



Философия простоты, или еретическая лекция о программировании



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ADD, Санкт-Петербург, 2011



простота



СЛОЖНОСТЬ предметной области



СЛОЖНОСТЬ предметной области

Оплата от покупателя. Проведен *

Перейти ? Файлы

Номер:	ТДН00001	от	16.03.2004 12:00:00	Дата прихода:	17.03.2004
Валюта:	руб.	Курс:	1,0000	Форма оплаты:	Безналичные
Контрагент:	Дальстрой	Редактировать:	<input checked="" type="radio"/> Без разбиения <input type="radio"/> Списанием		
Договор:	Договор поставки Д-67	Сделка:	ТДН00007 от 03.03.2004 12:00:00		
Сумма USD:	11 225,55	Сумма платежа:	320 000,02 руб.		
Курс:	28,5064	(1 USD = 28,5064 р...			

Проект: Платежное поручение входящее: Оплата от покупателя. Новый *

Операция Действия Перейти ? Клиент-Банк

Счет	Рег. номер:	ТДН00012	от:	17.03.2004 0:00:00	Отразить в:	<input checked="" type="checkbox"/> опер. учете <input type="checkbox"/> бух. учете <input type="checkbox"/> нал. учете
Всег	Вх. номер:		от:	.	<input type="checkbox"/> Оплачено:	31.12.2004
Отве	Организация:	Нева ТД	Банковский счет:	Р/с Авт-банк		
Комм	Плательщик:	Дальстрой	Банковский счет:	Р/С "Дальстрой"		
Стат	Сумма:	320 000,00 руб.	Редактировать:	<input checked="" type="radio"/> Без разбиения <input type="radio"/> Списанием		
	Договор:	Основной договор (Нева)	Сделка:	ДН00007 от 03.03.2004 12:00:00		
	Курс:	29,1764	(1 USD = 29,1764 ...	Сумма USD:	10 967,77	
	Ставка НДС:	18% / 118%				
	Сумма НДС:	48 813,56				
	Запланировано:		Статья движ. ден. средств:	Поступления от покупателей и зака		
	Проект:					
	Ответственный:	Ефремов Артур Васильевич	Комментарий:			

OK Записать Закреть

СЛОЖНОСТЬ ИЗУЧЕНИЯ

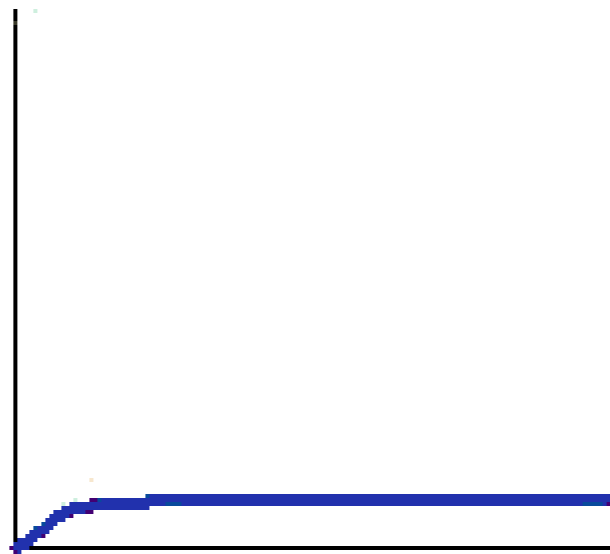




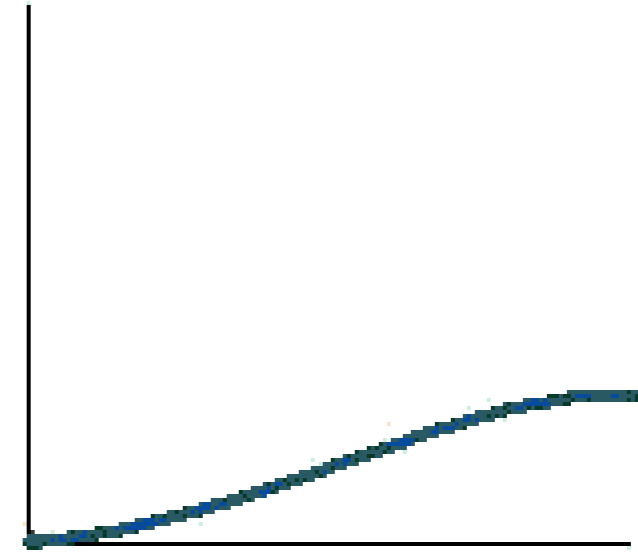
СЛОЖНОСТЬ ИЗУЧЕНИЯ

Classical learning curves for some common editors

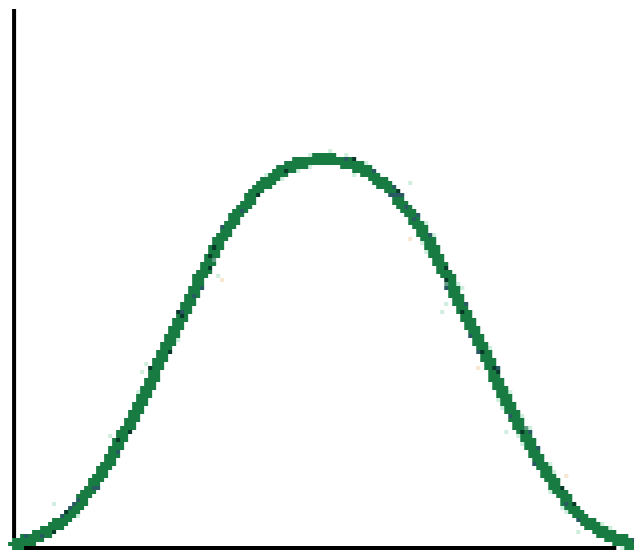
Notepad



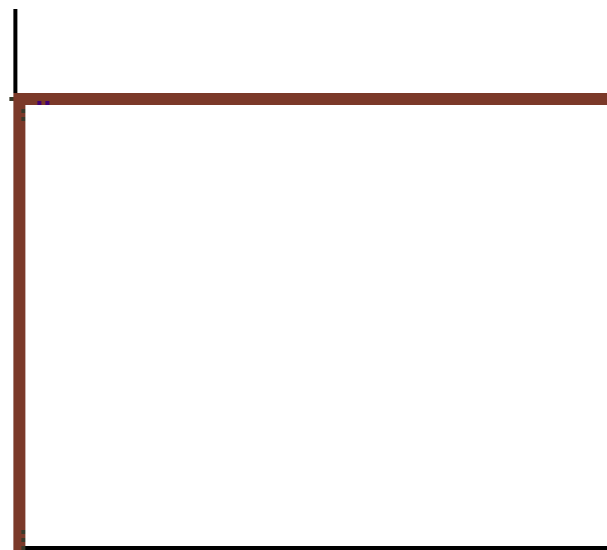
Pico



Visual Studio



vi



emacs



СЛОЖНОСТЬ
ИСПОЛЬЗОВАНИЯ





СЛОЖНОСТЬ ИСПОЛЬЗОВАНИЯ

```
xe
C:\Documents and Settings\Administrator>dir
Volume in drive C has no label.
Volume Serial Number is B0A5-5DF8

Directory of C:\Documents and Settings\Administrator

08/11/2004  09:05 AM    <DIR>          .
08/11/2004  09:05 AM    <DIR>          ..
08/11/2004  08:16 AM    <DIR>          Start Menu
07/28/2005  12:15 PM    <DIR>          My Documents
07/28/2005  12:15 PM    <DIR>          Favorites
08/11/2004  08:16 AM    <DIR>          Desktop
                0 File(s)          0 bytes
                6 Dir(s)  13,418,954,752 bytes free

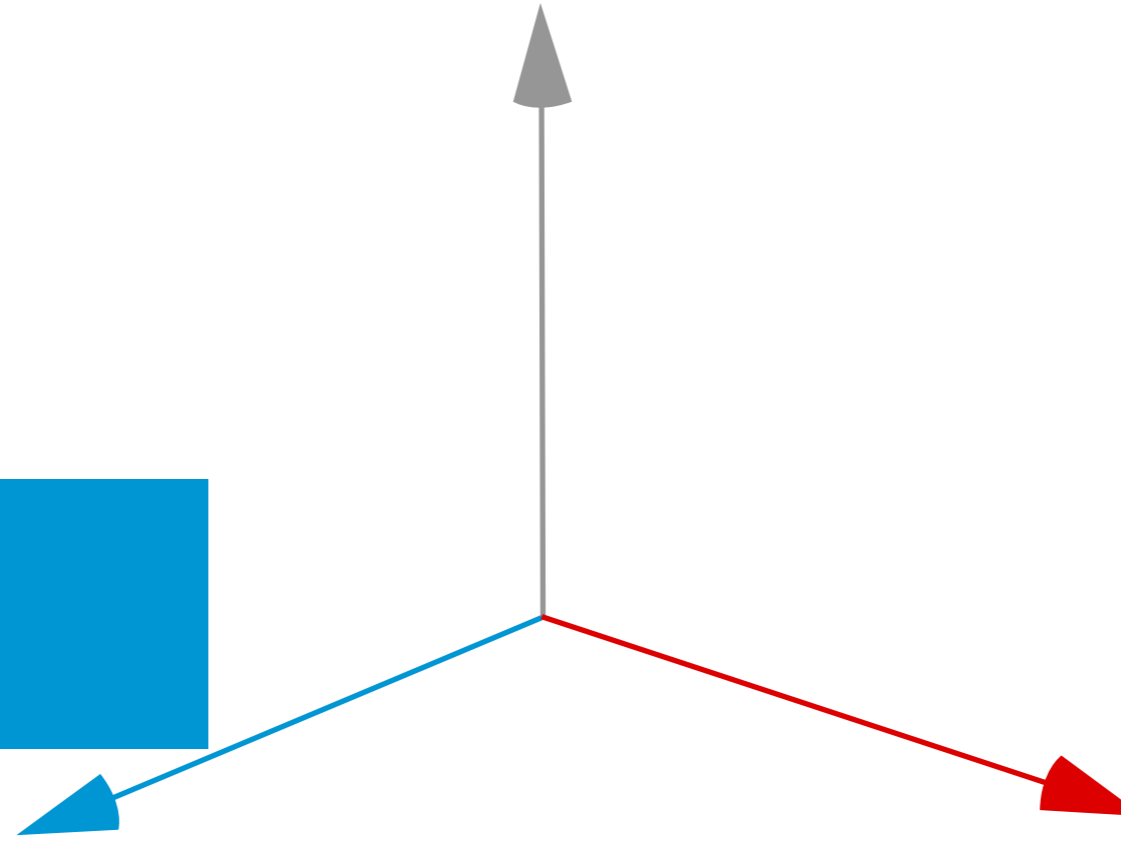
C:\Documents and Settings\Administrator>
```




сложность
предметной области

сложность
изучения

сложность
использования



СИМПТОМЫ





Preferences

Local History

Limit history size

Days to keep files: 7

Maximum entries per file: 50

Maximum file size (MB): 1

Note: The 'Maximum entries per file' and the 'Days to keep files' values are only applied when compacting the local history on shutdown.

Restore Defaults Apply

Cancel OK

- General
 - Appearance
 - Colors and Fonts
 - Label Decorations
 - Compare/Patch
 - Content Types
 - Editors
 - File Associations
 - Text Editors
 - Accessibility
 - Annotations
 - Hyperlinking
 - Linked Mode
 - Quick Diff
 - Spelling
 - Full Screen
 - Keys
 - Network Connections
 - SSH2
 - Perspectives
 - Search
 - Security
 - Secure Storage
 - Startup and Shutdown
 - Workspaces
 - Web Browser
 - Workspace
 - Build Order
 - Linked Resources
 - Local History
- Ant
- Dynamic Languages
- Fantom
- Help
- Install/Update
- Java
 - Appearance
 - Build Path
 - Code Style
 - Compiler
 - Debug
 - Editor
 - Installed JREs
 - JUnit
 - Properties Files Editor
- Plug-in Development
- Run/Debug
- Team





Local History

Limit history size

Days to keep files:

7

Maximum entries per file:

50

Maximum file size (MB):

1

Note: The 'Maximum entries per file' and the 'Days to keep' are only applied when compacting the local history.





type filter text



General

▶ Appearance

Compare/Patch

Content Types

▶ Editors

Full Screen

Keys

▶ Network Connections

Perspectives

Search

▶ Security

▶ Startup and Shutdown

Web Browser

▶ Workspace

▶ Ant

▶ Dynamic Languages

eclipse.com

▶ Help

▶ Install/Update

General

Always run in background

Keep next/previous editor, view and perspective

Show heap status

Open mode

Double click

Single click

Select on hover

Open when using arrow keys

Note: This preference may not take effect



Bugzilla@Mozilla - Search for bugs

[Home](#) | [New](#) | [Search](#) | | [Reports](#) | [Requests](#) | [New Account](#) | [Help](#) | [Log In](#)

[Find a Specific Bug](#)

Advanced Search

[Give me some help](#) (reloads page).

Summary: contains all of the words/strings

Classification:

- Client Software
- Components
- Server Software
- Other
- Graveyard

Product:

- addons.mozilla.org
- AUS
- Bugzilla
- Calendar
- Camino

Component:

- API
- Accessibility
- Account Manager
- Account Request: CVS
- Account Request: Hg

Version:

- 0.1
- 0.2
- 0.3
- 0.4
- 0.5

Fixed In:

-

Target:

-
- 0.007
- 0.008
- 0.009

A Comment: contains the string

The URL: contains all of the words/strings

Whiteboard: contains all of the words/strings

Keywords: contains all of the keywords

Status:

- UNCONFIRMED
- NEW
- ASSIGNED
- REOPENED
- RESOLVED
- VERIFIED
- CLOSED

Resolution:

- FIXED
- INVALID
- WONTFIX
- DUPLICATE
- WORKSFORME
- INCOMPLETE
- EXPIRED
- MOVED
-

Severity:

- blocker
- critical
- major
- normal
- minor
- trivial
- enhancement

Priority:

-
- P1
- P2
- P3
- P4
- P5

Hardware:

- All
- ARM
- DEC
- HP
- PowerPC
- x86
- x86_64
- SGL
- Sun

OS:

- All
- Windows 95
- Windows 98
- Windows ME
- Windows NT
- Windows 2000
- Windows XP
- Windows Server 2003
- Windows Vista

Email Addresses, Bug Numbers, and Votes

Any of:

- the bug assignee
- the reporter
- the QA contact
- a CC list member
- a commenter

is

Any of:

- the bug assignee
- the reporter
- the QA contact
- a CC list member
- a commenter

is

Bug Changes

Only bugs changed between:

and
(YYYY-MM-DD or relative dates)

where one or more of the following changed:

- [Bug creation]
- Alias
- Assignee
- blocking-fennec





```
build.fan  x  README.rst  x  TODO.txt  x
~/Dropbox/ws/xored/spectre/TODO.txt
spectre
├── build.fan
├── doc
├── fan
├── README.rst
├── test
└── TODO.txt
36 File uploading
37 (v) Investigate multiple cookies bug
38 (v) Template response
39 (v) investigate Safari refresh/304 bug
40
41 Docs
42 ----
43
44 Form fields screenshots
45
46 Router
47 -----
48 * includes
49 * additional checks (http method, headers, arbitrary functions) http://routes.groovie.org/setting\_up.html#conditions
50 * path_info and routing to sub-apps (http://routes.groovie.org/setting\_up.html#magic-path-info)
51 ? allow strings as a key when mapping request handler classes
52 (v) short-circuiting routes
53 * differentiate request method
54 (v) pass additional params to controller
55
56 Middlewares
57 -----
58 APPEND_SLASH
59 PREPEND_WWW
60
61
62
1, 0
```



КТО КОГО ИСПОЛЬЗУЕТ?





Maintaining Git

Ensuring good performance

On large repositories, git depends on compression to keep the history information from taking up too much space on disk or in memory.

This compression is **not performed automatically**. Therefore you should occasionally run `git gc`:

```
$ git gc
```

...

http://book.git-scm.com/4_maintaining_git.html



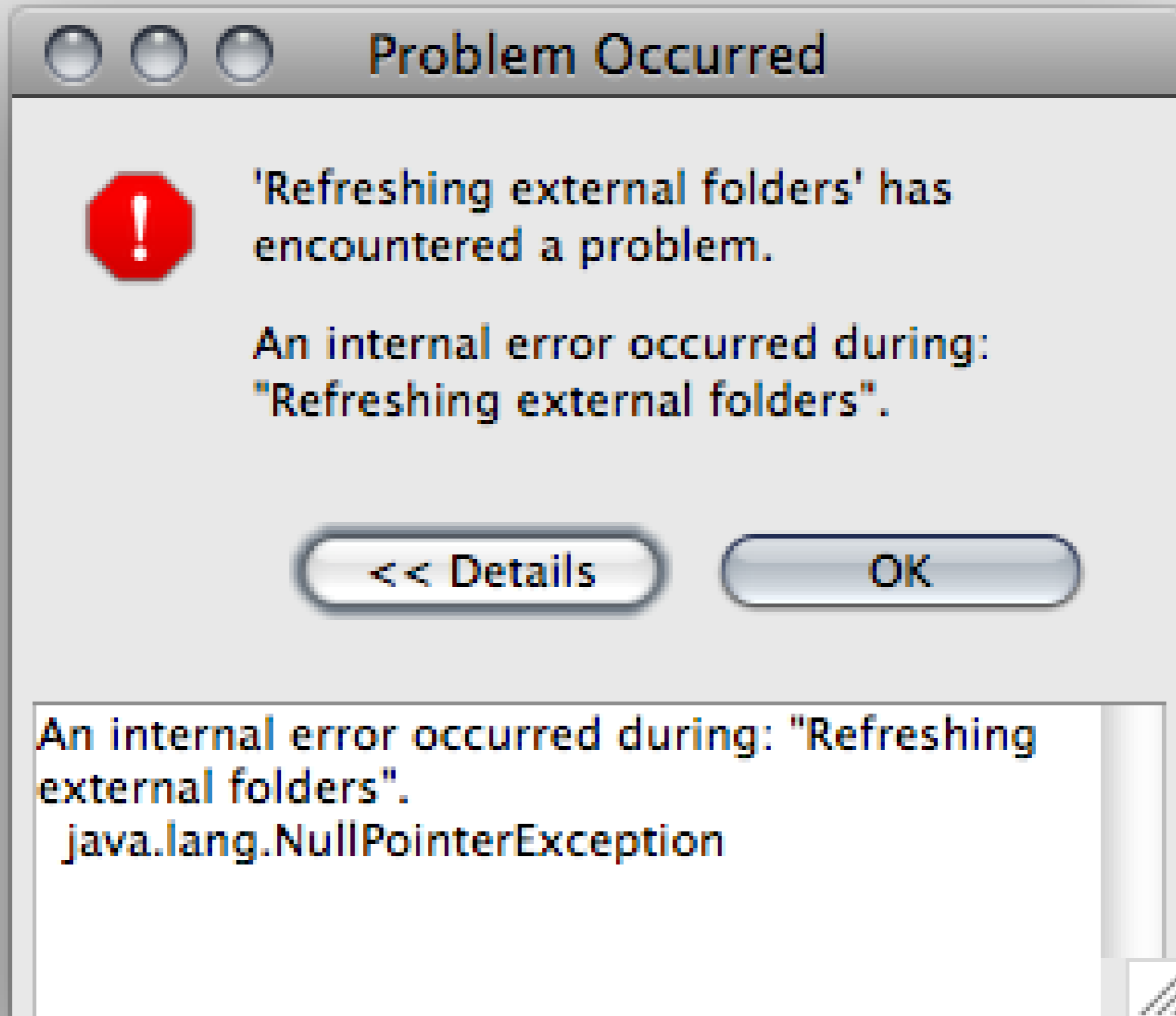


rule_summary.html ✕

Resource is out of sync with the file system: '/x5expert/templates/rule_summary.html'.

Press 'F5' or select File > Refresh to refresh the file.





ТЫ ДОСТАТОЧНО УМЕН?





Importing your code into Git (no history)

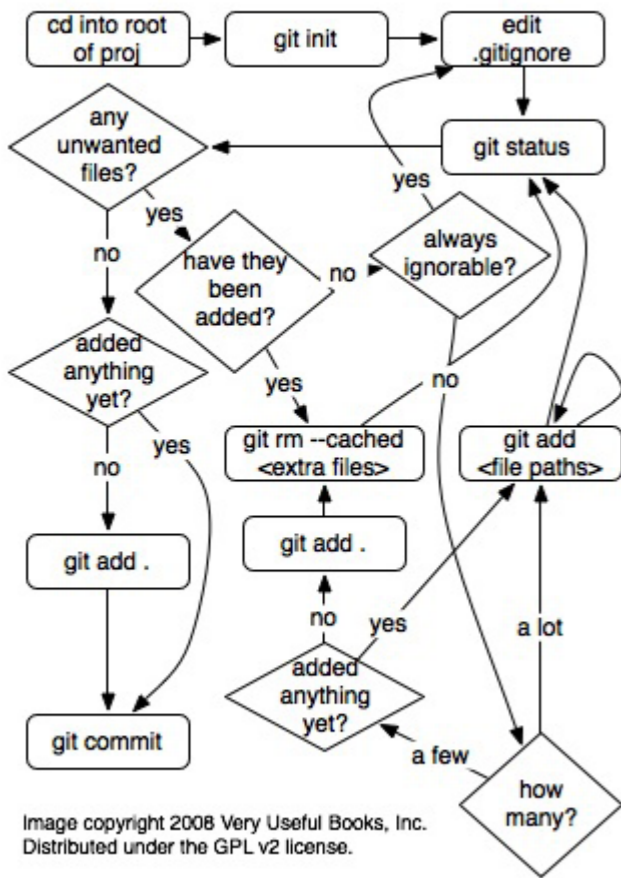
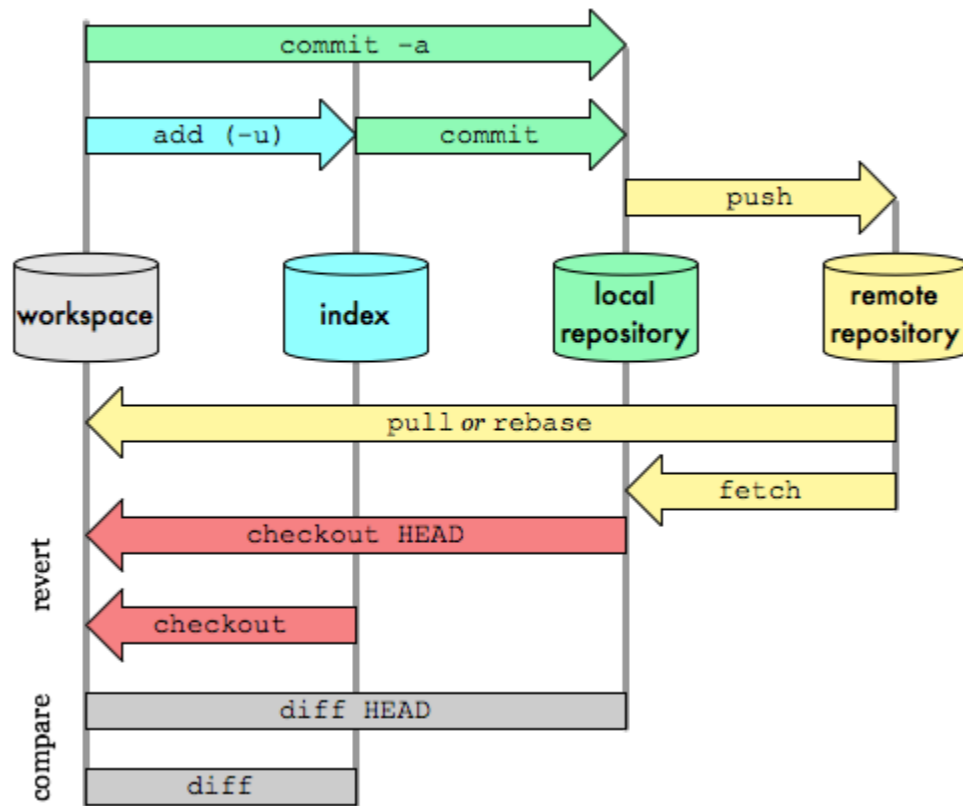


Image copyright 2008 Very Useful Books, Inc. Distributed under the GPL v2 license.

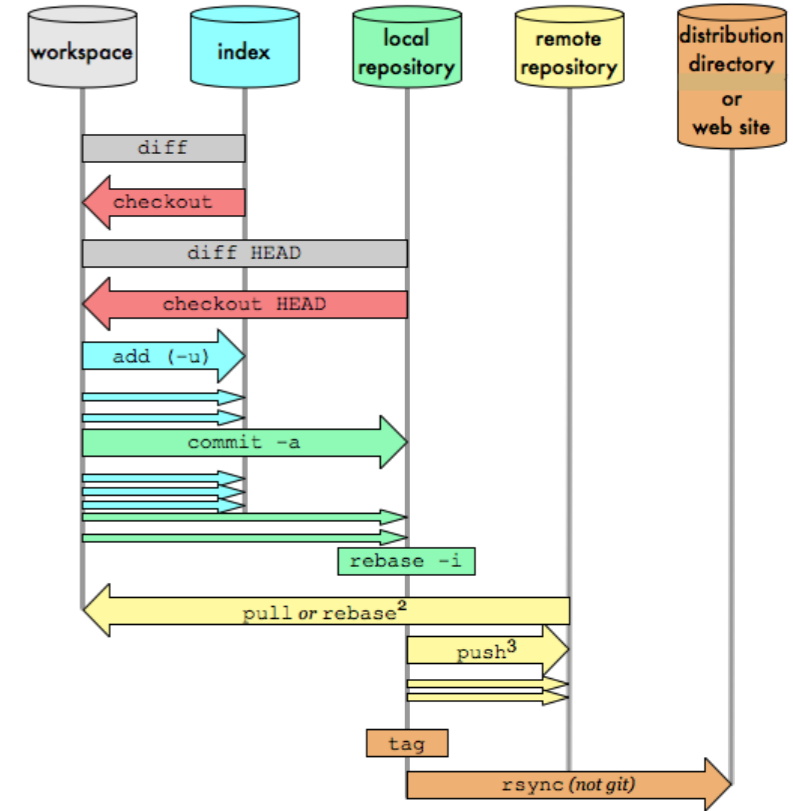
Git Data Transport Commands

<http://osteele.com>

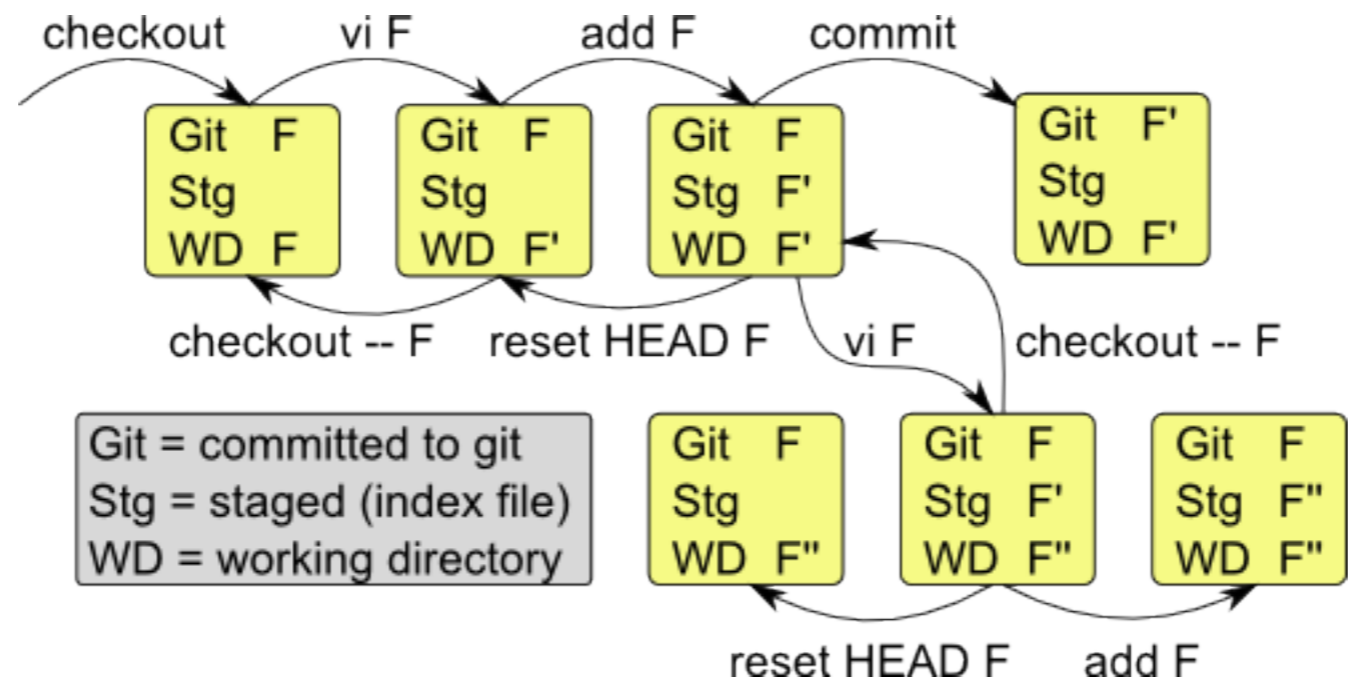


A¹ Git Workflow

<http://osteele.com>



1 Git is a workflow construction toolkit. This is just one of many possible workflows.
 2 With git-svn: "git svn rebase". With git-p4: "git p4 rebase"
 3 With git-svn: "git svn dcommit"



Git = committed to git
 Stg = staged (index file)
 WD = working directory





простота

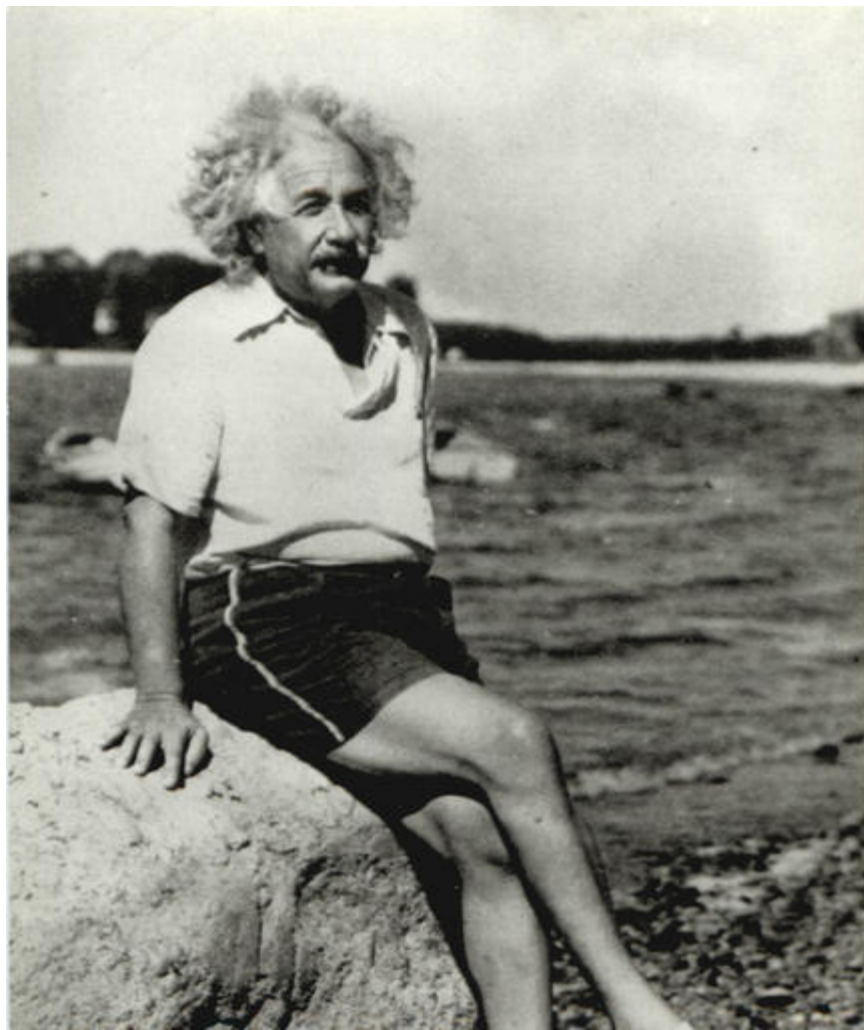


Сложность программных систем



Everything should be made as simple as possible, but not simpler.

Albert Einstein

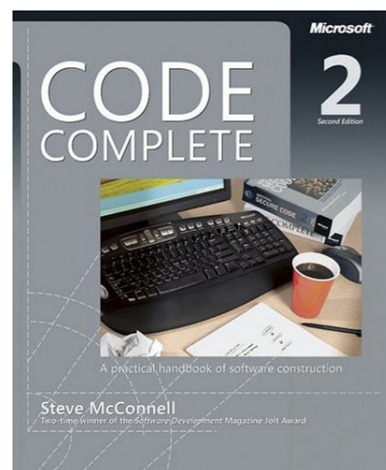




Managing complexity is the most important technical topic in software development.

In my view, it's so important, that Software's Primary Technical Imperative has to be *managing complexity*.

“Code complete” by Steve McConnell





Simple is better than complex.

Complex is better than complicated.

If the implementation is hard to explain, it's a bad idea.

If the implementation is easy to explain, it may be a good idea.

“Zen of Python” by Tim Peters





Меньше кода — меньше багов.

Меньше кода — проще разобраться.

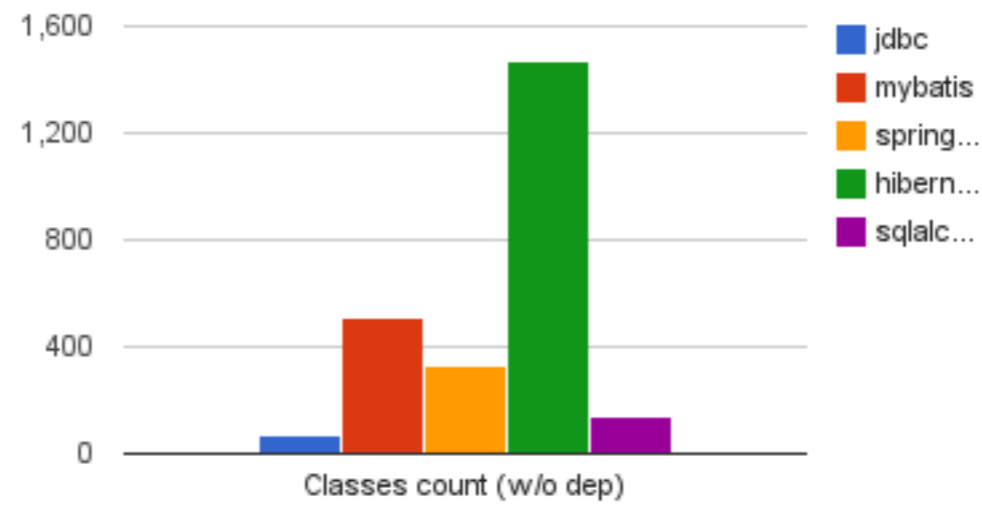
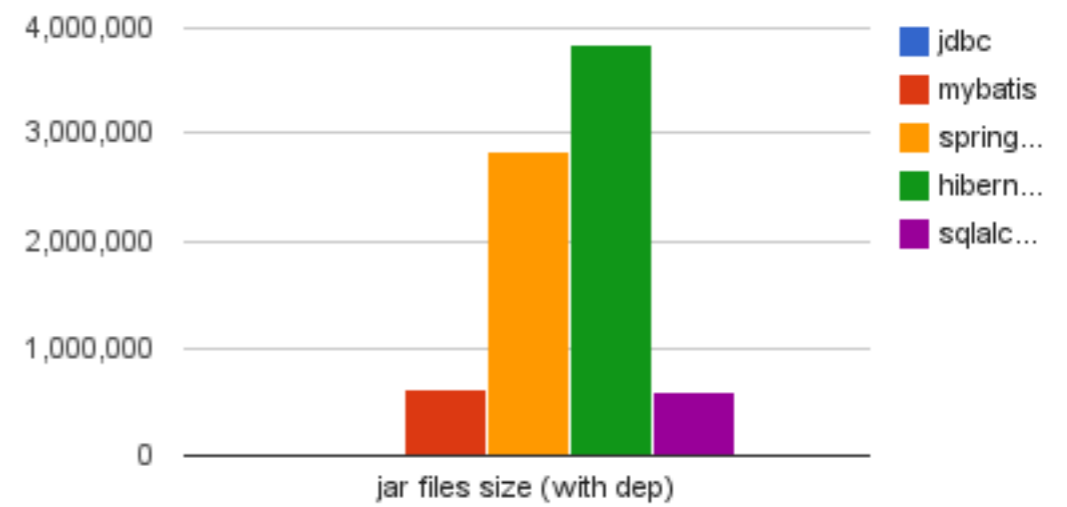
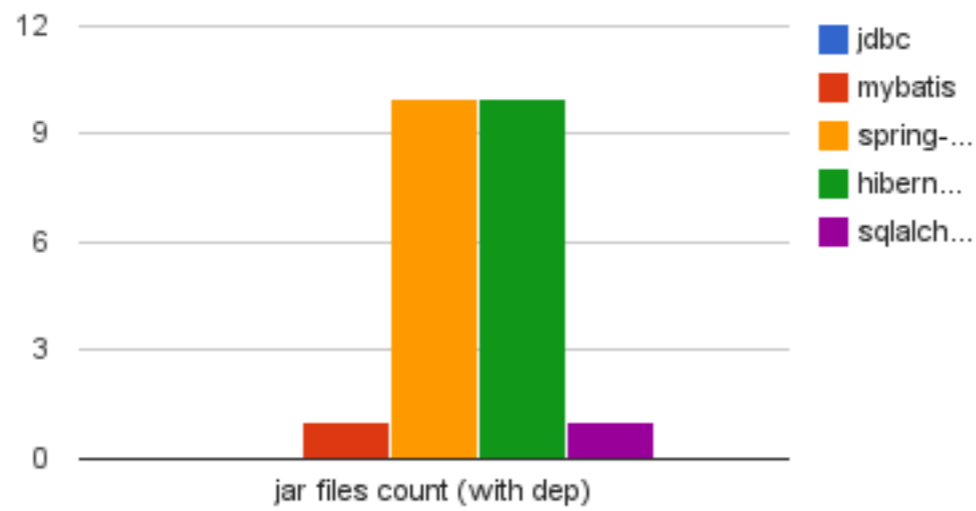
Меньше кода — легче менять.

Cpt. Obvious



простота, ау!







Зависит от: **10 других библиотек**
общим объемом: **~ 4 мб (сжаты zip)**
Главный jar: **~ 1400 классов**



wsgi

Зачем?





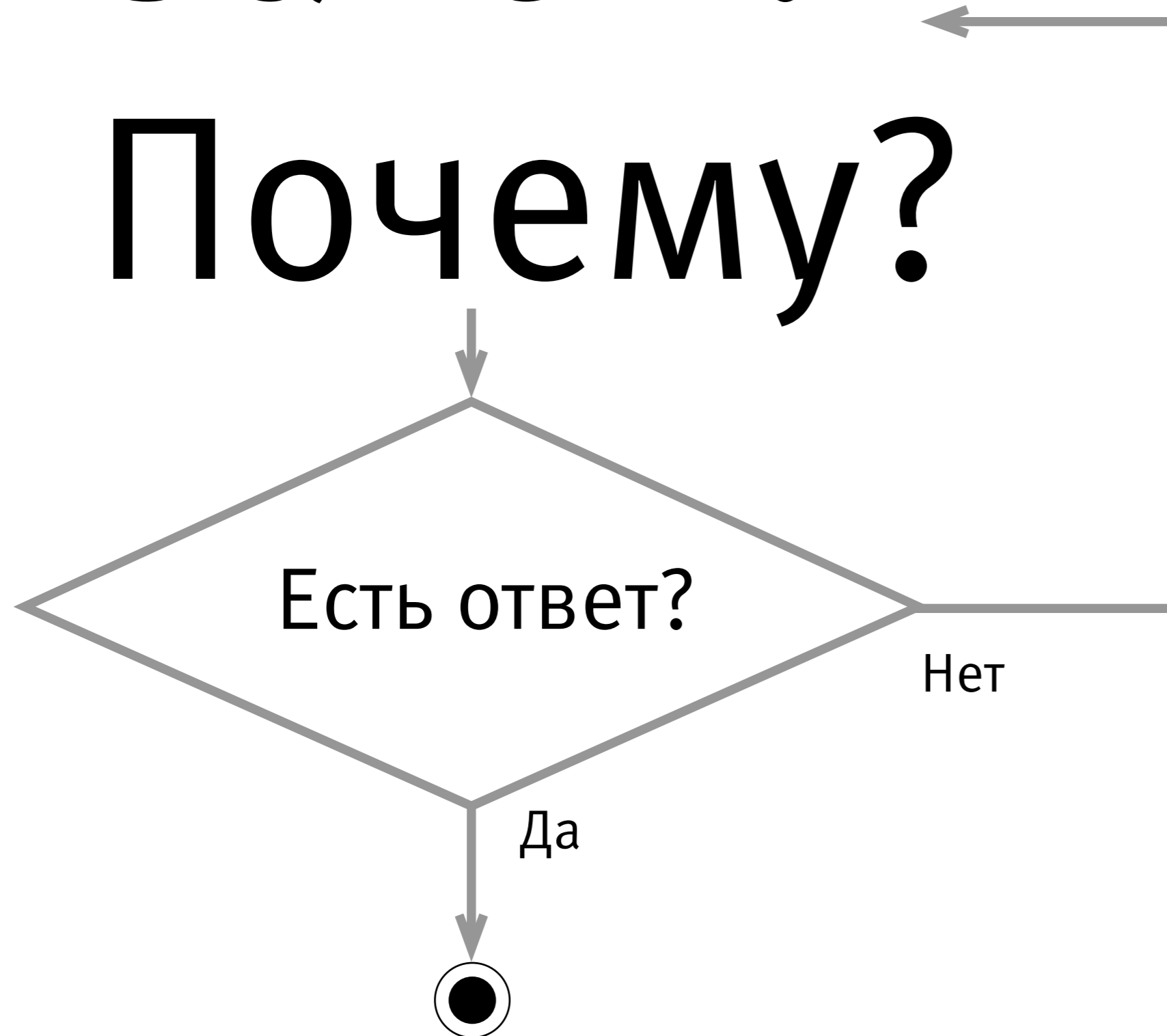
Зачем?

Почему?



Зачем?

Почему?





```
<?xml version="1.0" encoding="UTF-8"?>
<project xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd"
  xmlns="http://maven.apache.org/POM/4.0.0"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <modelVersion>4.0.0</modelVersion>
  <parent>
    <artifactId>billing-main</artifactId>
    <groupId>ru.sibirenergo.billing</groupId>
    <version>1.7.0</version>
    <relativePath>../relativePath</relativePath>
  </parent>

  <artifactId>billing-webapp</artifactId>
  <packaging>war</packaging>

  <name>billing-webapp</name>
  <description>Web Application on Wicket Framework</description>

  <profiles>
    <profile>
      <id>dev-deploy</id>
      <build>
        <plugins>
          <plugin>
            <artifactId>maven-clean-plugin</artifactId>
            <version>2.4.1</version>
            <configuration>
              <filesets>
                <fileset>
                  <directory>${env.CATALINA_HOME}/webapps/billing-webapp</directory>
                  <followSymlinks>>false</followSymlinks>
                </fileset>
              </filesets>
            </configuration>
          </plugin>
          <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-war-plugin</artifactId>
            <version>2.0</version>
            <configuration>
              <webappDirectory>${env.CATALINA_HOME}/webapps/billing-webapp</webappDirectory>
            </configuration>
          </plugin>
        </plugins>
      </build>
    </profile>
  </profiles>

  <build>

    <finalName>${project.artifactId}</finalName>

    <!-- RESOURCES -->
    <resources>
      <resource>
        <directory>src/main/resources</directory>
        <filtering>>true</filtering>
        <includes>
          <include>*.properties</include>
          <include>*/*.css</include>
        </includes>
      </resource>
      <resource>
        <directory>src/main/resources</directory>
        <filtering>>false</filtering>
        <excludes>
          <exclude>*.properties</exclude>
          <exclude>*/*.css</exclude>
        </excludes>
      </resource>
    </resources>

    <!-- PLUGINS -->
    <plugins>
    </plugins>
  </build>

  <dependency>
    <groupId>org.apache.maven.plugins</groupId>
    <artifactId>maven-war-plugin</artifactId>
    <version>2.0</version>
  </dependency>
  <dependency>
    <groupId>${project.groupId}</groupId>
    <artifactId>billing-main</artifactId>
    <version>1.7.0</version>
    <scope>provided</scope>
  </dependency>
  <dependency>
    <groupId>org.springframework</groupId>
    <artifactId>spring</artifactId>
    <version>3.0.7</version>
  </dependency>
  <dependency>
    <groupId>org.springframework</groupId>
    <artifactId>spring-test</artifactId>
    <version>3.0.7</version>
  </dependency>
  <dependency>
    <groupId>org.apache.wicket</groupId>
    <artifactId>wicket</artifactId>
    <version>1.5.13</version>
  </dependency>
  <dependency>
    <groupId>org.apache.wicket</groupId>
    <artifactId>wicket-extensions</artifactId>
    <version>1.5.13</version>
  </dependency>
  <dependency>
    <groupId>org.apache.wicket</groupId>
    <artifactId>wicket-datetime</artifactId>
    <version>1.5.13</version>
  </dependency>
  <dependency>
    <groupId>org.apache.wicket</groupId>
    <artifactId>wicket-spring</artifactId>
    <version>1.5.13</version>
  </dependency>
  <dependency>
    <groupId>org.wicketstuff</groupId>
    <artifactId>wicketstuff-merged-resources</artifactId>
    <version>3.0-20091007</version>
  </dependency>
  <dependency>
    <groupId>com.asual.lesscss</groupId>
    <artifactId>lesscss-engine</artifactId>
    <version>1.2.11</version>
  </dependency>
  <dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>slf4j-log4j12</artifactId>
    <version>1.7.12</version>
  </dependency>
  <dependency>
    <groupId>commons.logging</groupId>
    <artifactId>commons-logging</artifactId>
    <version>1.2</version>
  </dependency>
  <dependency>
    <groupId>javax.servlet</groupId>
    <artifactId>servlet-api</artifactId>
    <scope>provided</scope>
    <version>2.4</version>
  </dependency>
  <repository>
    <id>wicket-tree</id>
    <name>Wicket-tree Repository</name>
    <url>http://wicket-tree.googlecode.com/svn/repo</url>
  </repository>
</project>
v
```

```
<artifactId>billing-common</artifactId>
</dependency>
<dependency>
  <groupId>${project.groupId}</groupId>
  <artifactId>billing-building-accounting</artifactId>
</dependency>
<dependency>
  <groupId>${project.groupId}</groupId>
  <artifactId>billing-passport</artifactId>
</dependency>

<!-- spring -->
<dependency>
  <groupId>org.springframework</groupId>
  <artifactId>spring</artifactId>
</dependency>
<dependency>
  <groupId>org.springframework</groupId>
  <artifactId>spring-test</artifactId>
</dependency>

<!-- wicket -->
<dependency>
  <groupId>org.apache.wicket</groupId>
  <artifactId>wicket</artifactId>
</dependency>
<dependency>
  <groupId>org.apache.wicket</groupId>
  <artifactId>wicket-extensions</artifactId>
</dependency>
<dependency>
  <groupId>org.apache.wicket</groupId>
  <artifactId>wicket-datetime</artifactId>
</dependency>
<dependency>
  <groupId>org.apache.wicket</groupId>
  <artifactId>wicket-spring</artifactId>
</dependency>

<!-- wicketstuff -->
<dependency>
  <groupId>org.wicketstuff</groupId>
  <artifactId>wicketstuff-merged-resources</artifactId>
  <version>3.0-20091007</version>
</dependency>

<!-- LESS css -->
<dependency>
  <groupId>com.asual.lesscss</groupId>
  <artifactId>lesscss-engine</artifactId>
  <version>1.2.11</version>
</dependency>

<!-- logging -->
<dependency>
  <groupId>org.slf4j</groupId>
  <artifactId>slf4j-log4j12</artifactId>
</dependency>
<dependency>
  <groupId>commons.logging</groupId>
  <artifactId>commons-logging</artifactId>
</dependency>

<dependency>
  <groupId>javax.servlet</groupId>
  <artifactId>servlet-api</artifactId>
  <scope>provided</scope>
  <version>2.4</version>
</dependency>
</dependencies>

<repositories>
  <repository>
    <id>wicket-tree</id>
    <name>Wicket-tree Repository</name>
    <url>http://wicket-tree.googlecode.com/svn/repo</url>
  </repository>
</repositories>
</project>
v
```

Built by:
maven groupId</groupId>
-counters</artifactId>
</dependency>
<dependency>
<groupId>\${project.groupId}</groupId>

10 файлов
63 465 Кб



```
$ cat dep.pip
```

```
django >= 1.2
```

```
Jinja2 >= 2.5
```

```
coffin
```

```
debug_toolbar
```

```
south
```

```
pytz
```

```
pisa >= 3.0
```

1 файл
73 байта



Datasource

Transaction Manager

`org.springframework.transaction.jta.JtaTransactionManager`

`org.springframework.orm.hibernate3.LocalSessionFactoryBean`

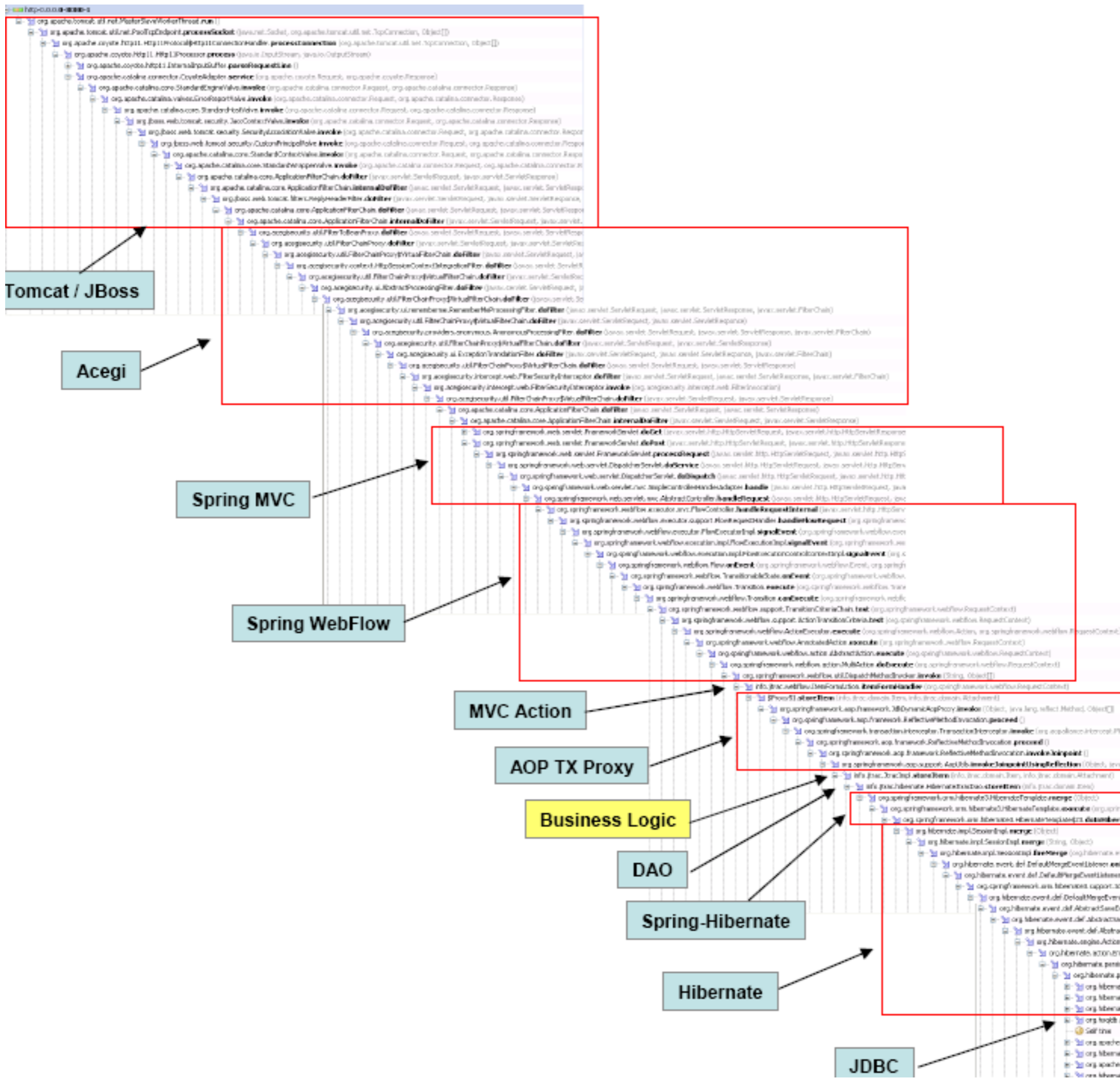
`org.springframework.orm.hibernate3.HibernateTemplate`

`org.springframework.orm.hibernate.LocalTransactionManager-
Lookup`

`org.hibernate.transaction.JTATransactionFactory`

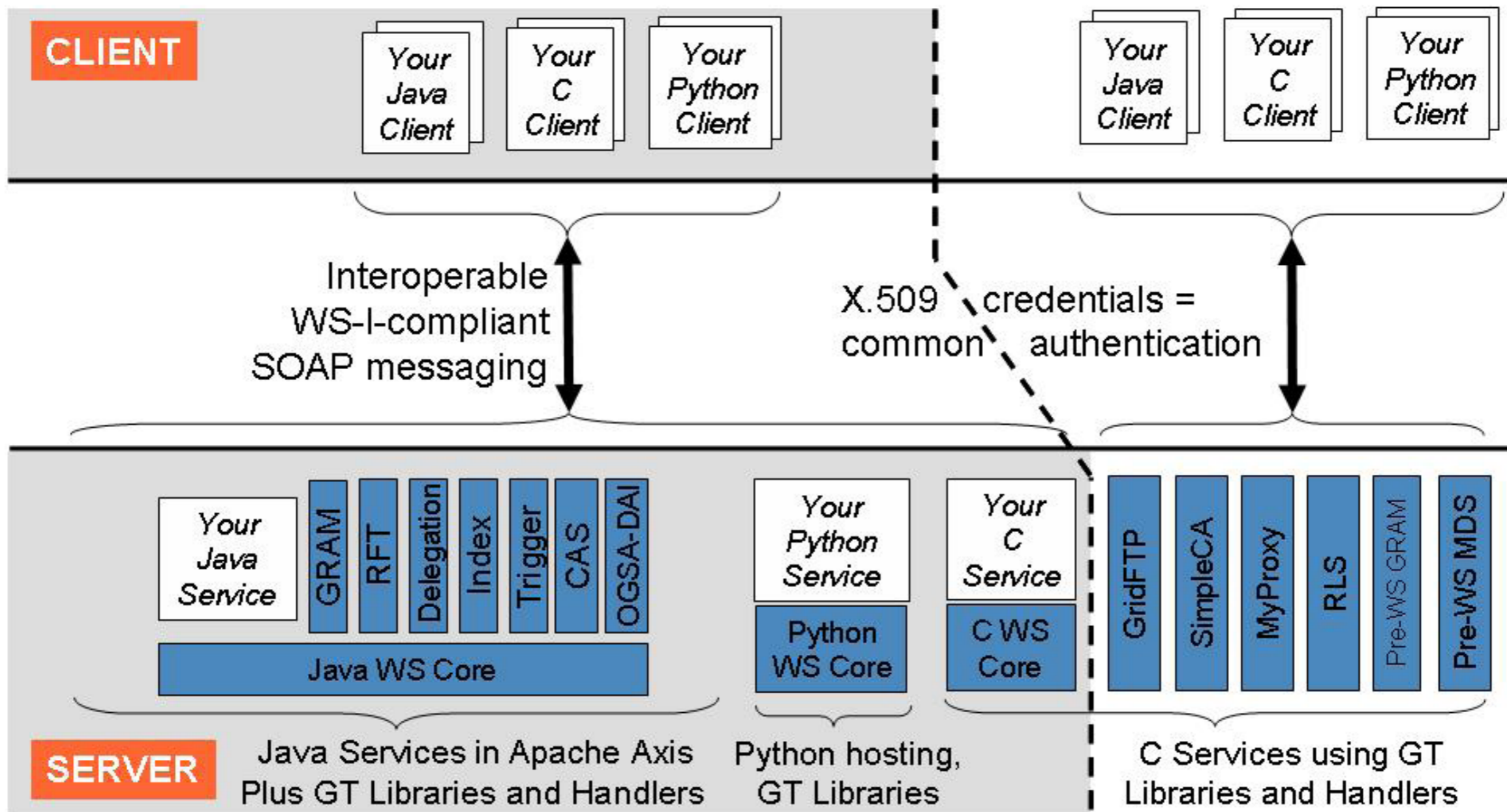
`org.springframework.jdbc.support.SQLException-
Translator`







GT4 Service Infrastructure





Сложная задача



Сложное решение

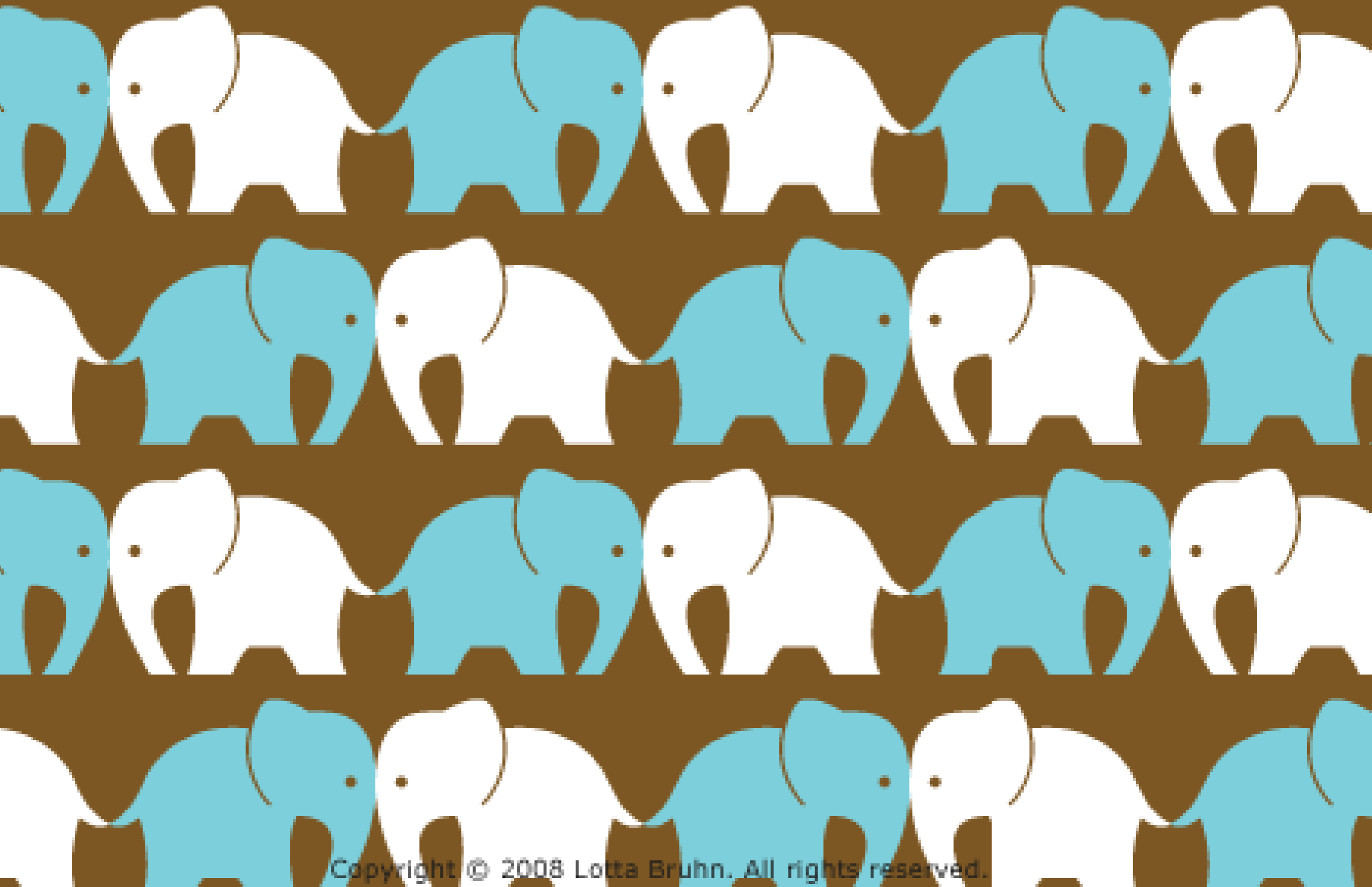


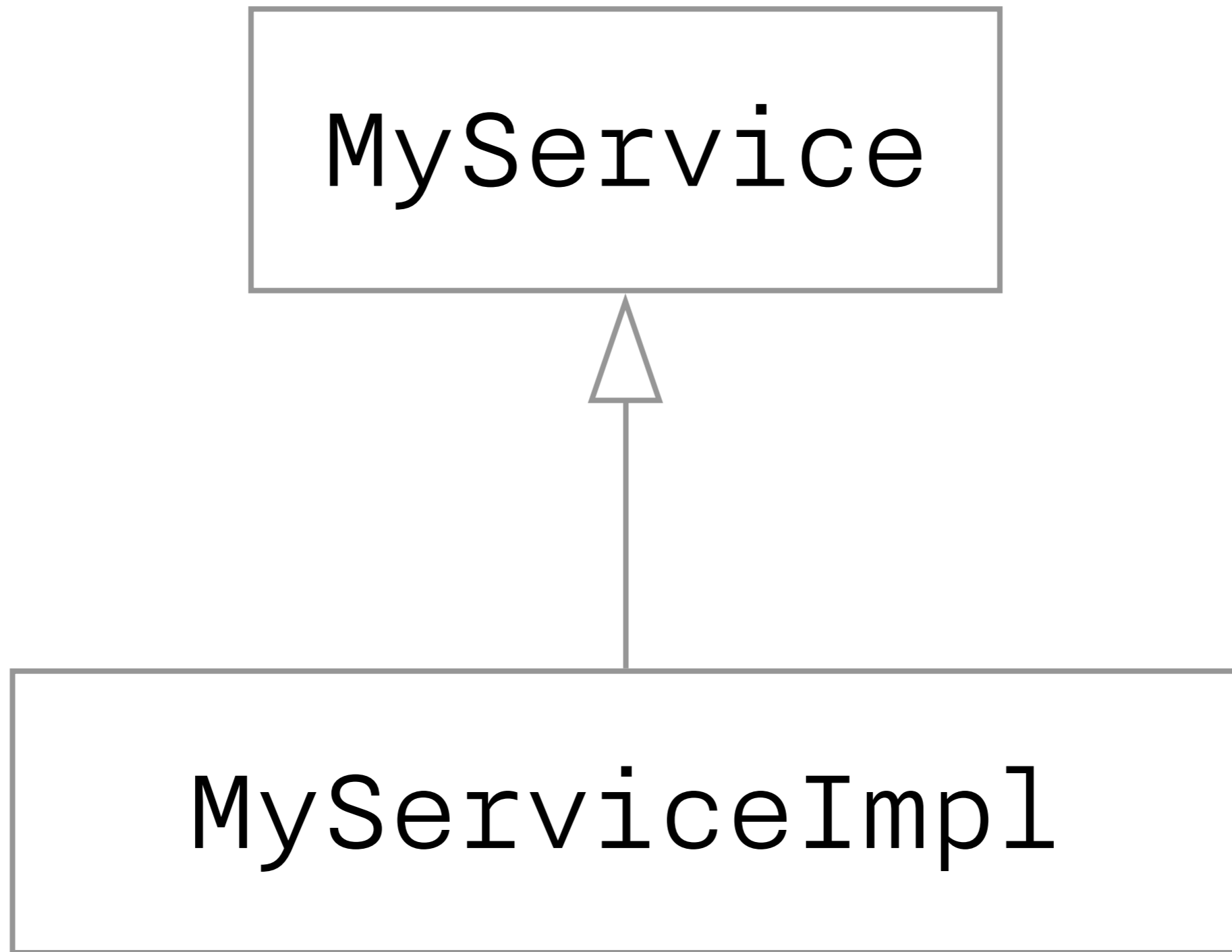
Правильное решение



Сложное решение

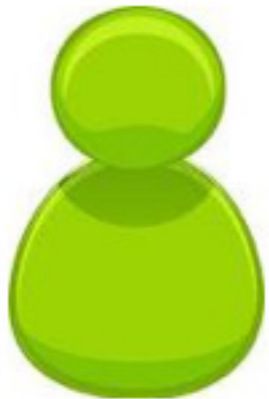
patterns







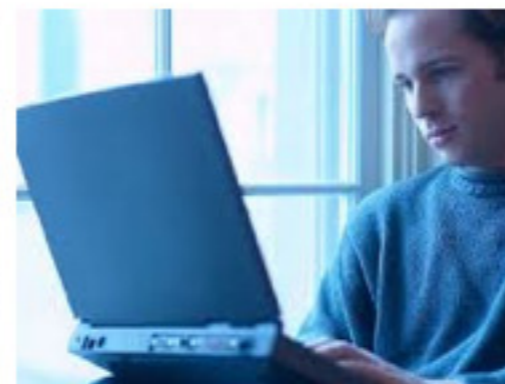
**ПОМНИ О
ПОЛЬЗОВАТЕЛЕ**





Результатов: примерно 255 000 000 (0,26 сек.)

Расширенный поиск







одуматься x

Имя

НИКИТА

Страница по адресу www.brilance.com says:

Имя должно состоять только из латинских букв, цифр и знаков _ @ -, от 2 до 20 символов.

OK

.....

Повторить пароль

.....

Влипнуть!



5 простых шагов установки программы под Линукс (если все пойдет хорошо)

1. `tar xvzf package.tar.gz` (or `tar xvjf package.tar.bz2`)
2. `cd package`
3. `./configure`
4. `make`
5. `make install`





Если у вас Linux — поставьте ffmpeg, sox и запустите запись как-то так:

```
sox -t alsa "hw:0,0" -t ogg -A -2  
-c1 -r11025 - | ffmpeg -y -i - -ar  
11025 -ab 52 -ac 1 -f x11grab -s  
1280x720 -i :0.0+10,20 -b 200 -r 12  
-f avi thescreencast.avi
```



ORACLE



ORA-00020: Maximum number of processes (%s)
exceeded

ORA-00904: invalid column name

ORA-00942: table or view does not exist

ORA-00911: invalid character

ORA-01722: invalid number

django

Exception Value: Cannot resolve keyword 'name'
into field. Choices are: first_name, id, last_
name, middle_name,



Коллего-ориентированное программирование



Classes and methods in Wicket are generally declared as final **until the need for extensibility is well understood.**

...classes and methods which haven't been designed for extension cannot be extended **until the problem(s) at hand are examined by the Wicket development team.**

While this does provoke more discussion and sometimes a bit of annoyance, the **discussion** generally **improves Wicket...**

<http://www.wicketframework.org/faqs.html#why-final>





ПОМНИ



упрощай

?



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