

Writing BETTER code with NetBeans

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Who is talking...

- Entrepreneur and founder of UK based software company IDR solutions
- Using Java since 1997 and have used Vi, JBuilder, VisualCafe, Eclipse, IDEA, NetBeans
- Work with PDF, HTML5, SVG in Java and JavaFX
- Day job - a Java PDF library and PDF2HTML5/SVG converter
- I have a History degree
- I also have a PGCE (Loughborough) and a CS MSc from a local University...

Ask me about Sport, NetBeans, JavaFX, Java, HTML5, SVG, PDF, or anything which happened before 1500AD



My talk will cover...

- NetBeans is not just for Java
- All the Java tools you will ever need.
- Debugging code with NetBeans
- NetBeans and Ant (I might mention Maven)
- Automated Testing with NetBeans
- Tips for writing better code quicker with NetBeans
- Other Code quality plugins
- Something about cats

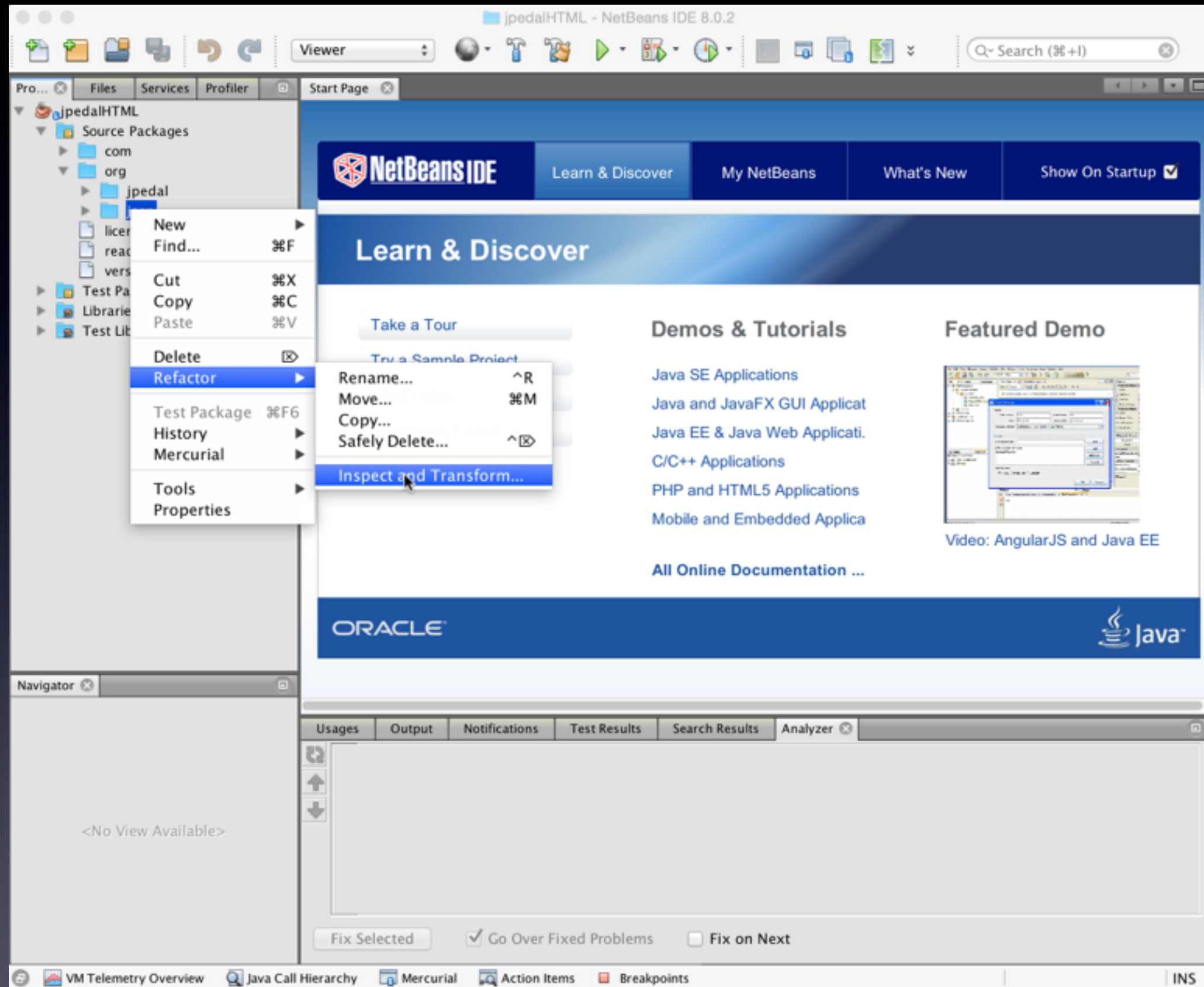


What is better code?

- Faster to write
- Faster to run
- Less 'buggy'
- Looks likes Mark Reinhold wrote it
- Makes sense to a 7 year old
- Easy to maintain
- More fun to write
- Shorter
- More verbose
- Simpler
- I know it when I see it...



Context matters



The NetBeans 'family'

NetBeans IDE 8.0.2 Download

8.0.1 | 8.0.2 | Development | Archive

Email address (optional):

Subscribe to newsletters: ☒ Monthly ☐ Weekly

☒ NetBeans can contact me at this address

IDE Language: English Platform: Mac OS X

Note: Greyed out technologies are not supported for this platform.

Supported technologies *	Java SE	Java EE	C/C++	HTML5 & PHP	All
NetBeans Platform SDK	•	•			•
Java SE	•	•			•
Java FX	•	•			•
Java EE		•			•
Java ME					—
HTML5		•		•	•
Java Card™ 3 Connected					—
C/C++			•		•
Groovy					•
PHP				•	•
Bundled servers					
GlassFish Server Open Source Edition 4.1		•			•
Apache Tomcat 8.0.15		•			•

Download Download Download Download Download

Free, 105 MB Free, 222 MB Free, 72 MB Free, 72 MB Free, 243 MB

* You can add or remove packs later using the IDE's Plugin Manager (Tools | Plugins).

Java 7 and later versions are required for installing and running the PHP and C/C++ NetBeans Bundles. You can download the [latest Java at java.com](#).

JDK 7 and later versions are required for installing and running the Java SE, Java EE and All NetBeans Bundles. You can download [standalone JDK](#) or download the latest JDK with [NetBeans IDE Java SE bundle](#).

You can start developing applications based on the NetBeans Platform using the NetBeans IDE for Java SE. Learn more about the [NetBeans Platform](#). NetBeans source code and binary builds without bundled runtimes are also available in [zip file format](#). See also [instructions on how to build the IDE from sources or installation instructions](#).

Important Legal Information:

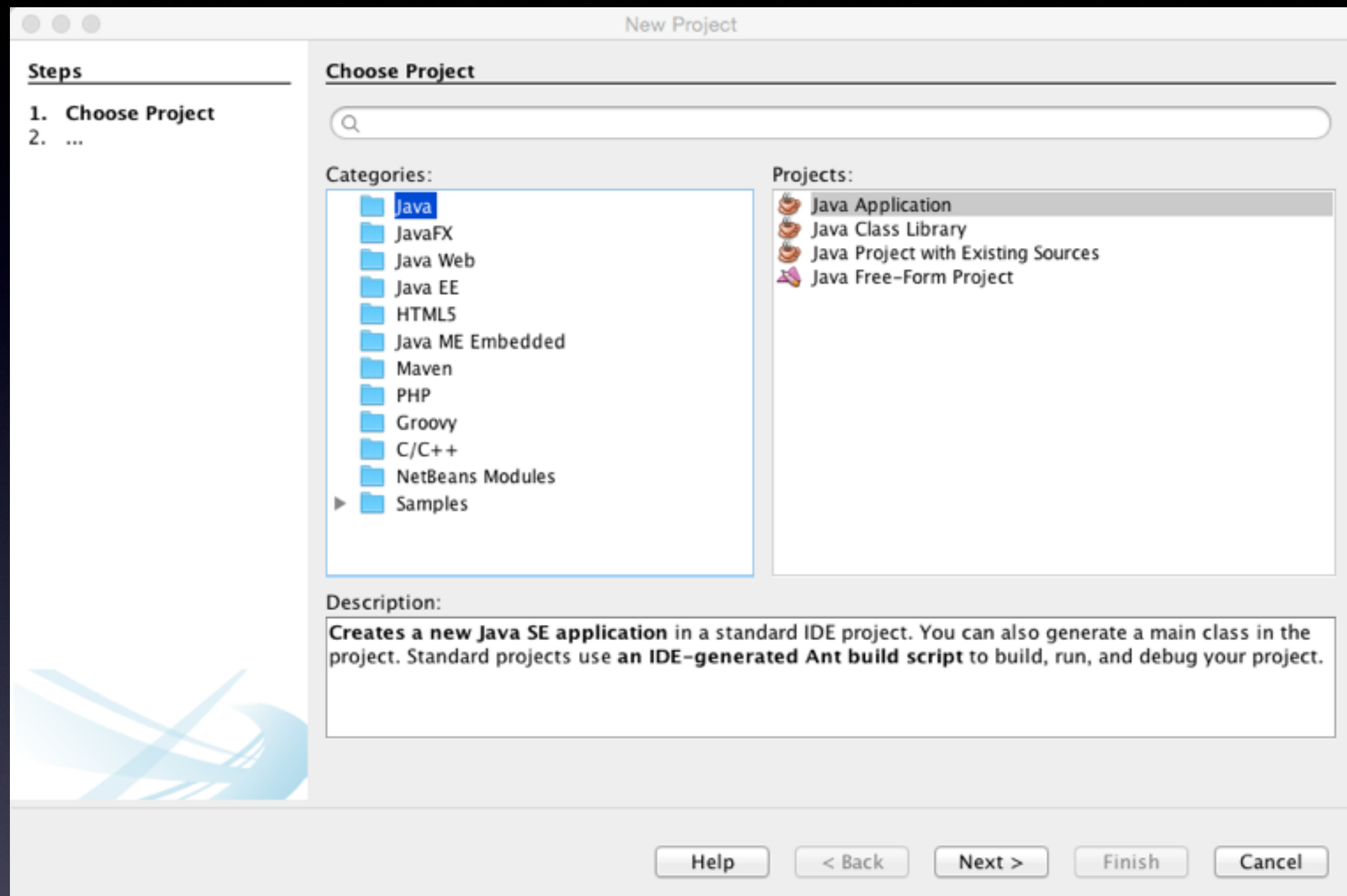
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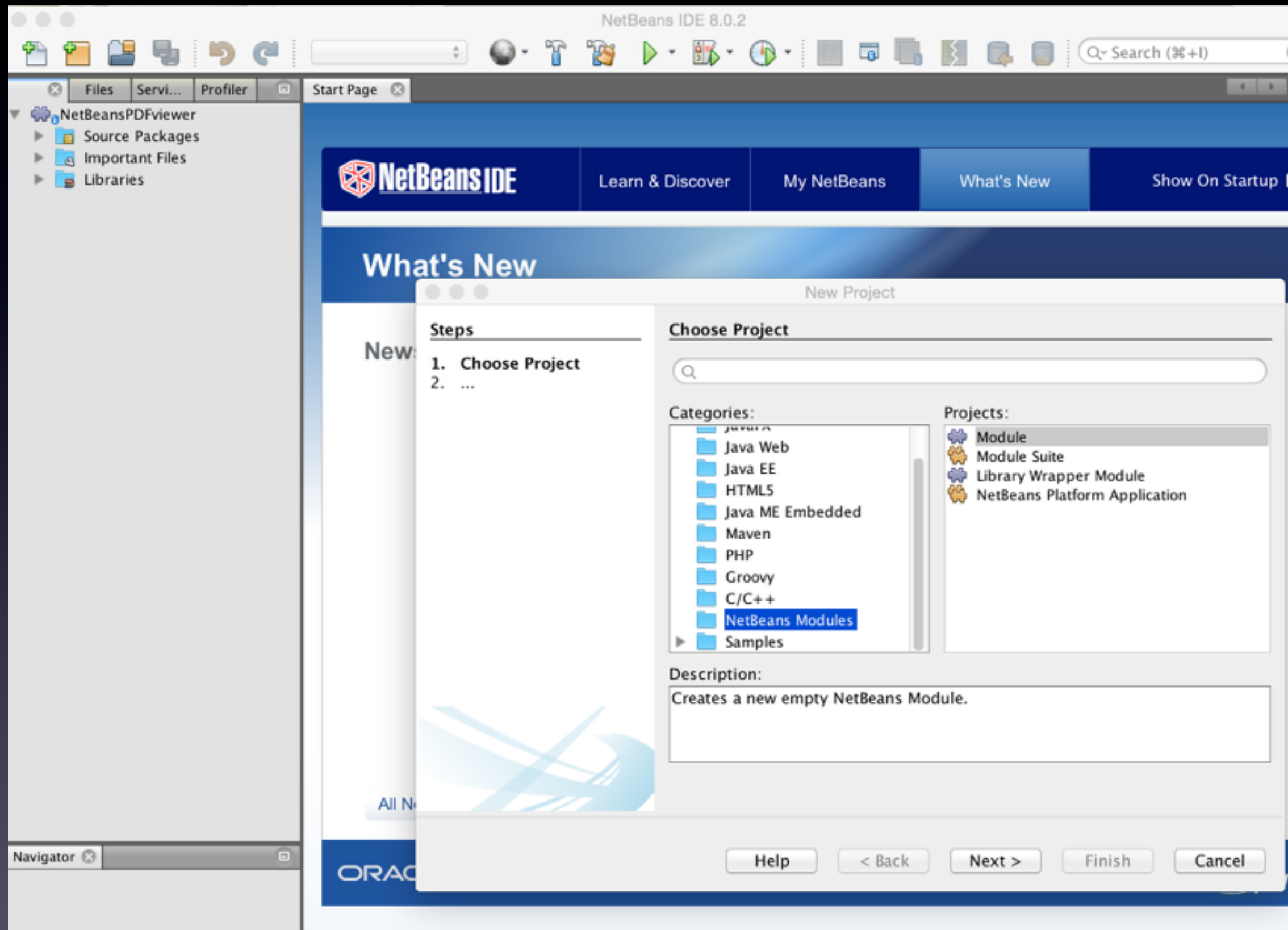
IDE, SDK, Framework or Platform?

NetBeans Projects

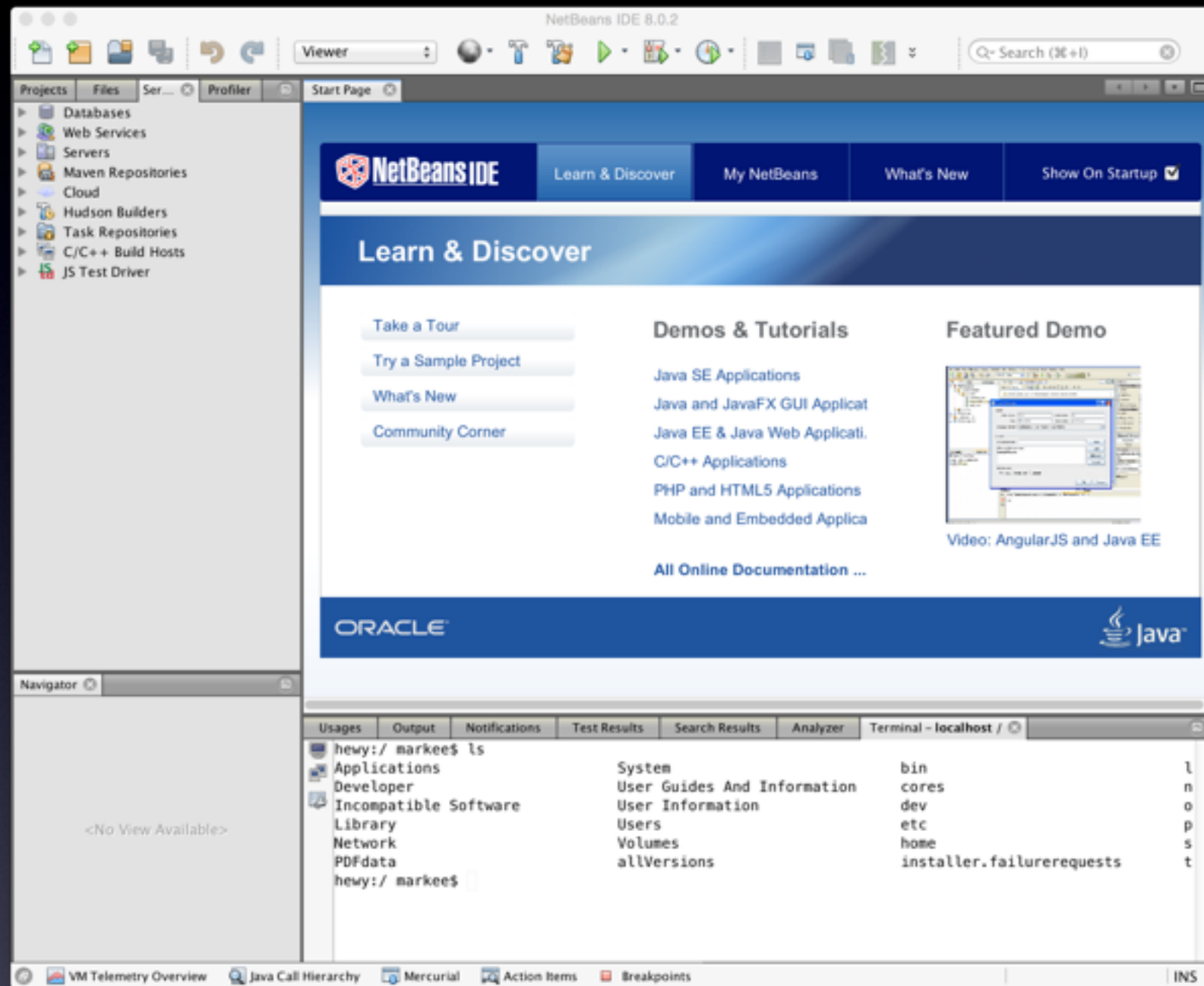


You can have multiple projects all open at once
Add other languages with Plugins (ie Android)...

Plugin Projects



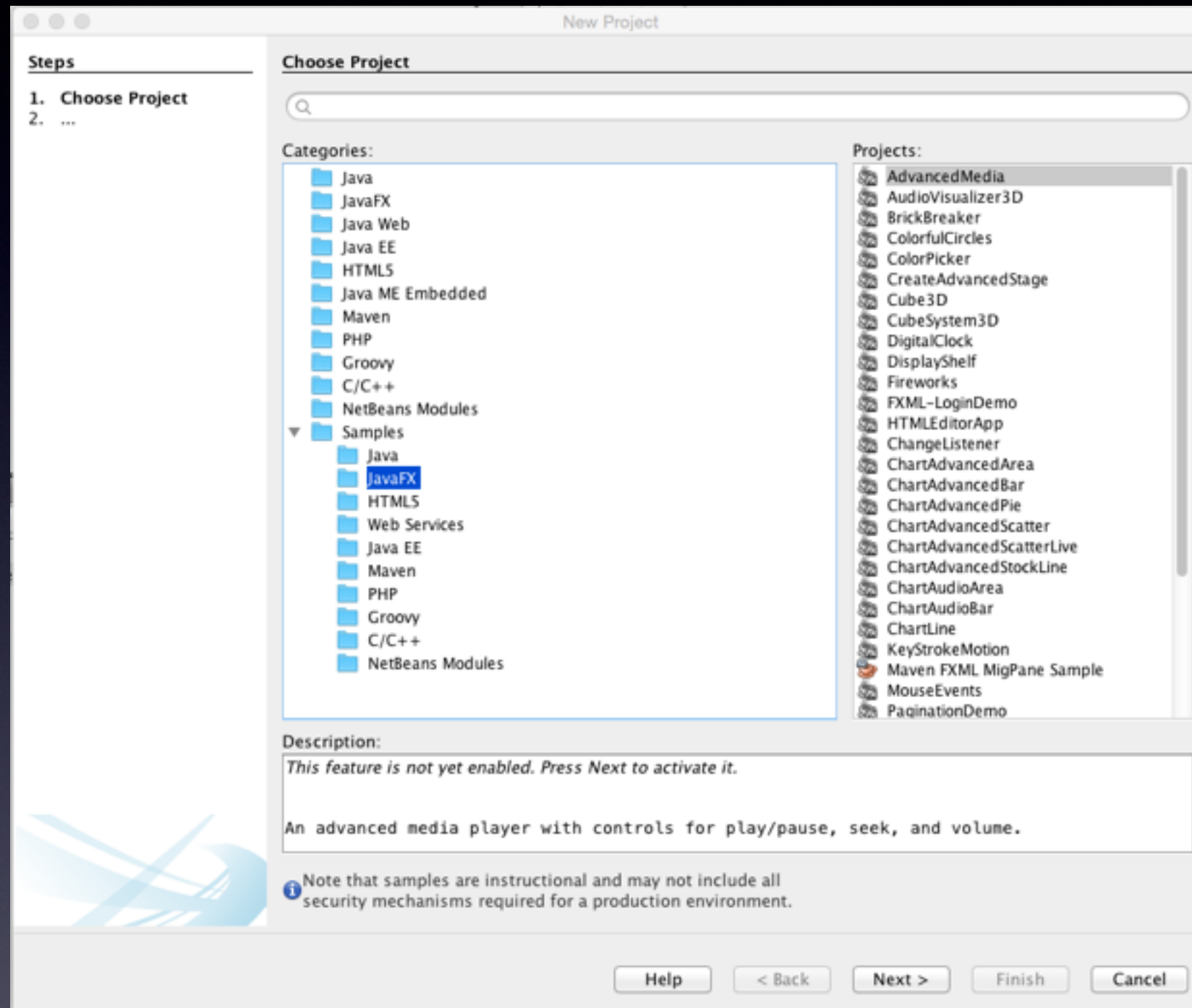
You can live inside NetBeans



Integration to Start Page, services, plugins, even a shell...

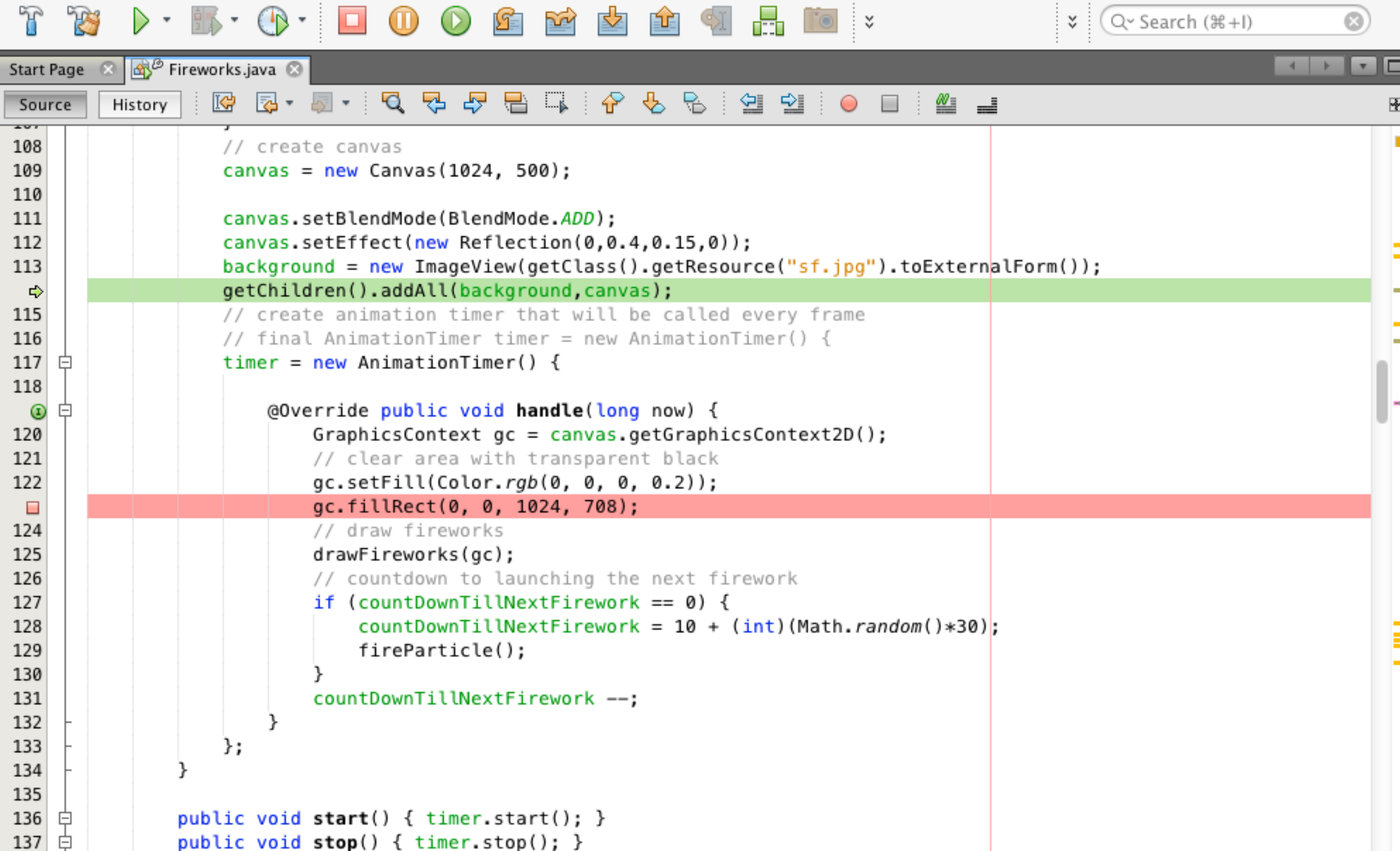
Good artists copy, great artists steal!

Quote from Pablo Picasso Mark Stephens



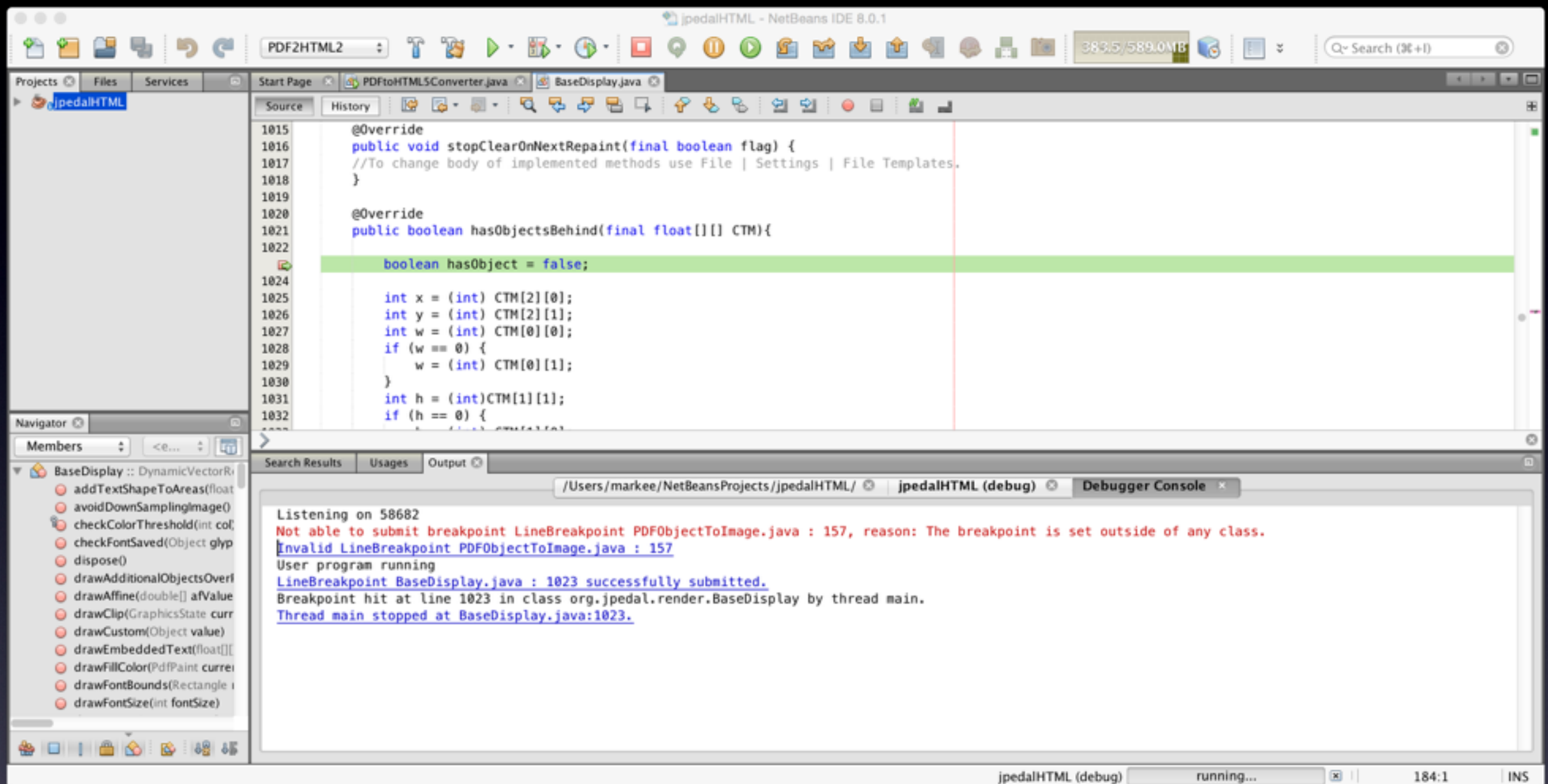
Debugging code

Fireworks - NetBeans IDE 8.0.2



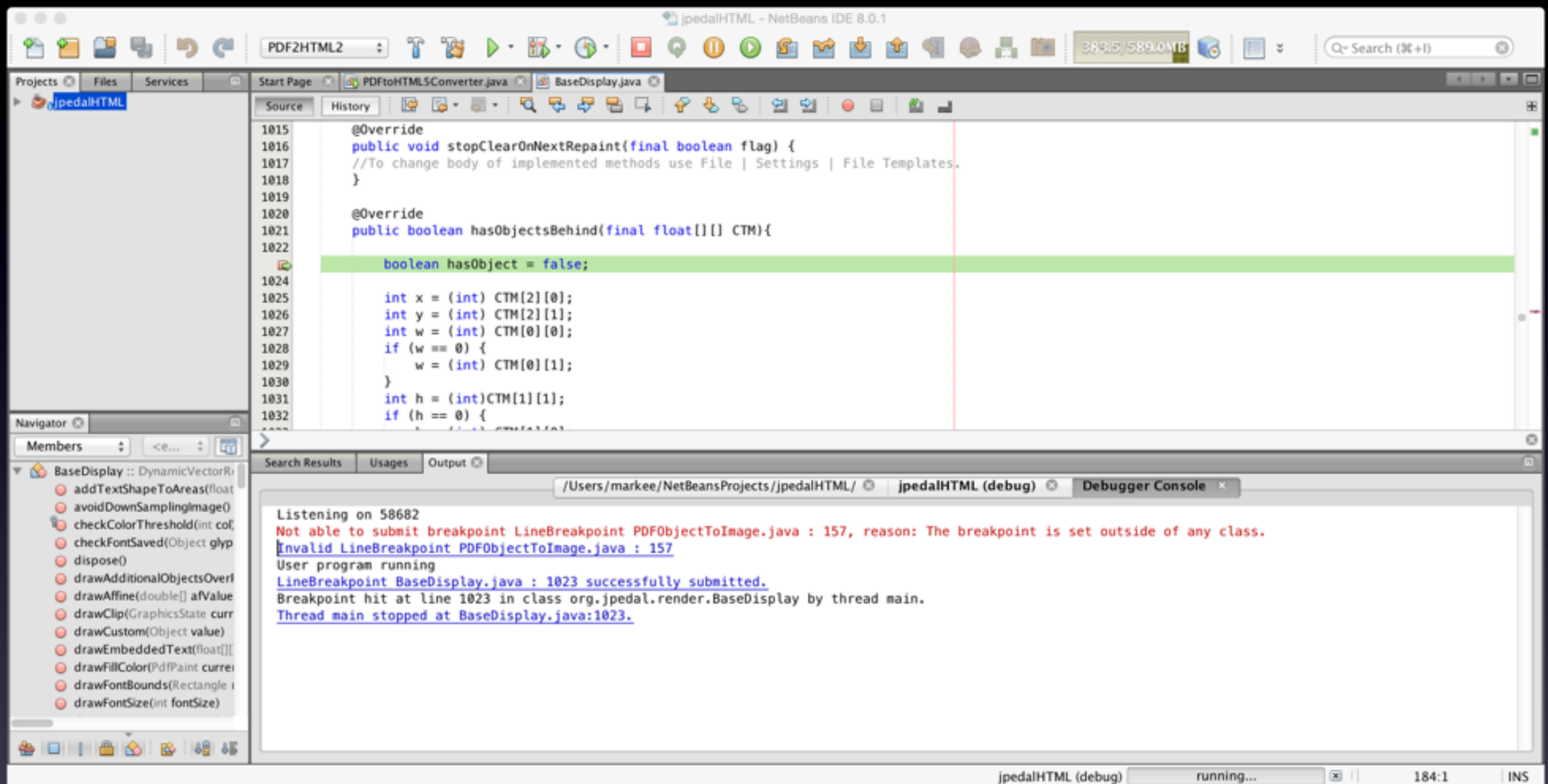
```
108 // create canvas
109 canvas = new Canvas(1024, 500);
110
111 canvas.setBlendMode(BlendMode.ADD);
112 canvas.setEffect(new Reflection(0,0.4,0.15,0));
113 background = new ImageView(getClass().getResource("sf.jpg").toExternalForm());
114 children.addAll(background, canvas);
115 // create animation timer that will be called every frame
116 // final AnimationTimer timer = new AnimationTimer() {
117 timer = new AnimationTimer() {
118
119     @Override public void handle(long now) {
120         GraphicsContext gc = canvas.getGraphicsContext2D();
121         // clear area with transparent black
122         gc.setFill(Color.rgb(0, 0, 0, 0.2));
123         gc.fillRect(0, 0, 1024, 708);
124         // draw fireworks
125         drawFireworks(gc);
126         // countdown to launching the next firework
127         if (countDownTillNextFirework == 0) {
128             countDownTillNextFirework = 10 + (int)(Math.random()*30);
129             fireParticle();
130         }
131         countDownTillNextFirework --;
132     }
133 };
134
135 public void start() { timer.start(); }
136 public void stop() { timer.stop(); }
```

Version control



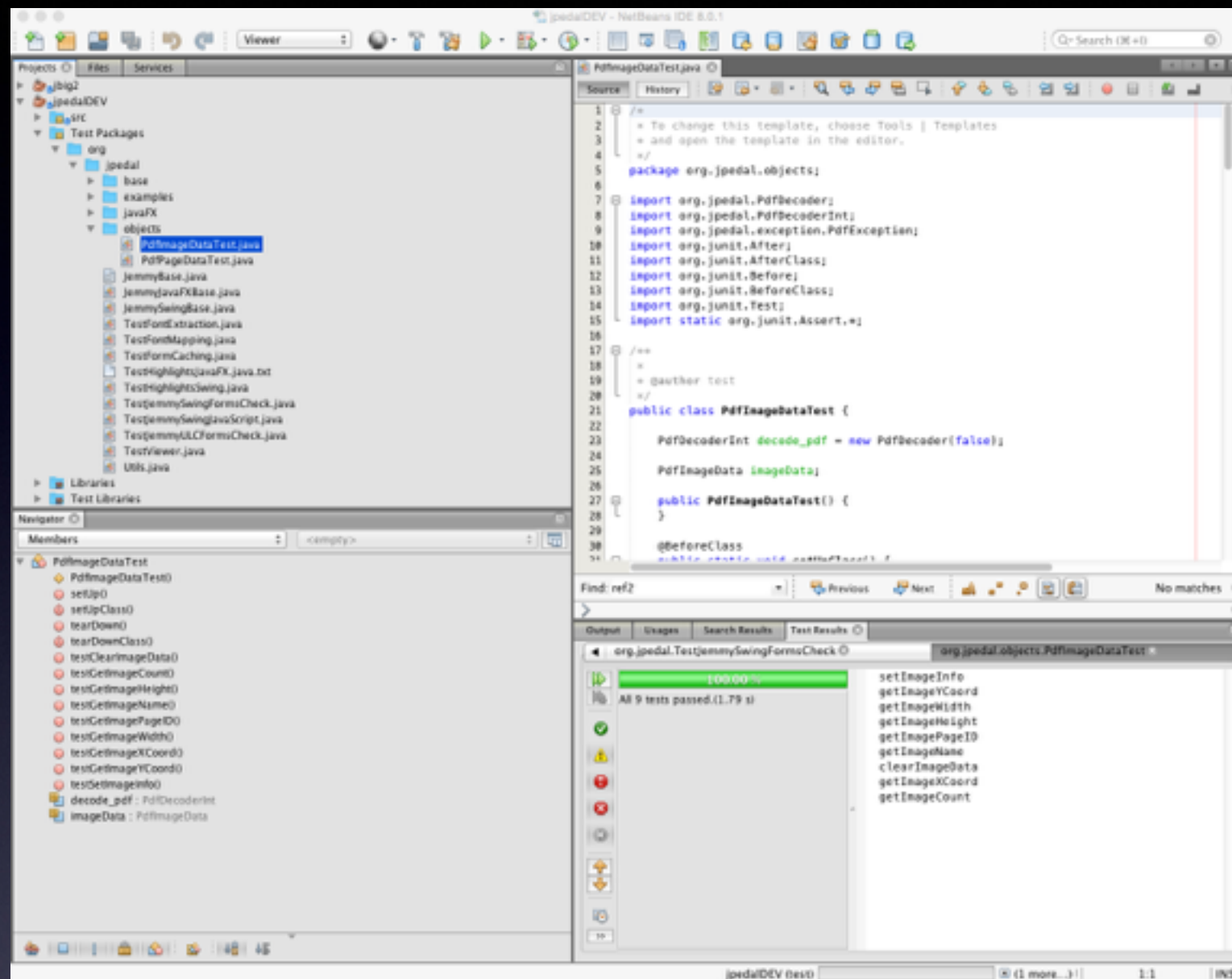
Note the toolbar is configurable....

NetBeans and Ant



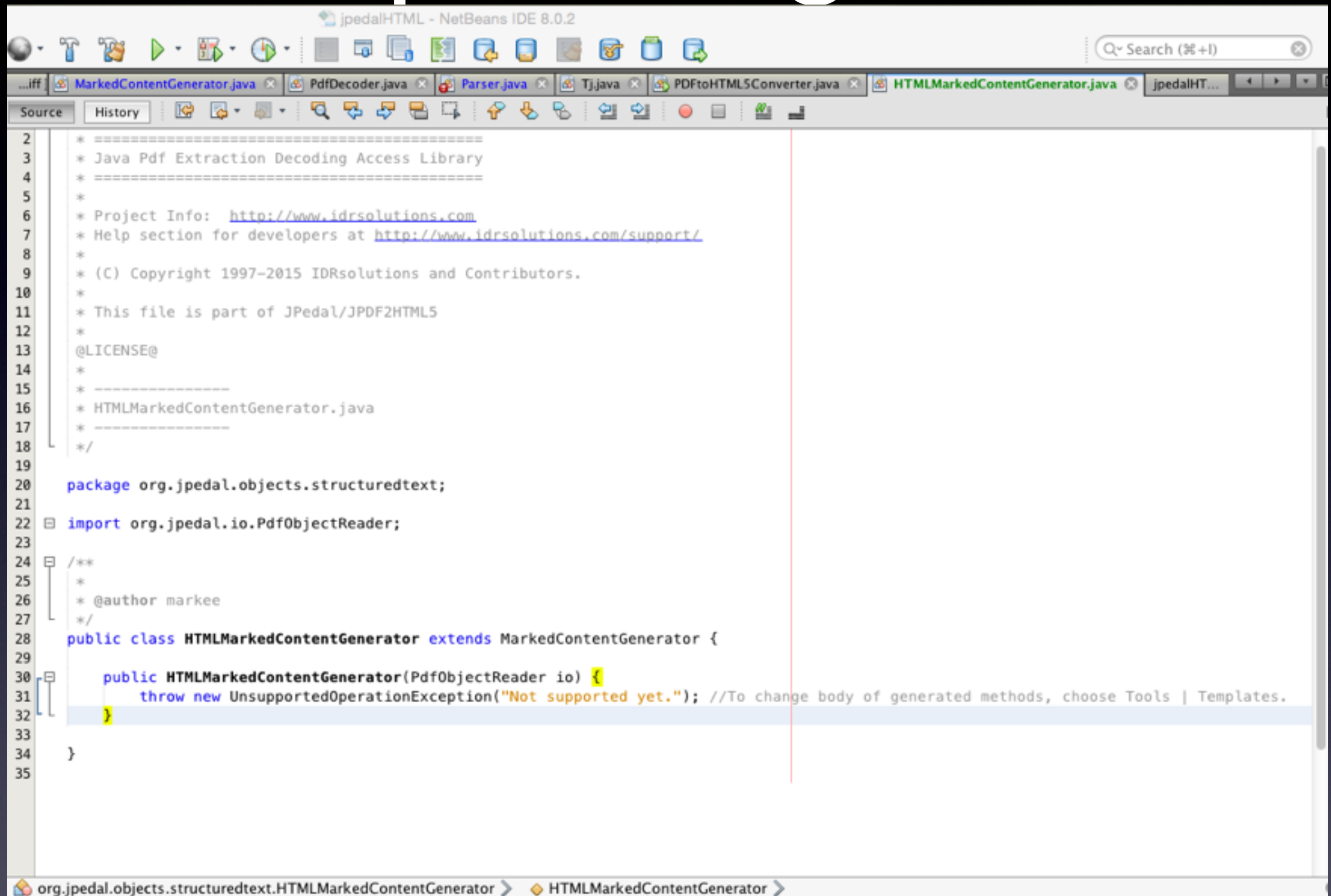
NetBeans is an Ant wrapper...

Testing your code



JUnit/Jemmy tests easy to create/run in NetBeans and
script for Continuous Integration

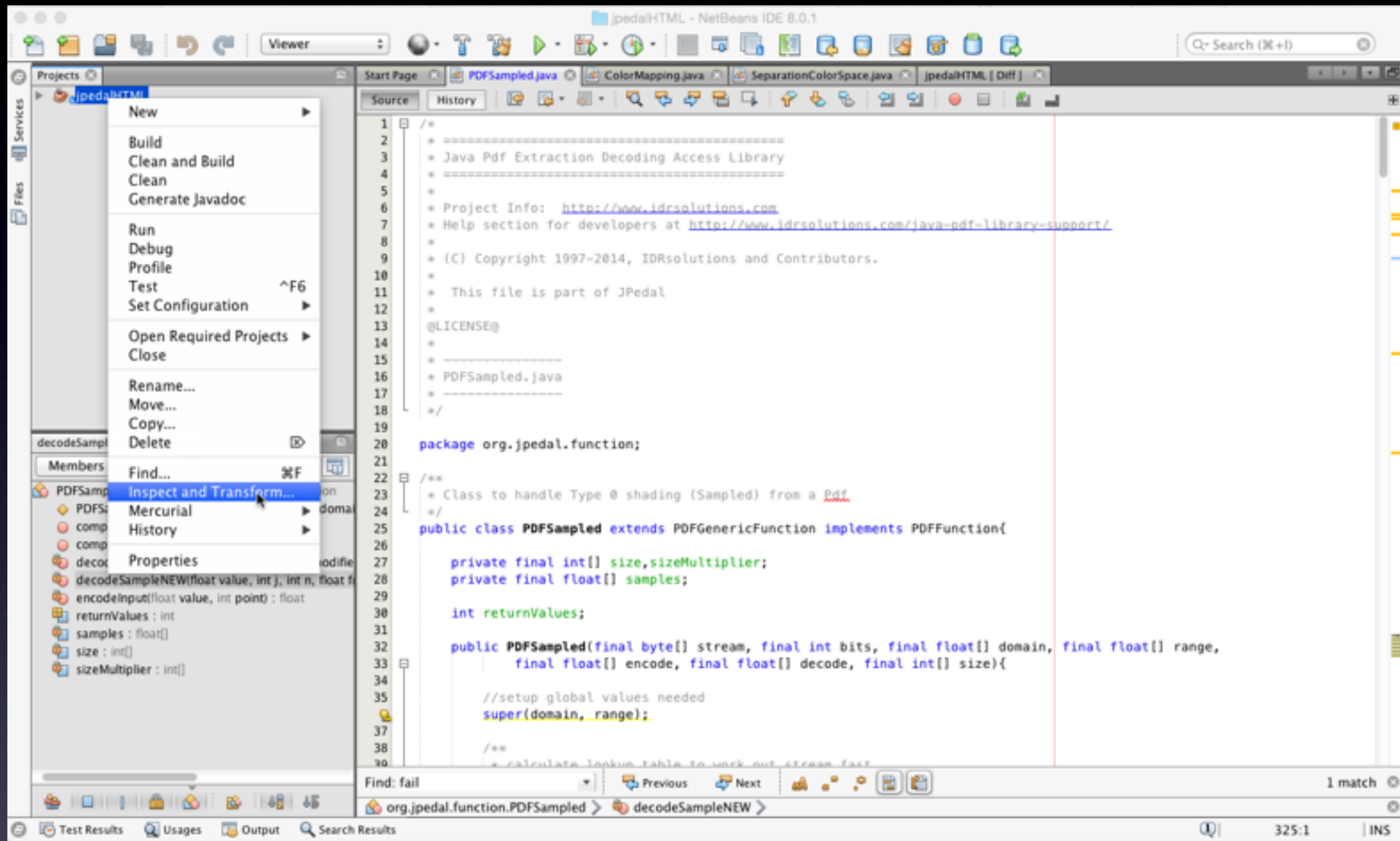
Help writing code



```
2  * =====
3  * Java Pdf Extraction Decoding Access Library
4  * =====
5  *
6  * Project Info: http://www.idrsolutions.com
7  * Help section for developers at http://www.idrsolutions.com/support/
8  *
9  * (C) Copyright 1997-2015 IDR solutions and Contributors.
10 *
11 * This file is part of JPedal/JPDF2HTML5
12 *
13 @LICENSE@
14 *
15 * -----
16 * HTMLMarkedContentGenerator.java
17 * -----
18 */
19
20 package org.jpedal.objects.structuredtext;
21
22 import org.jpedal.io.PdfObjectReader;
23
24 /**
25  *
26  * @author markee
27  */
28 public class HTMLMarkedContentGenerator extends MarkedContentGenerator {
29
30     public HTMLMarkedContentGenerator(PdfObjectReader io) {
31         throw new UnsupportedOperationException("Not supported yet."); //To change body of generated methods, choose Tools | Templates.
32     }
33
34 }
35
```

Lots of little features you often miss

Inside NetBeans



Code quality

The screenshot displays the NetBeans IDE interface with the `ImageDecoder.java` file open. The left sidebar shows the project structure for `jpadaDEV`, with the `org.jpada.parser.image` package selected. The bottom-left pane shows the `Members` list for the `ImageDecoder` class, listing various methods like `addMaskObject`, `generateTransformedImage`, and `processImage`.

The main editor window shows the source code of `ImageDecoder.java`, with line numbers 742 to 772 visible. The code includes a `processImage` method that handles image decoding, including color space and mask processing.

The bottom-right pane displays the `Action Items` list, which contains 12 quality issues identified by the IDE. These issues are categorized by severity (3 - Avoid really long classes, 3 - This class has too many methods, consider refactoring it, 3 - Avoid long parameter lists, etc.) and provide specific recommendations for improving the code quality.

Description	File	Location
3 - Avoid really long classes.	ImageDecoder.java	.../image/ImageDecoder.java:45
3 - This class has too many methods, consider refactoring it.	ImageDecoder.java	.../image/ImageDecoder.java:45
3 - Avoid long parameter lists.	ImageDecoder.java	.../image/ImageDecoder.java:124
3 - The method <code>setupXObjectColorspace()</code> has an NPath complexity of 340	ImageDecoder.java	.../image/ImageDecoder.java:143
3 - The method <code>processImageXObject()</code> has an NPath complexity of 3888	ImageDecoder.java	.../image/ImageDecoder.java:216
3 - The method <code>generateTransformedImage()</code> has an NPath complexity of 127052	ImageDecoder.java	.../image/ImageDecoder.java:368
3 - Avoid empty if statements	ImageDecoder.java	.../image/ImageDecoder.java:415
3 - These nested if statements could be combined	ImageDecoder.java	.../image/ImageDecoder.java:550
3 - The method <code>generateTransformedImageSingle()</code> has an NPath complexity of 298	ImageDecoder.java	.../image/ImageDecoder.java:586
3 - These nested if statements could be combined	ImageDecoder.java	.../image/ImageDecoder.java:687
3 - Avoid really long methods.	ImageDecoder.java	.../image/ImageDecoder.java:709
3 - Avoid empty if statements	ImageDecoder.java	.../image/ImageDecoder.java:865
3 - Avoid empty if statements	ImageDecoder.java	.../image/ImageDecoder.java:1021

EasyFind - Medium: 22 (in currently edited file)



AWWPIX



Details and links

<http://www.netbeans.org>

<https://convert.idrsolutions.com>

<https://blog.idrsolutions.com>

Come and chat to me...

Happy developing with NetBeans....

