10 hash-tags in Circle of Influence
- Top 10 active twitterers (people who twitter)
- Top 10 constant twitterers
- Top 10 decreasing active twitterers
- Top 10 increasing active twitterers



It's about Scala :)



```
Terminal — java — 134x31
java bash java
INFO - Service request (GET) /classpath/json.js took 9 Milliseconds
INFO - Service request (GET) /ajax_request/liftAjax.js took 1 Milliseconds
getId: Full(XebiascalaId)
INFO - Service request (GET) /favicon.ico took 8 Milliseconds
getId: Full(XebiascalaId)
INFO - Service request (GET) / took 37 Milliseconds
getId: Full(XebiascalaId)
INFO - Service request (GET) / took 29 Milliseconds
getId: Full(XebiascalaId)
INFO - Service request (GET) / took 38 Milliseconds
getId: Full(XebiascalaId)
INFO - Service request (GET) / took 28 Milliseconds
getId: Full(XebiascalaId)
INFO - Service request (POST) /ajax_request/F2277145943272XX/ took 2 Milliseconds
getId: Full(XebiascalaId)
INFO - Service request (POST) /ajax_request/F2277145943272XX/ took 2 Milliseconds
getId: Full(XebiascalaId)
INFO - Service request (POST) /ajax_request/F2277145943272XX/ took 7 Milliseconds
getId: Full(XebiascalaId)
INFO - Service request (POST) /ajax_request/F2277145943272XX/ took 1 Milliseconds
=====
RECOMMENDED PEOPLE TO FOLLOW
=====
1. @foo
2. @bar
3. @pipo
4. @jonas
5. @enz
=====
(c) 2009, the recommendation engine
=====
```

Don't get stuck in Lift, Java, HTML, CSS, JS, ...