

Bernhard Merkle – Find(ing) Bugs Is Easy

Charles Bailey – The Rant Of Three

Simon Sebright – SharePoint for Thinking Developers

Phil Nash – Why I Do What I Do

Matt Turner - Fluency

Chris Oldwood – Not Only But Also

Frank Birbacher – Style C++ for Version Control

Frances Buontempo - TDD

Astrid Byro – A Cry For Help

Didier Verna – Why?

Find(ing)Bugs is...




Departures

Flight	Time	Gate	Remarks
2340	8:42P	S16D	On-Time
470	6:10P	D5	On-Time
396	8:41P	D8	On-Time
2024	9:05P	B10	On-Time
476	9:28P	C16	On-Time
2864	9:55P	B14	Now 1
390	5:56P	N6	Now 7

Salidas - Departures:

10:01

Time	Est	Airline	Flight	To	Gate	Remarks
10:00	10:00	American	1140	Chicago		
10:10	10:10	Embraer	2301	Milan-Malpensa		
10:14	10:14	Aeroflot	2703	Cozumel		
10:49	10:49	Mexicana	370	Mexico		
10:59	10:59	US Airways	1428	Charlotte		
11:25	11:25 A					
11:25	11:25 A					
11:35	11:35 A					
11:35	11:35	US Airways	216	Philadelphia		
11:40	11:40	Delta	405	Atlanta		
11:40	11:40	Ryan	902	Dallas/Ft		
11:55	11:55	Mexicana	344	Mexico		
11:57	11:57	Magnicharter	771	Mexico		
12:00	12:00	Aeromexico	296	Guadalajara		
12:10	12:10	Continental	1933	Newark		

 This application cannot be opened because there are some problems with the information that was provided. Please check the application's information and try again. If the error still occurs, you may have to delete the application and then reinstall it. For more information, see the help and support pages for this application.

CPU Type	: PENTIUM-PRO	Base Memory	: 640K
Co-Processor	: Installed	Extended Memory	: 31744K
CPU Clock	: 166MHz	Cache Memory	: 256K
Diskette Drive A : 1.44M, 3.5 in.		Display Type	: EGA/UGA
Diskette Drive B : None		Serial Port(s)	: 3FB 2FB
Pri. Master Disk : None		Parallel Port(s)	: 3FB
Pri. Slave Disk : None		EDO DRAM at Row(s)	: 0
Sec. Master Disk : None		SDRAM at Row(s)	: None
Sec. Slave Disk : None		L2 Cache Type	: Pipelined Burst

PCI device listing.....

Bus No.	Device No.	Func No.	Vendor ID	Device ID	Device Class	IRQ
0	7	1	8086	7010	IDE Controller	14
0	7	2	8086	7020	Serial Bus Controller	11
0	17	0	5333	8901	Display Controller	10

↓ Arrivals Llegadas **T2** ↓ Toilets Aseos

MEMORY EMPTY





The system is going down NOW !!
Sending SIGTERM to all processes.
Feb 16 16:09:28 sb547201 syslog.info System log daemon exiting.
Sending SIGKILL to all processes.
The system is halted. Press Reset or turn off power
Power down.

Passenger Announcement

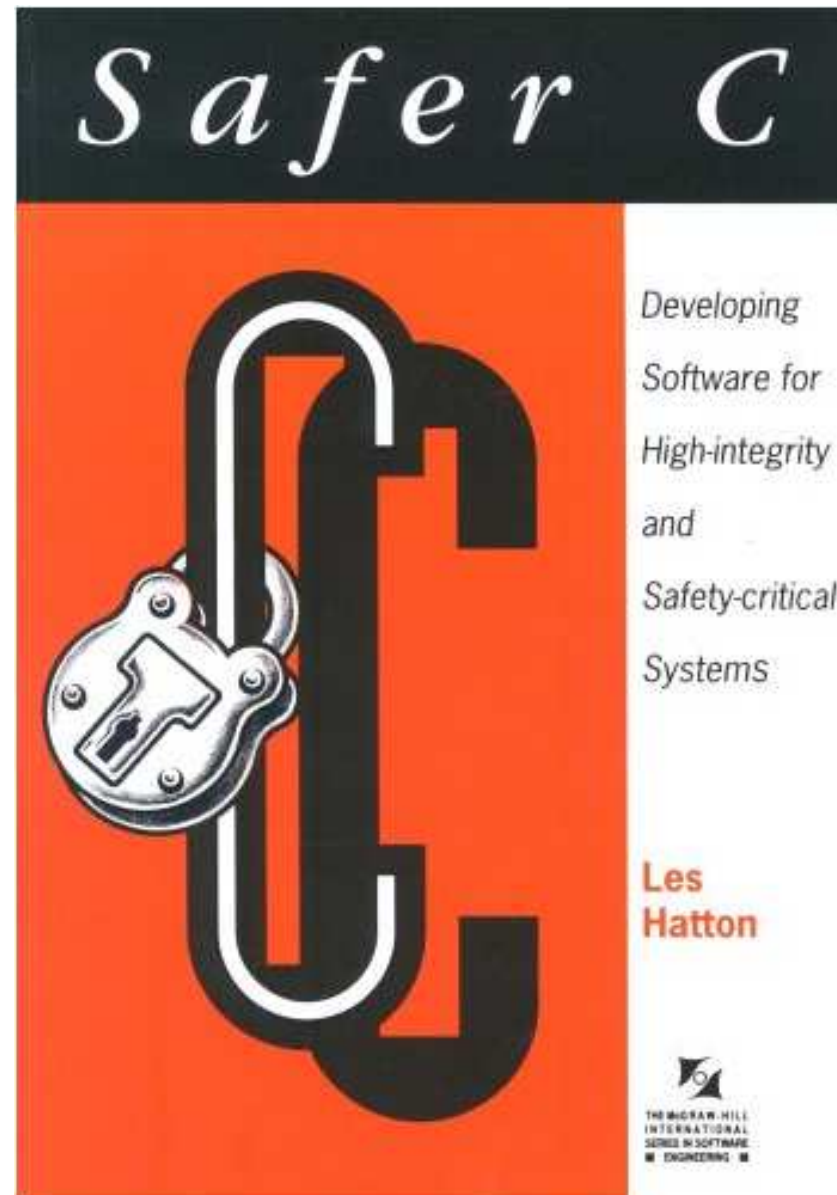
PLEASE WAIT WHILE SEAT REBOOTS

How to reduce the risk: Safer...

How to reduce the risk: Safer...



How to reduce the risk: Safer...



Joshua Bloch

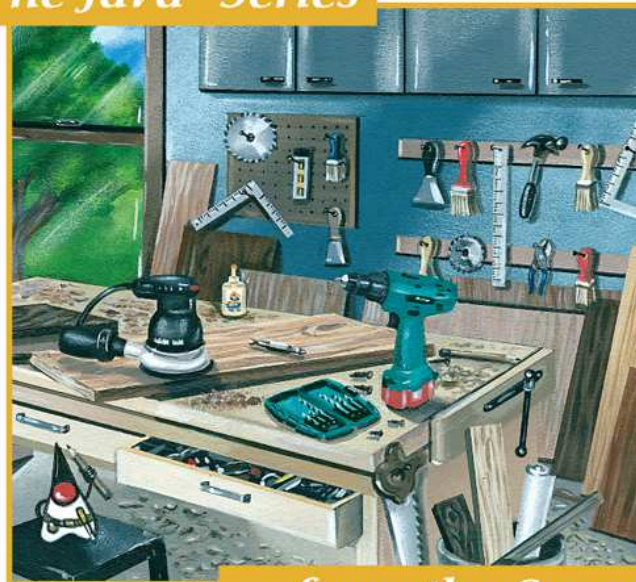
Revised and
Updated for
Java SE 6



Effective Java™

Second Edition

The Java™ Series



...from the Source



Java: findbugs

The screenshot shows the FindBugs application window for an unnamed project. The interface includes a menu bar (Datei, Ansicht, Einstellungen, Hilfe) and a tabbed view with categories: Nach Klasse, Nach Paket, Nach Fehlertyp, and Übersicht. A list of bugs is displayed, with 'MS: Mutable static field (70)' selected. Below the list, the 'Anmerkungen' (Annotations) tab is active, showing a detailed message: 'Field should be package protected'. The message explains that a mutable static field could be changed by malicious code or by accident and suggests making it package protected to avoid vulnerability. The footer of the window contains the URL 'http://findbugs.sourceforge.net/' and the University of Maryland logo.

FindBugs - <<unnamed project>>

Datei Ansicht Einstellungen Hilfe

Nach Klasse Nach Paket Nach Fehlertyp Übersicht

- Eq: Covariant equals() (1)
- HE: Equal objects must have equal hashcodes (4)
- IS2: Inconsistent synchronization (15)
- LI: Unsynchronized Lazy Initialization (1)
- MF: Masked Field (7)
- MS: Mutable static field (70)**
- NN: Naked notify in method (8)
- NP: Null pointer dereference (1)
- RC: Suspicious reference comparison (1)
- SBSC: String concatenation in loop using + operator (10)
- SIC: Inner class could be made static (23)
- Se: Incorrect definition of Serializable class (12)
- SnV: Serializable class with no Version ID (35)
- UCF: Useless control flow (1)

Einzelheiten Quelltext Anmerkungen

Field should be package protected

A mutable static field could be changed by malicious code or by accident. The field could be made package protected to avoid this vulnerability.

FindBugs - <http://findbugs.sourceforge.net/>

UNIVERSITY OF MARYLAND

C++: VisualLint

The screenshot displays the Visual Studio IDE with the VisualLint tool integrated. The main editor shows a C++ source file with the following code snippet:

```

c->mode = Y == Z_STREAM_END ? WASH : BADCODE;
break;
}
#endif /* !SLOW */
c->sub.code.need = c->lbits;
c->sub.code.tree = c->ltree;
c->mode = LEN;
case LEN: /* i: get length/literal/eob next */
j = c->sub.code.need;
NEEDBITS(j)
t = c->sub.code.tree + ((uInt)b & inflate_mask[j]);
DUMPBITS(t->bits)
e
if
{
Message 616 (Warning)
control flows into case/default
}

```

The VisualLint window shows a list of linting issues:

Order	Category	Severity	File	Line	Description
4	Info	Info			Note that the message will not be given for a case that merely follows another case without an intervening statement. Also, there must actually be a possibility for flow to occur from above.
5	Warning	Warning	d:\Projects\...\INFCODES.C	121	control flows into case/default
6	Information	Info	d:\Projects\...\INFCODES.C	121	control flows into case/default without -fallthrough
7	Information	Info	d:\Projects\...\INFCODES.C	123	Loss of sign in promotion from int to unsigned long
8	Information	Info	d:\Projects\...\INFCODES.C	158	Loss of sign in promotion from int to unsigned long
9	Information	Info	d:\Projects\...\INFCODES.C	161	Loss of sign in promotion from int to unsigned long

The Lint Analysis Status window shows the following analysis results:

File	Analysis Status	Issues
DEFLATE.C	Underway	105
GZIO.C	Complete	80
INFCODES.C	Complete	38
ADLER32.C	Complete	6
COMPRESS.C	Complete	2
CRC32.C	Complete	0
INFBLOCK.C	Underway	0
INFFAST.C	Not analysed	n/a
INFLATE.C	Not analysed	n/a
TREES.C	Not analysed	n/a
INF TREES.C	Not analysed	n/a
UNCOMPR.C	Not analysed	n/a
INFUTIL.C	Not analysed	n/a
ZUTIL.C	Not analysed	n/a

The bottom status bar indicates: Completed Lint analysis of file d:\Projects\AddIns\Visual Lint\Test Solutions\VS2005\Wallpaper Manager\CImage\zlib\GZIO.C. 80 issues reported.

Eclipse CDT: Codan

The screenshot shows the 'Properties for hello' dialog in Eclipse, with the 'Code Analysis' tab selected. The left sidebar shows a tree view of project properties, with 'Code Analysis' expanded. The main area displays a table of problems and an information section.

Code Analysis

Use workspace settings
 Use project settings

Use workspace settings

Problems

Name	Severity
<input checked="" type="checkbox"/> Potential Cute Problem	
<input checked="" type="checkbox"/> Unregistered Test Marker	Warning
<input checked="" type="checkbox"/> Potential programming problems	
<input checked="" type="checkbox"/> Assignment in condition	Warning
<input checked="" type="checkbox"/> Statement has no effect	Warning
<input checked="" type="checkbox"/> Class has a virtual method and non-virtual destruct	Warning
<input checked="" type="checkbox"/> Catching by reference is recommended	Warning
<input checked="" type="checkbox"/> Suggested parenthesis around expression	Warning
<input checked="" type="checkbox"/> No return value	Error
<input checked="" type="checkbox"/> Unused return value	Error
<input checked="" type="checkbox"/> No return	Warning
<input type="checkbox"/> Coding Style	
<input type="checkbox"/> Name convention for function	Info

Info

Message: Statement has no effect 'X'

Description: Finds statements like 'a;' or '-a;' or 'a-b;' which do no seems to have any side effect therefore suspicious

Parameters: This problem has extra preferences

Customize...

Restore Defaults Apply

OK Cancel

Eclipse CDT: Linticator

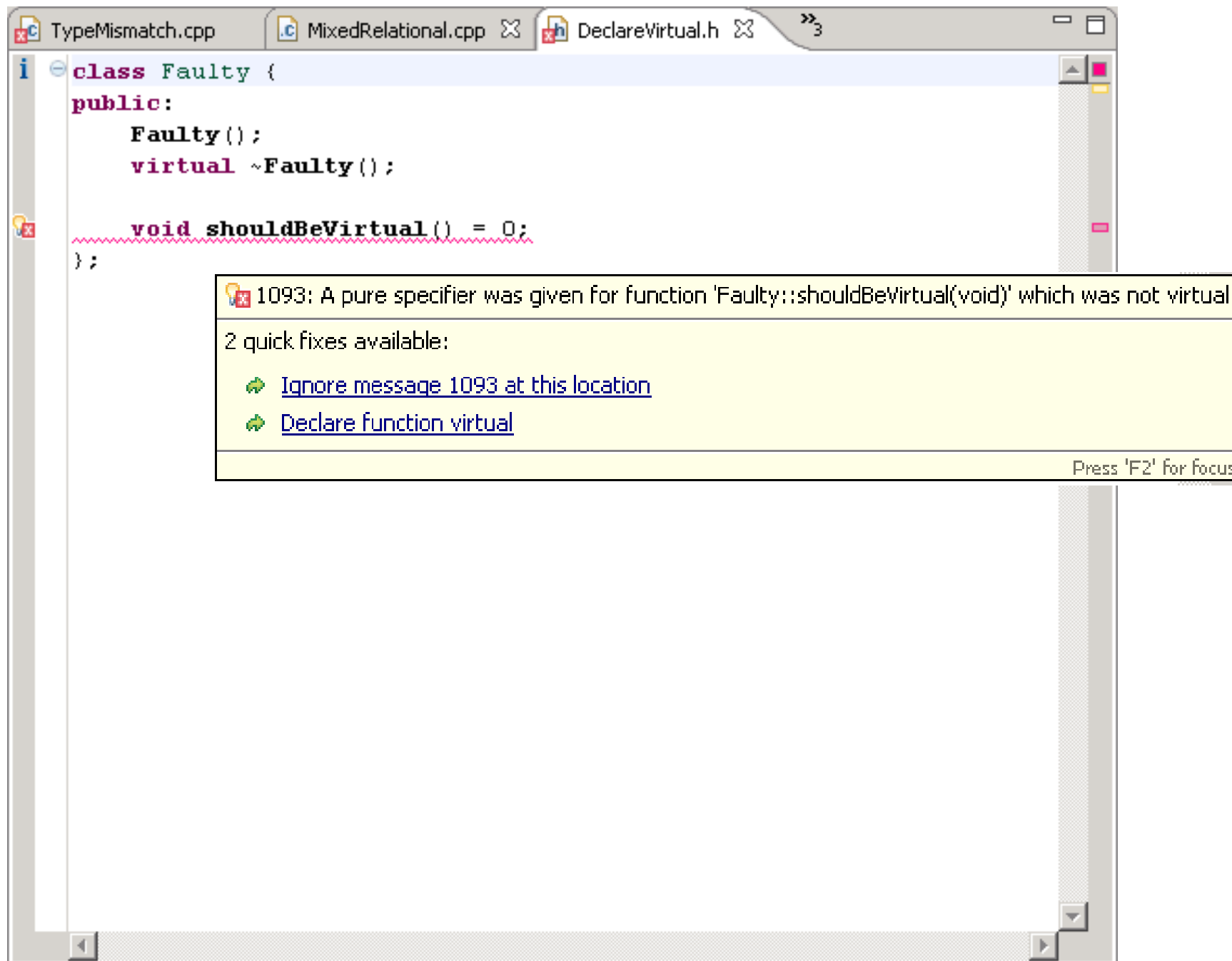
The screenshot shows the Eclipse IDE interface. The main editor displays the following C++ code in `DeclareVirtual.h`:

```
class Faulty {  
public:  
    Faulty();  
    virtual ~Faulty();  
  
    void shouldBeVirtual() = 0;  
};
```

The `void shouldBeVirtual() = 0;` line is highlighted with a red squiggly line, indicating a linting error. The Project Explorer on the left shows a project named 'hello' with various source files. The Problems view at the bottom shows 7 errors, 15 warnings, and 16 infos.

Description	Resource	Path	Location	Type
Errors (7 items)				
1093: A pure specifier was given for fu	DeclareVirtual.h	/hello/src	line 6	Lint Marker
14: Symbol 'main(void)' previously defin	MixedRelational.cpp	/hello/src	line 2	Lint Marker
18: Symbol 'main(void)' redeclared (sigr	MixedRelational.cpp	/hello/src	line 2	Lint Marker
55: Bad type	IncludeTypeInfo.cpp	/hello/src	line 7	Lint Marker
59: Bad type	IncludeTypeInfo.cpp	/hello/src	line 7	Lint Marker
60: Bad type	IncludeTypeInfo.cpp	/hello/src	line 7	Lint Marker
64: Type mismatch (assignment) (ptrs t	TypeMismatch.cpp	/hello/src	line 3	Lint Marker
Warnings (15 items)				
Infos (16 items)				

Eclipse CDT: Linticator



The screenshot shows the Eclipse CDT IDE with three open files: TypeMismatch.cpp, MixedRelational.cpp, and DeclareVirtual.h. The active file is DeclareVirtual.h, which contains the following C++ code:

```
class Faulty {  
public:  
    Faulty();  
    virtual ~Faulty();  
  
    void shouldBeVirtual() = 0;  
};
```

A linting error is shown on the line `void shouldBeVirtual() = 0;`. The error message is:

1093: A pure specifier was given for function 'Faulty::shouldBeVirtual(void)' which was not virtual

Two quick fixes are available:

- [Ignore message 1093 at this location](#)
- [Declare function virtual](#)

Press 'F2' for focus

C#: FxCop

The screenshot displays the Microsoft FxCop application interface. The main window shows a project tree on the left and a list of analysis results in the center. A 'Project Options' dialog box is overlaid on the right side of the main window.

Microsoft FxCop - My FxCop Project*

File Edit Project Tools Help

Analyze ?

Targets Rules

Active Excluded In Project Absent

Level	Fix Category	Certainty	Rule	Item
✖	Non Breaking	95%	Mark assemblies wi...	abstra
✖	Non Breaking	99%	Mark assemblies wi...	abstra
⚠	Non Breaking	99%	Mark assemblies wi...	abstra
⚠	Non Breaking	95%	Assemblies should ...	abstra
⚠	Breaking	99%	Assemblies should ...	abstra
⚠	Breaking	50%	Av	
⚠	Non Breaking	99%	Ab	

1 message(s) selected

```
Error, Certainty 99, for "MarkAssembliesWithClsCompl
{
  Target      : "abstracttype.dll" (Introspection
  Resolution  : "'AbstractType' should be marked v
                and its value should be true."
  Help        : "http://www.getdotnet.com/team/fix
  Category    : "Microsoft.Design" (String)
  CheckId     : "CA1014" (String)
  RuleFile    : "Design Rules" (String)
```

Output Properties

Project Options

Standard Saving & Compression Spelling & Analysis

Project Name: My FxCop Project

Report Style sheet: c:\program files\microsoft fxcoop 1.312e\Xml\FxCopReport.Xsl

Shared Project Apply Style sheet Attempt source file lookup

Save Messages

Project: Active All Active Excluded Absent

Report: Active All Active Excluded Absent

Report options also dictate console output analyzing this project from FxCopCmd.exe

Suspend analysis after: 100 exceptions

Disable rules after: 10 exceptions

OK Cancel

```
//  
// wisdom about bugs that remain in PRODUCTION code  
//  
String wisdomAboutBugs(Programmers p, Techniques t)  
{  
    if(p.areSmartPeople() && p.doNotMakeDumbMistake())  
    {  
        return "no bugs in code";  
    }  
  
}
```

```
//  
// wisdom about bugs that remain in PRODUCTION code  
//  
String wisdomAboutBugs(Programmers p, Techniques t)  
{  
    if(p.areSmartPeople() && p.doNotMakeDumbMistake())  
    {  
        return "no bugs in code";  
    }  
  
    if(t.isTDD() || t.isPairProgramming() || t.isReview())  
    {  
        return "bugs are difficult to find";  
    }  
  
}
```

```
//  
// wisdom about bugs that remain in PRODUCTION code  
//  
String wisdomAboutBugs(Programmers p, Techniques t)  
{  
    if(p.areSmartPeople() && p.doNotMakeDumbMistake())  
    {  
        return "no bugs in code";  
    }  
  
    if(t.isTDD() || t.isPairProgramming() || t.isReview())  
    {  
        return "bugs are difficult to find";  
    }  
  
    return "you lied";  
}
```

```
if (in == null)
  try {
    in.close();
    ...
  }
```



```
if (in == null)
  try {
    in.close();
    ...
  }
```



Eclipse 3.0.0. M8




```
if (listeners == null)
    listeners.remove(listener)
;
```



```
if (listeners == null)
    listeners.remove(listener)
;
```

sun.awt.x11.XMSelection

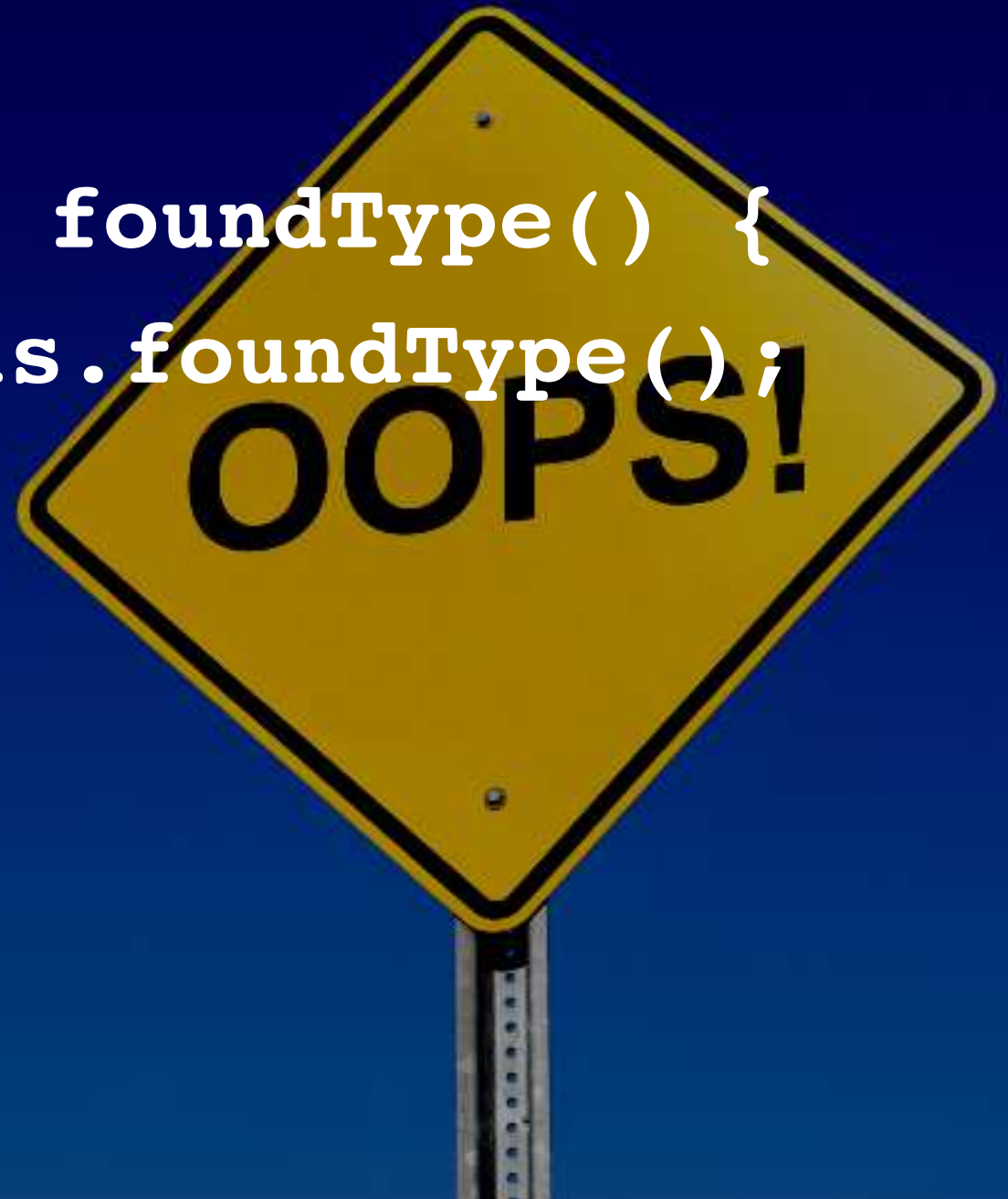
JDK1.6.0, b105



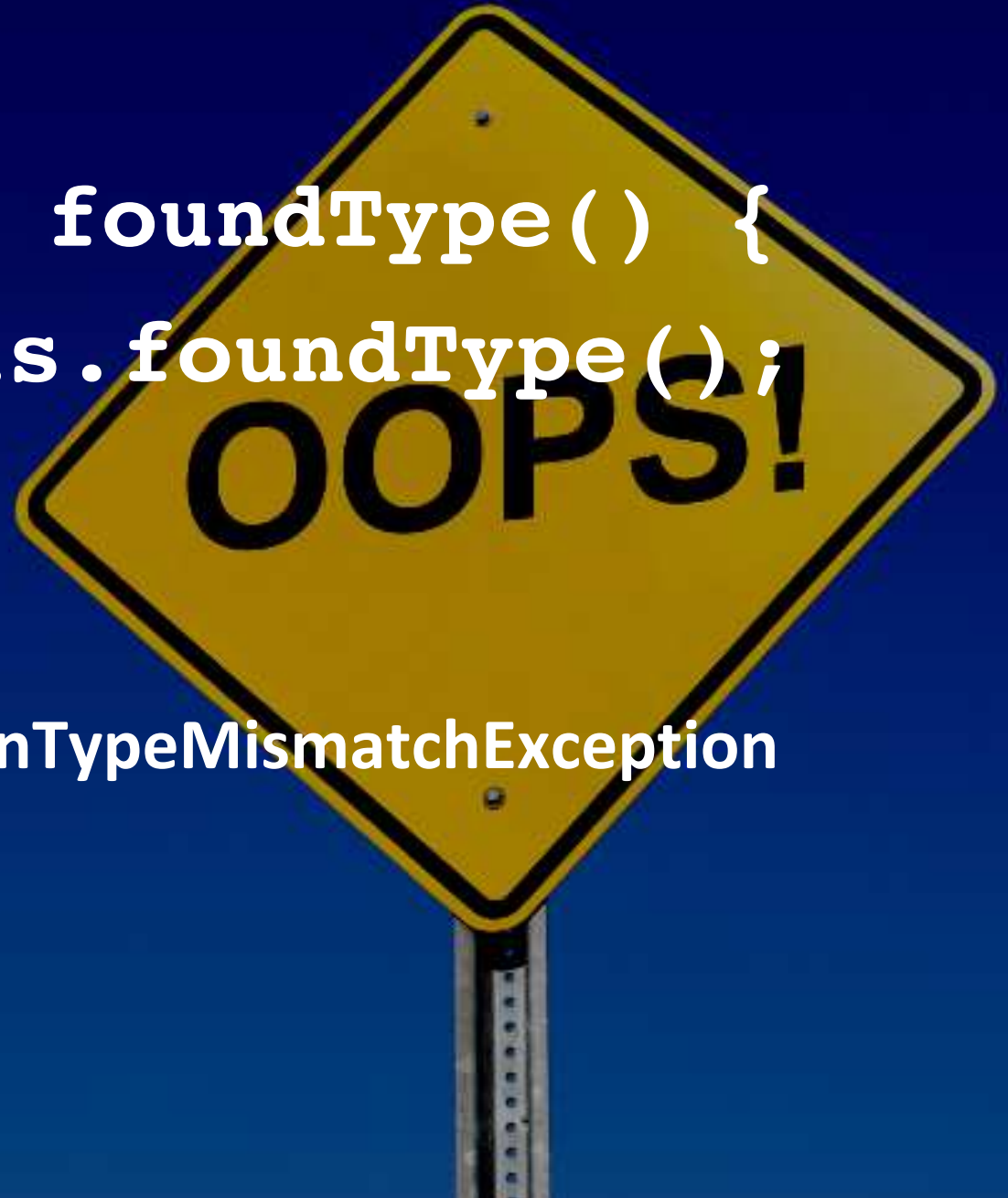




```
public String foundType() {  
    return this.foundType();  
}
```

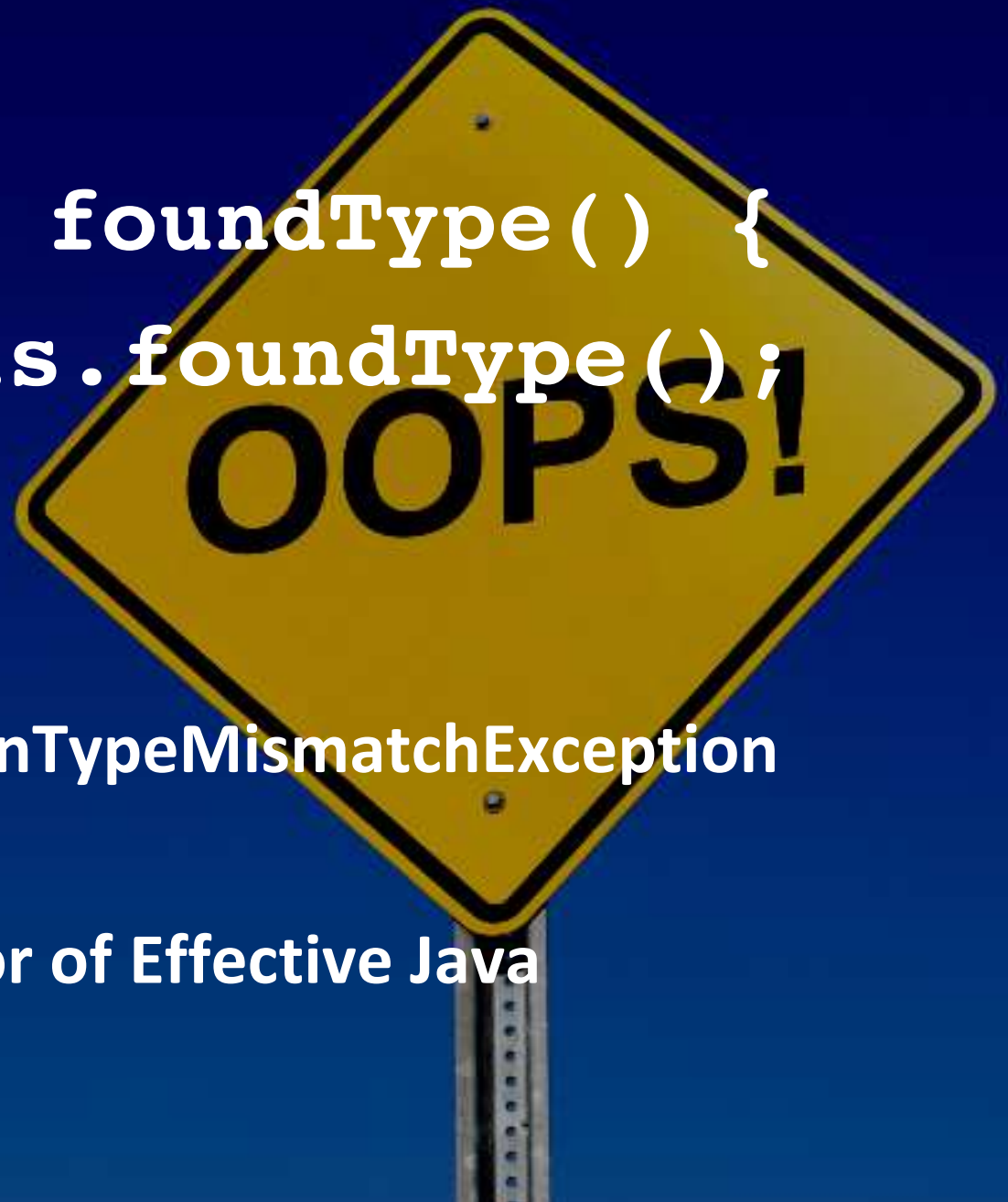


```
public String foundType() {  
    return this.foundType();  
}
```



j.l.annotation.AnnotationTypeMismatchException
JDK1.6.0, b13

```
public String foundType() {  
    return this.foundType();  
}
```



`j.l.annotation.AnnotationTypeMismatchException`

JDK1.6.0, b13

Bug by Josh Bloch, author of Effective Java

FindBugs Infinite loop Fitted T-Shirt

[Close Window](#)

Photos

Description

Size Charts



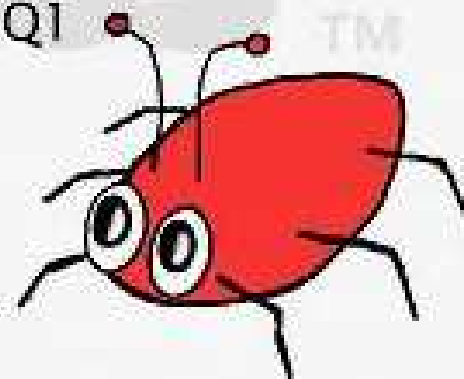
Zoom In 
On Image


```
/**  
 * java.lang.annotation.AnnotationTypeMismatchException  
 * @author Josh Bloch  
 **/  
private final String foundType;  
public String foundType() {  
    return this.foundType;  
}
```

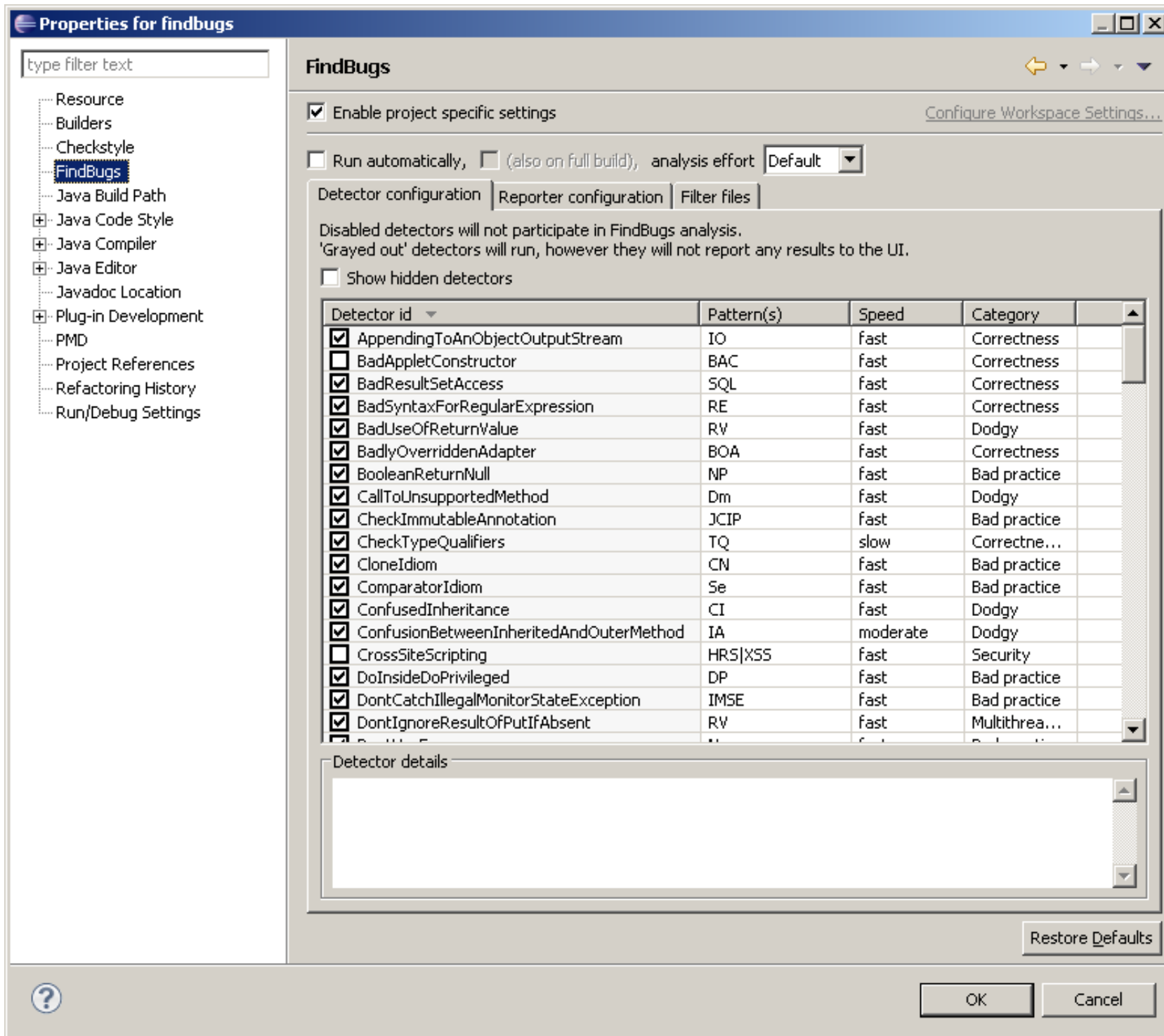
```
/**
 * java.lang.annotation.AnnotationTypeMismatchException
 * @author Josh Bloch
 **/
private final String foundType;
public String foundType() {
    return this.foundType();
}
```

How many infinite recursive loops can FindBugs find in your code?

- 5 Sun's JDK 1.5.0_01
- 10 Sun's AppServer 8.1 2005Q1
- 14 IBM's WebSphere 6.0.2
- 13 JBoss 4.0.2
- 3 Eclipse 3.1M7
- 2 Tomcat 5.5.9



Everyone makes stupid mistakes. What do you use to help you find and fix yours?



Priorität	Kategorie	Fehler-Art	↔	Class	Fehler-Muster
+	+	Equal objects must have equal hashcodes (4)			
+	+	Infinite Loop (4)			
+	+	Null pointer dereference (31)			
+	+	Problems with equals() (4)			
+	+	Questionable Boolean Assignment (2)			
+	+	Redundant comparison to null (8)			
+	+	Regular expressions (1)			
+	+	Repeated conditional test (5)			
+	+	Suspicious equals() comparison (9)			
+	+	Suspicious integer expression (3)			
-	-	Switch case falls through (1)			
		Value of astNode from previous case is lost here due to switch sta			
+	+	Useless control flow (1)			
+	+	Useless self-operation (6)			
+	+	Malicious code vulnerability (370)			
+	+	Multithreaded correctness (15)			
+	+	Performance (49)			

AnnotationValueImpl.java in org.eclipse.jdt.apt.core.internal.declaration	
96	public SourcePosition getPosition()
97	{
98	final MirrorKind kind = _parent.kind();
99	ASTNode astNode = null;
100	switch(kind)
101	{
102	case ANNOTATION_MIRROR:
103	final AnnotationMirrorImpl anno = (AnnotationMirrorImpl)_paren
104	astNode = anno.getASTNodeForElement(_name);
105	break;
106	case ANNOTATION_ELEMENT:
107	final AnnotationElementDeclarationImpl element = (AnnotationEl
108	astNode = element.getAstNodeForDefault();
109	default:
110	throw new IllegalStateException(); // should never reach this
111	}
112	// did not come from source.
113	if(astNode == null)
114	return null;
115	if(_index >= 0 && astNode.getNodeType() == ASTNode.ARRAY_INITIALI
116	final ArrayInitializer arrayInit = (ArrayInitializer)astNode;
117	final List exprs = arrayInit.expressions();
118	if (exprs != null && _index < exprs.size())
119	astNode = (ASTNode)exprs.get(_index);
120	}
121	if(astNode == null) return null;
122	

Value of astNode from previous case is lost here due to switch statement fall through to throw

Dead store due to switch statement fall through to throw

A value stored in the previous switch case is ignored here due to a switch fall through to a place where an exception is thrown. It is likely that you forgot to put a break or return at the end of the previous case.

cbi-wtp-wst.xml [Hudson] - Mozilla Firefox

File Edit View History Bookmarks ScrapBook Tools Help

https://build.eclipse.org/hudson/job/cbi-wtp-wst.xml/ Francesco Cesarini

Swisscom Hospit... ACCU :: Full sch... Google Mail - Inb... Download jEdit f... cbi-wtp-w... (Untitled) Free Eclipse plug... FindBugs Infinite... Francesco Cesar...

Hudson

Hudson » cbi-wtp-wst.xml search log in ENABLE AUTO REFRESH

[Back to Dashboard](#)

[Status](#)

[Changes](#)

[Workspace](#)

[FindBugs Warnings](#)

[CVS Polling Log](#)

Project cbi-wtp-wst.xml

This is a continuous integration build for the WTP Source Editing XML related components. A build may occur every half hour if changes have occurred. Builds are done from HEAD.

Disk Usage: Workspace 371MB, Builds 65MB

Disk Usage Trend

Build #	Build (MB)	Workspace (MB)
#177	~10	~370
#178	~10	~370
#179	~10	~370
#180	~10	~370

Test Result Trend

Build #	Count
#177	~700
#178	~700
#179	~700
#180	~700
#181	~700

FindBugs Trend

Build #	Count
#177	~700
#178	~700
#179	~700
#180	~700
#181	~700

Chuck Norris can solve the Towers of Hanoi in one move. [\(just show failures\) enlarge](#)

Build History (trend)

- #181 Apr 14, 2010 11:33:31 PM
- #180 Apr 13, 2010 10:06:56 AM 16MB
- #179 Apr 12, 2010 4:06:22 PM 16MB
- #178 Apr 12, 2010 2:06:23 PM 16MB
- #177 Apr 12, 2010 11:50:38 AM 16MB

[for all](#) [for failures](#)

Workspace

Last Successful Artifacts

- [wst-xml-Automated-Tests-N201004142336.zip](#)
- [wst-xml-SDK-N201004142336.zip](#)
- [wst-xml-Update-N201004142336.zip](#)

Recent Changes

Latest Test Result(no failures)

Permalinks

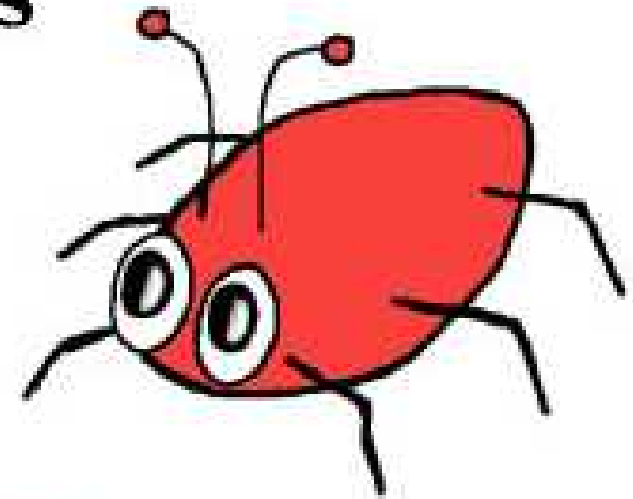
- [Last build \(#181\), 1 day 9 hr ago](#)
- [Last stable build \(#181\), 1 day 9 hr ago](#)
- [Last successful build \(#181\), 1 day 9 hr ago](#)

YSlow FoxyProxy: none



FindBugs

because its easy
an open source project



<http://findbugs.sourceforge.net/>

