



Environnements de Développement



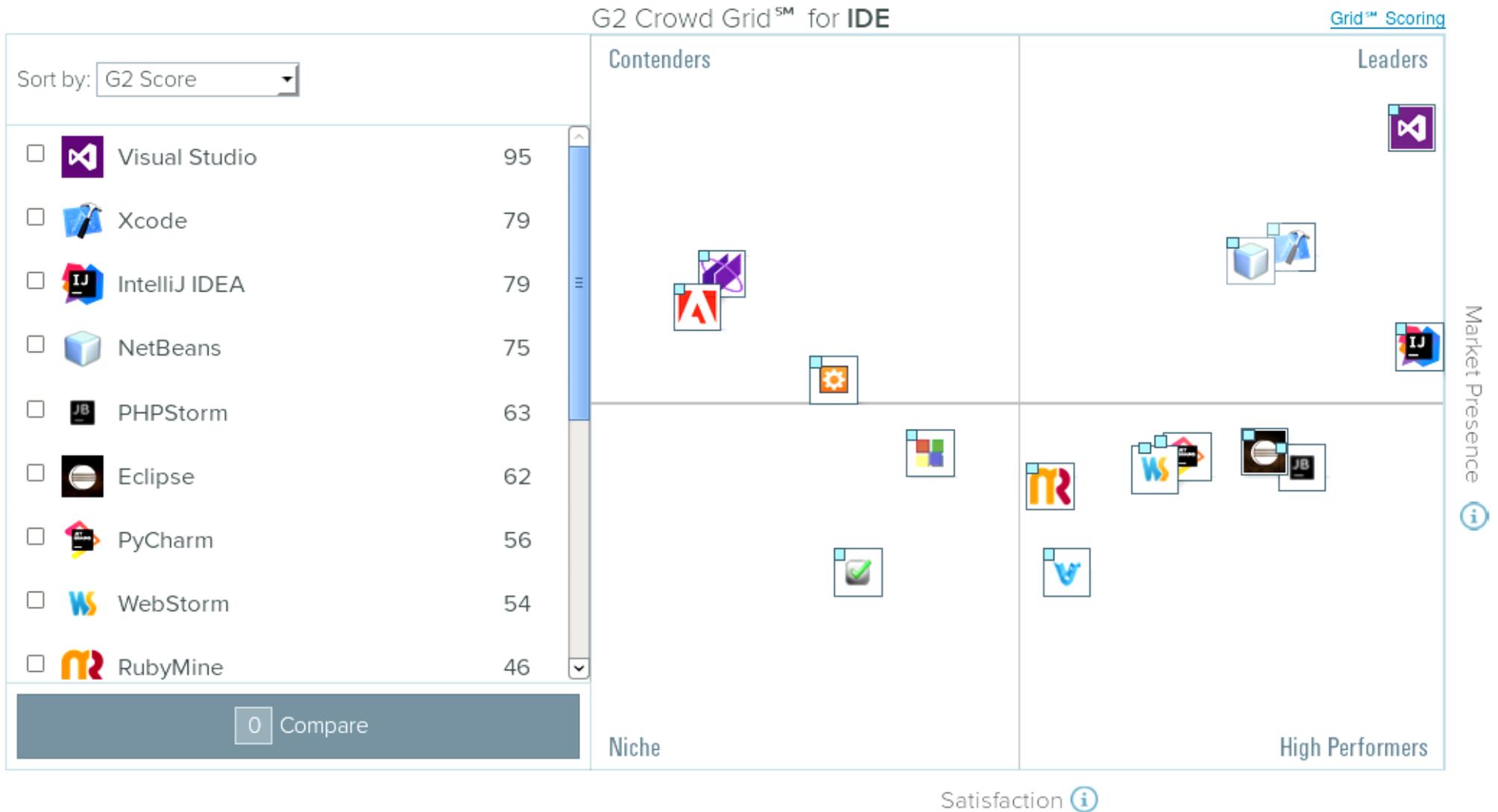
IDE : Integrated Development Environment

Qualité d'un IDE



- Editeur de code **avancé** (+ plugins) :
 - Coloration syntaxique, **conventions de codage**
 - Suggestions de complétions
 - Compilation intégrée
 - Environnement d'exécution intégrée
 - Debugging
 - Refactoring
 - Versions de **sources**
 - Analyse de la **qualité** de code
 - Lancer des **tests**

IDE



IDE : Visual Studio

The image shows the Visual Studio website homepage. At the top, there is a navigation bar with the Visual Studio logo and the text "Abonnements MSDN" and "Se connecter". Below this is a secondary navigation bar with links for "Produits", "Fonctionnalités", "Téléchargements", "Actualités", "Support", "Marketplace", and "Documentation". A green button labeled "Visual Studio gratuit" is on the right. The main content area features a large white logo and the headline "Des outils pour tous les développeurs et toutes les applications". Below this, three columns describe "Visual Studio", "Visual Studio Team Services", and "Visual Studio Code".

Visual Studio

Abonnements MSDN Se connecter

Produits Fonctionnalités Téléchargements Actualités Support Marketplace Documentation

Visual Studio gratuit

Des outils pour tous les développeurs et toutes les applications

Visual Studio

Un environnement de développement intégré riche pour créer des applications époustouflantes pour Windows, Android et iOS, ainsi que des applications Web et des services de cloud modernes.

Découvrir Visual Studio >

Visual Studio Team Services

Services de collaboration basés sur le cloud pour le contrôle de version, la planification Agile, la livraison continue et l'analyse d'application (pour Visual Studio, Eclipse, Xcode ou n'importe quel IDE ou éditeur de code).

Découvrir Team Services >

Visual Studio Code

Modification de code redéfinie des applications cloud et Web modernes. Code est gratuit et disponible sur votre plateforme préférée : Windows, Mac OS X ou Linux.

Découvrir Visual Studio Code >

Overview

Agile Software Development

Version Control

Tools for Java teams

Release Management

Reporting

Cloud-Based Load Testing

Testing Tools

Mobile

Web

Cloud

Windows

Outils Office

Node.js

Python

.NET

Visual C++

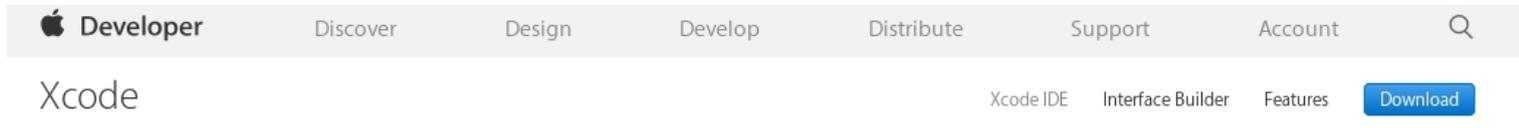
Débogage et diagnostics

IDE

17 Juin 2016
Xstra-dev

Anaïs Oberto

IDE : XCode



Tools you'll love to use.

The Xcode IDE is at the center of the Apple development experience. Tightly integrated with the Cocoa and Cocoa Touch frameworks, Xcode is an incredibly productive environment for building apps for Mac, iPhone, iPad, Apple Watch, and Apple TV.

Assistant Editor

Live issues

Jump Bar

Interface Builder, Auto Layout

Version Editor and Source Control

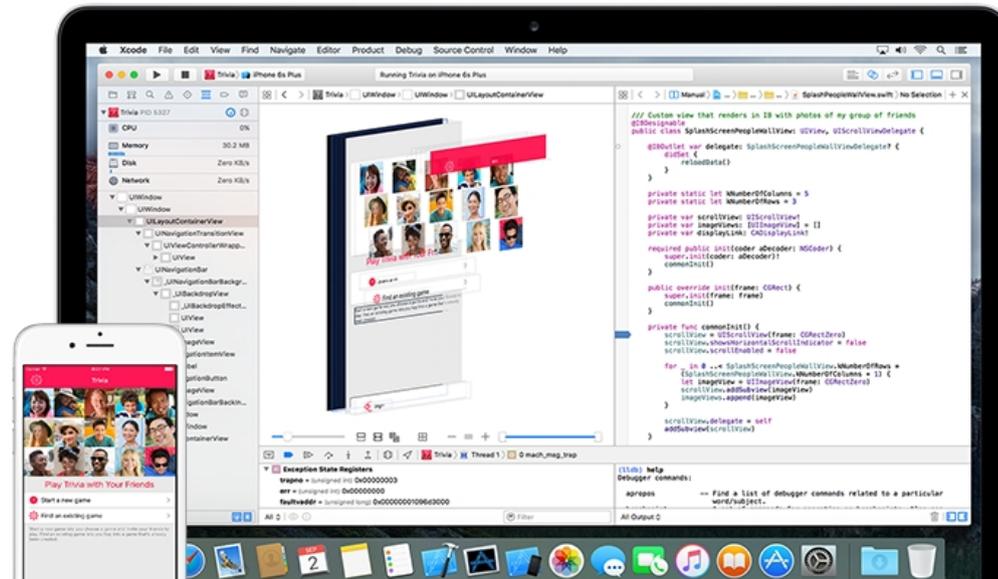
Testing

Continuous integration bots

Customize

Schemes

Preview, Simulators



Anais Oberto

17 Juin 2016
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IDEs : JetBrains



IntelliJ IDEA

The most intelligent Java IDE



PhpStorm

Lightning-smart PHP IDE



WebStorm

The smartest JavaScript IDE



CLion

A smart cross-platform IDE for C and C++



PyCharm

Python IDE for professional developers



RubyMine

The most intelligent Ruby IDE



AppCode

Smart IDE for iOS/OS X development

Java, Kotlin, Groovy, Scala

Android [?](#)

Maven, Gradle, SBT

Git, SVN, Mercurial, CVS

Perforce, ClearCase, TFS

JavaScript, TypeScript [?](#)

Java EE, Spring, GWT, Vaadin, Play, Grails, Other Frameworks [?](#)

Database Tools, SQL

IDE : NetBeans

- » **Base IDE**
 - Project Management
 - Databases
 - Versioning
 - Team Collaboration
- » **Java**
 - Editing and Refactoring
 - Build Tools
 - Debugger and Profiler
 - Testing and Code Analysis
- » **Java on the Server**
 - Java EE
 - Web Services
 - Deployment and Monitoring
- » **Java on the Client**
 - JavaFX
 - Swing
 - Java ME and Embedded
- » **HTML5 Web Development**
- » **PHP**
 - Editing and Refactoring
 - Frameworks and Tools
 - Testing and Code Analysis
- » **Groovy**
- » **C/C++**

Xstra-dev

Choose page language

NetBeans NetBeans IDE NetBeans Platform Enterprise Plugins Docs & Support Community Search

NetBeans IDE

Fits the Pieces Together

NEW! **NetBeans IDE 8.1**

Learn More Download

Quickly and easily develop desktop, mobile and web applications with Java, JavaScript, HTML5, PHP, C/C++ and more.

NetBeans IDE is FREE, open source, and has a worldwide community of users and developers.

Featured News: Build with NetBeans IDE, Deploy to Oracle Java Cloud Service [See All News](#)

New: Darcula Look & Feel Theme

Easy & Efficient Project Management

Projects Files Favorites Versioning

Rapid User Interface Development

desktop web mobile

Anais Oberto

IDE : Eclipse



Google™ Custom Search



GETTING STARTED

MEMBERS

PROJECTS

MORE ▾

DOWNLOAD

Eclipse Is...

An amazing open source community of **Tools, Projects** and **Collaborative Working Groups**. Discover what you can do with Eclipse and join us.

DISCOVER ▾

Data Tools Platform

- Eclipse Git Team Provider
- Eclipse Java Development Tools
- Eclipse Java EE Developer Tools
- JavaScript Development Tools
- Maven Integration for Eclipse
- Mylyn Task List
- Eclipse Plug-in Development Environment
- Remote System Explorer
- Code Recommenders Tools for Java Developers
- Eclipse XML Editors and Tools
- C/C++ Development Tools
- PHP Development Tools (PDT)



IDE & Tools



Community of
Projects



Collaborative
Working
Groups

IDE : Sublime Text

Home Download Buy Blog Forum Support

Sublime Text

Sublime Text is a sophisticated text editor for code, markup and prose.
You'll love the slick user interface, extraordinary features and amazing performance.

```
14 def __init__(self, display_name, loader, name, dirs):
75     super(LoaderOrigin, self).__init__(display_name)
76     self.loader, self.loadname, self.dirs = loader, name, dirs
77
78     def reload(self):
79         return self.loader(self.loadname, self.dirs)[0]
80
81     def make_origin(display_name, loader, name, dirs):
82         if settings.TEMPLATE_DEBUG and display_name:
83             return LoaderOrigin(display_name, loader, name, dirs)
84         else:
85             return None
86
87     def find_template_loader(loader):
88         if isinstance(loader, (tuple, list)):
89             loader, args = loader[0], loader[1:]
90         else:
91             args = []
92         if isinstance(loader, basestring):
93             module, attr = loader.rsplit('.', 1)
94             try:
95                 mod = import_module(module)
96             except ImportError as e:
97                 raise ImproperlyConfigured('Error importing template source loader: %s' % e)
98             try:
99                 TemplateLoader = getattr(mod, attr)
100             except AttributeError as e:
```

Goto Anything can also be used to show a function, line or word within a file.

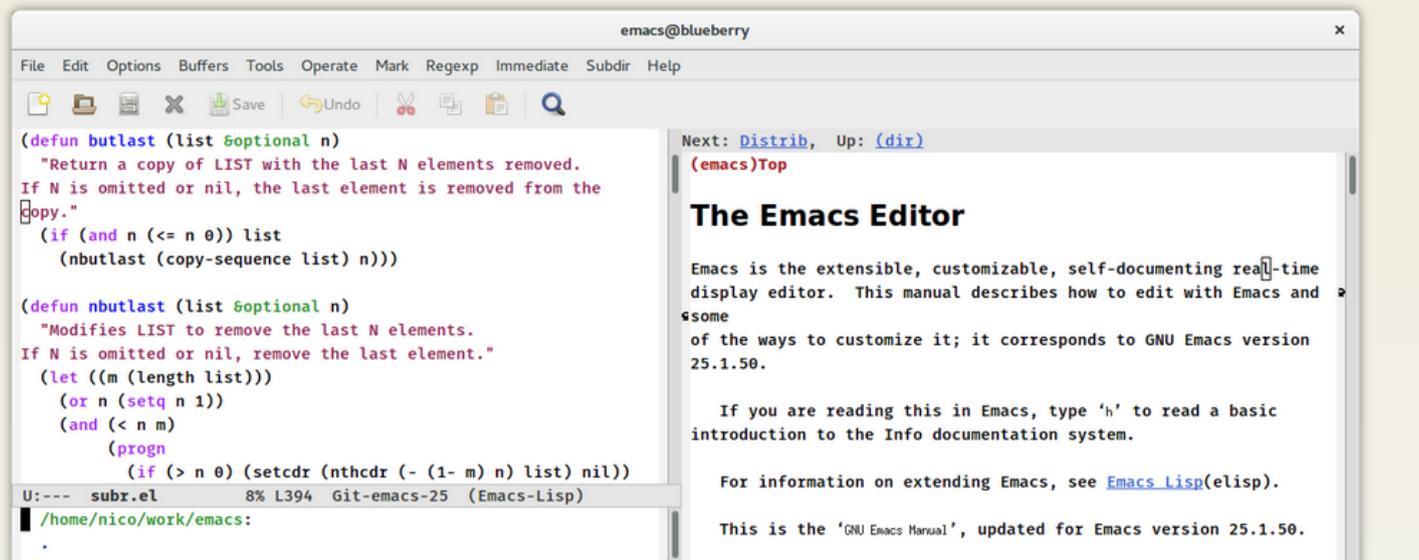
Type @ after a file name to filter on symbols. [More...](#)

IDE : Emacs



An extensible, customizable,
free/libre text editor — and more.

At its core is an interpreter for Emacs Lisp, a dialect of the Lisp programming language with extensions to support text editing.



Qualité d'un IDE

- Coloration syntaxique
- Suggestions de complétions

The image shows a screenshot of an IDE with two windows. The left window displays a code editor with a dropdown menu for code completion. The code is in Python and includes comments and docstrings. The dropdown menu lists methods like `hasOwnProperty`, `sent`, `set`, `setMaxListeners`, `settings`, `_usedRouter`, `_defineSetter_`, and `_lookupSetter_`. The `set` method is highlighted. The right window shows a code editor with a function `show_sector` and `hide_sector`. The `show_sector` function has a docstring and a loop. The `hide_sector` function has a docstring and a loop. The code is color-coded, and a tooltip is visible over the `show_block` method call in the `show_sector` function.

```
14 | app.set|
15 | app. hasOwnProperty in(__dirname, 'views'));
16 | app. sent jade');
17 | app. \\.
18 | app. set function
19 | app. setMaxListeners
20 | app. settings Assign `setting` to `val`, or return `setting`'s value.
21 | app. _usedRouter app.set('foo', 'bar'); app.get('foo'); // =
22 | app. _defineSetter_
23 | app. _lookupSetter_ Mounted servers inherit their parent ser
24 | app.
25 | @param {String} setting
26 | // development only @param {String} val
27 | if ('development' == app @return {Server} for chaining
28 | app.use(express.erro @api public
```

```
350 | def show_sector(self, sector):
351 |     """ Ensure all blocks in the given sector that should be shown are
352 |         drawn to the canvas.
353 |
354 |     """
355 |     for position in self.sectors.get(sector, []):
356 |         if position not in self.shown and self.exposed(position):
357 |             self.show
358 |             m show_block(self, position, immediate) Model
359 |             m show_sector(self, sector) Model
360 |             i shown Model
361 |             removed fr m _show_block(self, position, texture) Model
362 |             i _shown Model
363 |             """
364 |             Press ^ to choose the selected (or first) suggestion and insert a dot afterwards >>> π
365 |             for position in self.sectors.get(sector, []):
366 |                 if position in self.shown:
367 |                     self.hide_block(position, False)
```

Qualité d'un IDE

- Conventions de codage

The image shows a screenshot of an IDE interface. On the left is a project explorer with a tree view containing categories like 'Data Management', 'Help', 'Install/Update', 'Java', and 'Maven'. The 'Formatter' option is selected under the 'Code Style' section. The main editor area displays a Java code snippet with syntax highlighting. Overlaid on the editor is a 'Settings' dialog box. The dialog has a search bar and a tree view on the left with 'Code Style' expanded to 'CSS'. The right pane shows settings for 'Editor > Code Style > CSS' with a 'Scheme' dropdown set to 'Default'. There are two tabs: 'Tabs and Indents' and 'Other'. Under 'Other', there are checkboxes for 'Use tab character' and 'Smart tabs', and input fields for 'Tab size' (4), 'Indent' (4), and 'Continuation indent' (8). A 'Keep indents on empty lines' checkbox is also present. On the far right, a 'Set from...' dropdown menu is open, listing various languages: CoffeeScript, Gherkin, HAML, HTML, JavaScript, JSON, and Less. A preview of CSS code is visible on the right side of the dialog.

Qualité d'un IDE

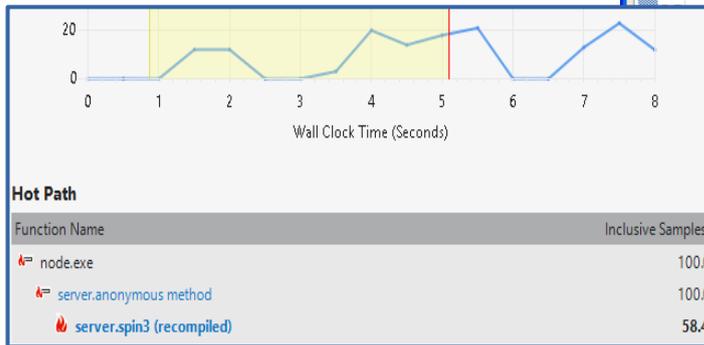
- Environnement d'exécution intégrée

The image shows an IDE interface with a 'Project Facet' panel on the left and a multi-device preview on the right. The 'Project Facet' panel lists various technologies and tools, including Axis2 Web Services, CXF 2.x Web Services, Dynamic Web Module, Java, JavaScript, JavaServer Faces, JAX-RS (REST Web Services), JAXB, JPA, Process Manager - Diagrams, Process Manager - Jackrabbit (E), Process Manager - Jackrabbit (R), Process Manager - Portal, and WebDoclet (XDoclet). The multi-device preview shows the application running on several devices: Nexus One (3.7), Nexus S (4.0), Galaxy Nexus (4.7), Nexus 4 (4.7), Nexus 5 (5.0), Nexus 6 (6.0), Nexus 7 (7.0), and Nexus 10 (10.1). The application interface displays a 'Messaging Sample' with buttons for sending messages and a text view for the data port.

```
<LinearLayout xmlns:android="http://schemas.android.com/apk-schemas:tools="http://schemas.android.com/tools" android:layout_width="match_parent" android:layout_height="match_parent" android:orientation="vertical" android:gravity="center_horizontal" android:paddingBottom="@dimen/activity_vertical_margin" android:paddingLeft="@dimen/activity_horizontal_margin" android:paddingRight="@dimen/activity_horizontal_margin" android:paddingTop="@dimen/activity_vertical_margin">
  <Button
    android:id="@+id/send_1_conversation"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="@string/send_1_conversation"/>
  <Button
    android:id="@+id/send_2_conversations"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="@string/send_2_conversations"/>
  <Button
    android:id="@+id/send_1_conversation_3_messages"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="@string/send_1_conv_3_messages"/>
  <TextView
    android:id="@+id/data_port"
    android:layout_width="match_parent"
    android:layout_height="0dp"
    android:layout_weight="1"
    android:scrollbars="vertical"/>
  <Button
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:id="@+id/clear"
    android:text="@string/clear_log"/>
</LinearLayout>
```

Qualité d'un IDE

- Debugging
- Profiling



Debug - ButterflyLCDTest/main.c - Eclipse SDK

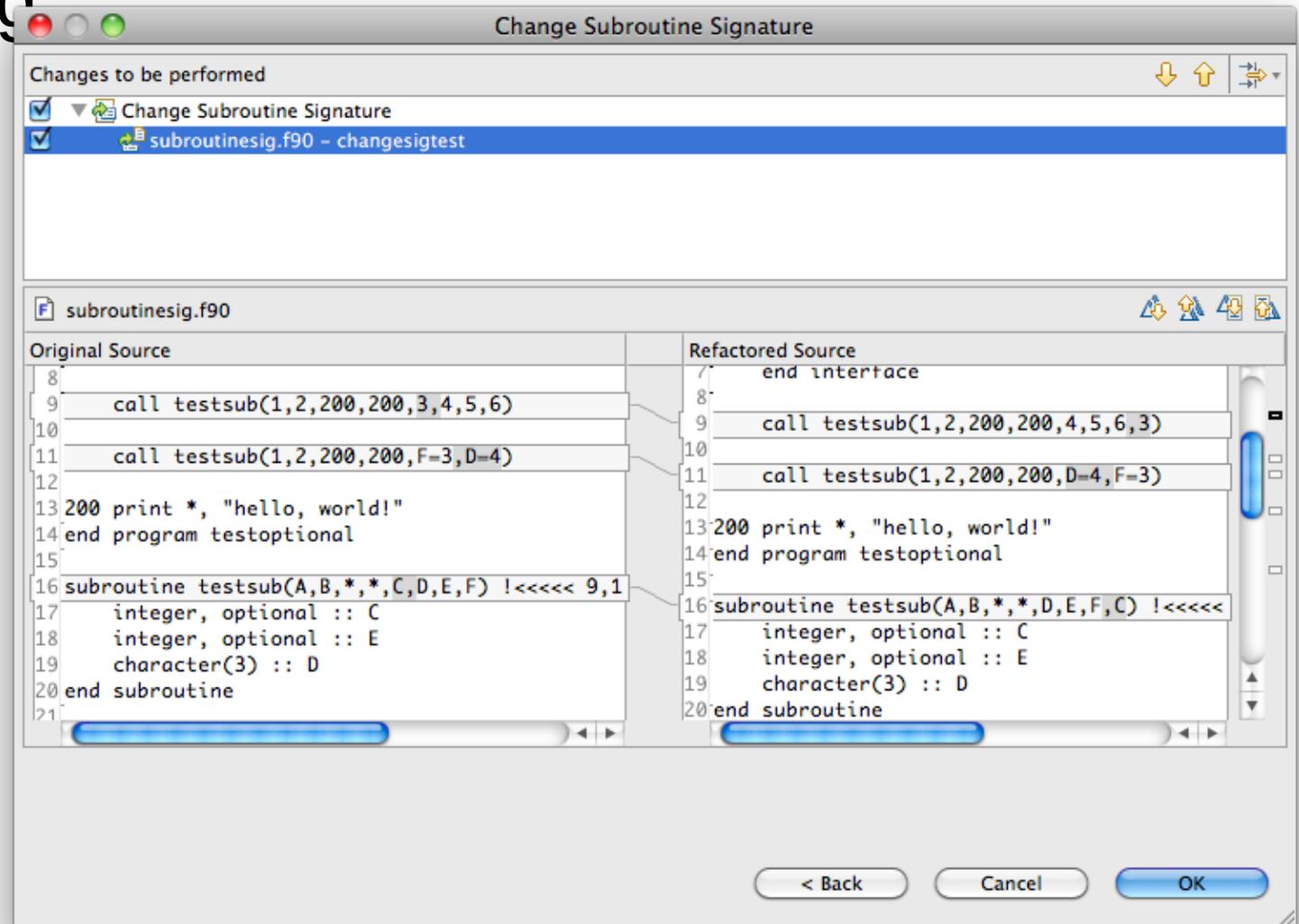
File Edit Refactor Navigate Search Project AVR Field Assist Run Window Help

main.c

```
29* Purpose : Contains the main loop of t
30*
31*****
32int main(void)
33{
34
35 // mt static char __flash *statext;
36 PGM_P statext;
37
38 // Initial state variables
39 statext = PSTR("AVR BUTTERFLY GCC");
40
41 // Program initialization
42 Initialization();
43 sei(); // mt enable interrupt();
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```

Qualité d'un IDE

- Refactoring



Qualité d'un IDE

- Versions de **sources**

The image displays a screenshot of an IDE interface, likely Visual Studio Code, illustrating source code management features. The main window shows a comparison between a remotely modified version (Based On HEAD) and a locally modified version (Based On LOCAL) of a file named `JavaApplication189.java`. The comparison is shown in a split view with line numbers and a central diff indicator. The locally modified version includes a new line: `* new line` at line 10, which is highlighted in green. Other changes include modifications to the `main` method signature and comments.

Overlaid on the bottom left is the 'Team Explorer - Changes' window, showing the commit history for the 'master' branch. The history includes two commits by Sara Itani: 'created basic express app' (12:08 AM) and 'Initial commit to add default .gitignore and .gitAttribute fi...' (12:03 AM). The 'Enter a commit message <Required>' field is visible, along with 'Commit' and 'Actions' buttons.

File	Status	Location
JavaApplication18...	Locally Modified	...tion189/src/javaapplication189/JavaApplication189.java

Line	Remotely Modified (Based On HEAD)	Locally Modified (Based On LOCAL)
6	<code>package javaapplication189;</code>	
7		<code>/**</code>
8	<code>/**</code>	<code>*</code>
9	<code>* @author tomas</code>	<code>* new line</code>
10	<code>*/</code>	<code>* @author tomas</code>
11	<code>*/</code>	<code>*/</code>
12	<code>public class JavaApplication189 {</code>	<code>public class JavaApplication189 {</code>
13		
14	<code>/**</code>	
15	<code>/**</code>	<code>/**</code>
16	<code> * the command line</code>	<code> * the command line</code>
17	<code> * the application</code>	<code> * the application</code>
18	<code> * the application</code>	<code> * the application</code>
19	<code> * the application</code>	<code> * the application</code>
20	<code> * the application</code>	<code> * the application</code>
21	<code> * the application</code>	<code> * the application</code>
22	<code> * the application</code>	<code> * the application</code>

Qualité d'un IDE

- Analyse de la **qualité** de code

The screenshot shows the Eclipse IDE interface. The main editor displays the following Java code:

```
1
2 public class Main {
3
4     public static void main(String... args) {
5         float i = 0.1f;
6         float j = 1.0f - 0.9f;
7         if (i == j) {
8             System.out.println("i == j");
9         } else {
10            System.out.println("i != j");
11        }
12    }
13 }
14
15 }
16
```

A tooltip for the SonarLint rule 'Equality tests should not be made with floating point values.' (squid:S1244) is shown over the code. The tooltip text reads:

Floating point numbers should not be tested for equality (squid:S1244)

Floating point math is imprecise because of the challenges of storing such values in a binary representation. Even worse, floating point math is through a series of simple mathematical operations and the answer will be different based on the order of those operation because of the rounding that takes place at each step.

Even simple floating point assignments are not simple:

Press 'F2' for focus

The bottom panel of the IDE shows a list of 7 items:

Date	Description	Rule key
13 seconds ago	✔ Document this public method.	squid:UndocumentedApi
13 seconds ago	✔ Move this file to a named package.	squid:S1220
13 seconds ago	⬆ Add a private constructor to hide the implicit public one.	squid:S1118
13 seconds ago	⬆ Equality tests should not be made with floating point values.	squid:S1244

Qualité d'un IDE

- Lancer des **tests**

The screenshot shows the Xcode IDE interface for a project named 'Jogr'. The main window displays the 'Jogr Bot' integration results. The summary shows 0 Errors, 4 Warnings, 2 Analysis Issues, and 1 Test Failed. The integration started on 1/26/14 at 12:55 PM and lasted 57 seconds. The build history bar chart shows a mix of Errors (red), Warnings (yellow), and Analysis Issues (blue) over time. The test history bar chart shows a mix of Failure (red) and Success (green) over time. The left sidebar shows a list of integration attempts, with the most recent one being 'Integrate (40)' at 12:55 PM, which failed.

Integration Results
Finished with test failures

Start: 1/26/14, 12:55 PM
Duration: 57 seconds
1 commit by japlseid@cloud.com

0 Errors, 4 Warnings, 2 Analysis, 1 Test Failed

Build History

Errors, Warnings, Analysis Issues

Test History

Failure, Success

Integration Details

- Warnings (4)
- Analysis Issues (2)
 - Potential leak of an object stored into 'sgImage'
Jogr — GraphView.m
 - Incorrect decrement of the reference count of an object that is not owned at this point by the caller
Jogr — RouteServiceProvider.m
- Test Failures (1)
 - [JogrMathTests testRoundToMinutes]
{(45 == totalRunInMinutes) is true} failed - The conversion from total jog time to rounded minutes isn't rounding properly
JogrMathTests.m