



Einführung in Eclipse

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Outline

- ▶ **Was ist Eclipse?**
- ▶ **Installation**
- ▶ **Bedienung**
 - **Einführung**
 - **Editor**
 - **Kompilieren**
 - **Debug**
- ▶ **Eclipse im Einsatz – Java**
 - **Javadoc, Code Standards**
- ▶ **Ausblick**



Was ist Eclipse?

- ▶ Integrierte Programmierumgebung (IDE – Integrated Development Environment)
- ▶ Von IBM mitentwickelt
- ▶ In Java™ implementiert
- ▶ sehr umfangreich
 - Für kleine wie große Projekte geeignet
 - einfach zu benutzen
- ▶ Ausbaufähig
 - Unterstützt Plug-Ins
- ▶ Standards
 - CVS, XML, etc.



Installation

- ▶ **Welche Version?**
 - **Eclipse 3.0 M3 / M4**
 - **Linux – GTK 2.0**
- ▶ **<http://www.eclipse.org>**
- ▶ **Inhalt der ZIP-Datei expandieren**



Einführung

- ▶ **Die Umgebung**
 - **Alles Plug-Ins**
 - **Die Workspace**
 - **Verschiede Views/ Perspectives**

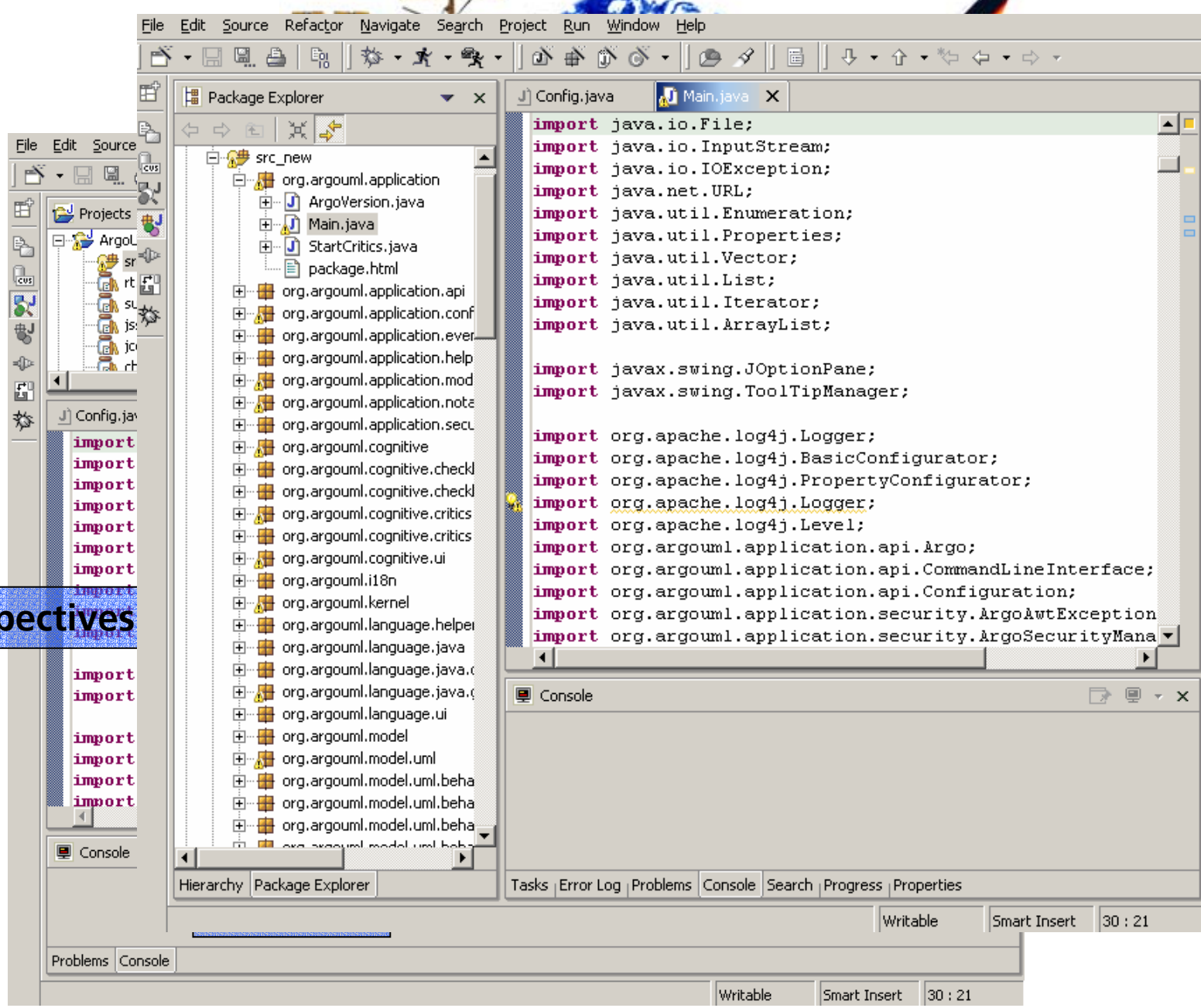
- ▶ **Einstellungen**
 - **Code Formatter**
 - **Code Generation**

- ▶ **Projekte**
 - **Einstellungen / Classpath etc.**



Die Umgebung

Perspectives

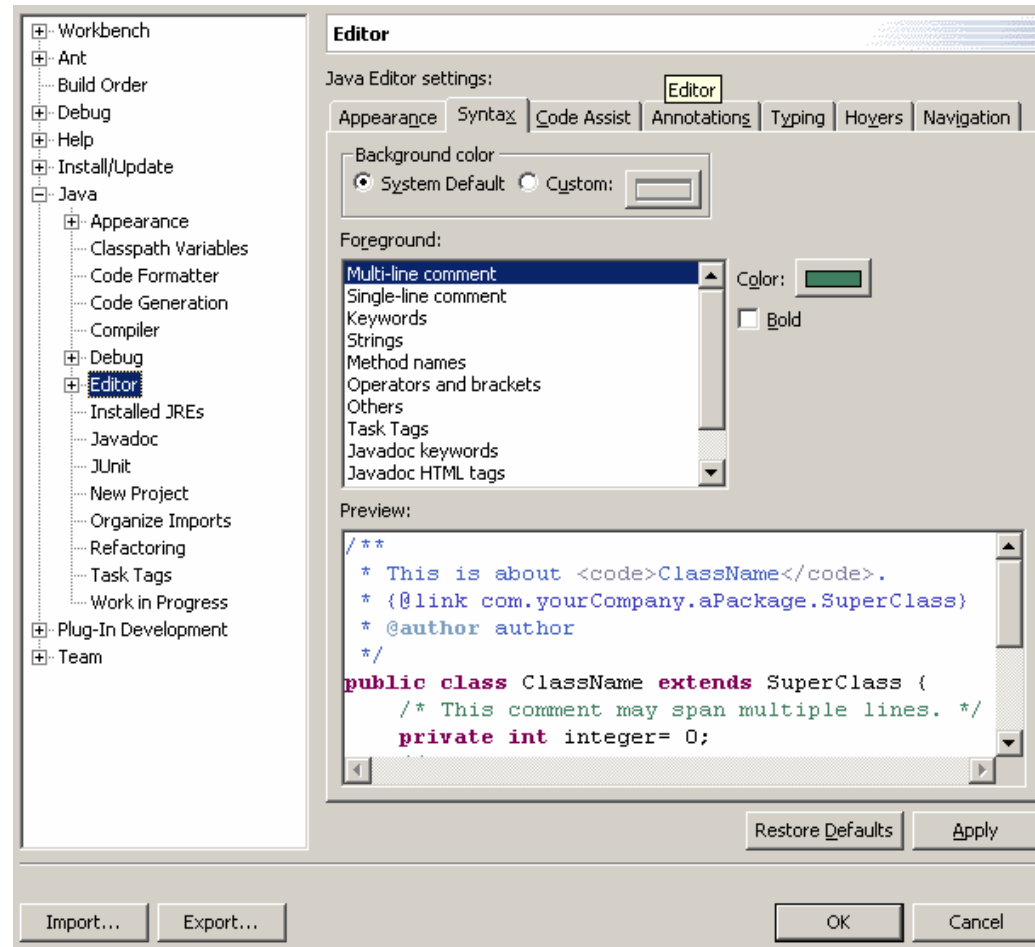




Einstellungen

▶ Window → Preferences

- Formatter
- Generation



Editor

Java Editor settings: Editor

Appearance Syntax Code Assist Annotations Typing Hovers Navigation

Background color
 System Default Custom: Color Picker

Foreground:

- Multi-line comment
- Single-line comment
- Keywords
- Strings
- Method names
- Operators and brackets
- Others
- Task Tags
- Javadoc keywords
- Javadoc HTML tags

Color: Color Picker
 Bold

Preview:

```

/**
 * This is about <code>ClassName</code>.
 * {@link com.yourCompany.aPackage.SuperClass}
 * @author author
 */
public class ClassName extends SuperClass {
    /* This comment may span multiple lines. */
    private int integer= 0;

```

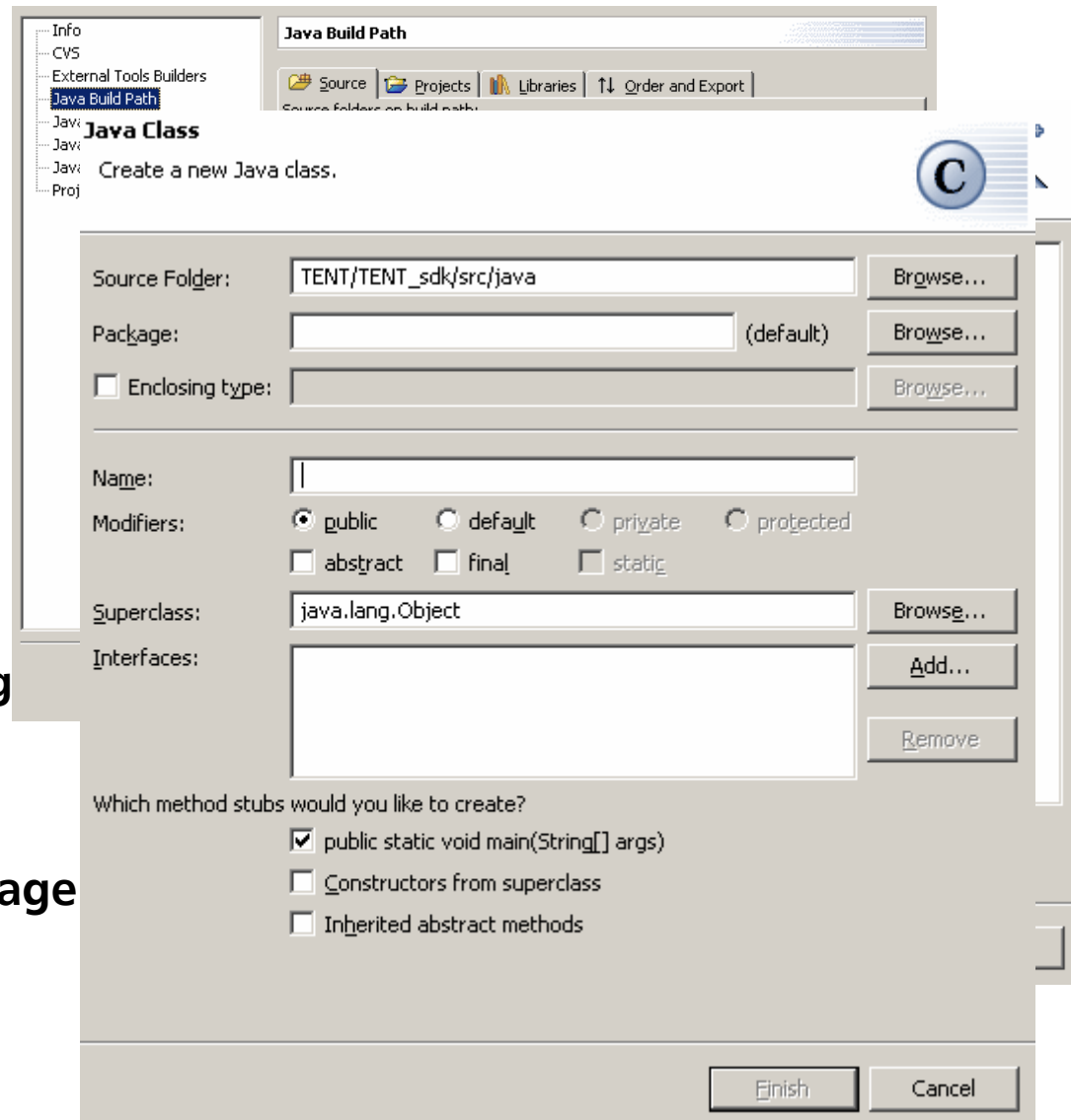
Restore Defaults Apply

Import... Export... OK Cancel



Projekt

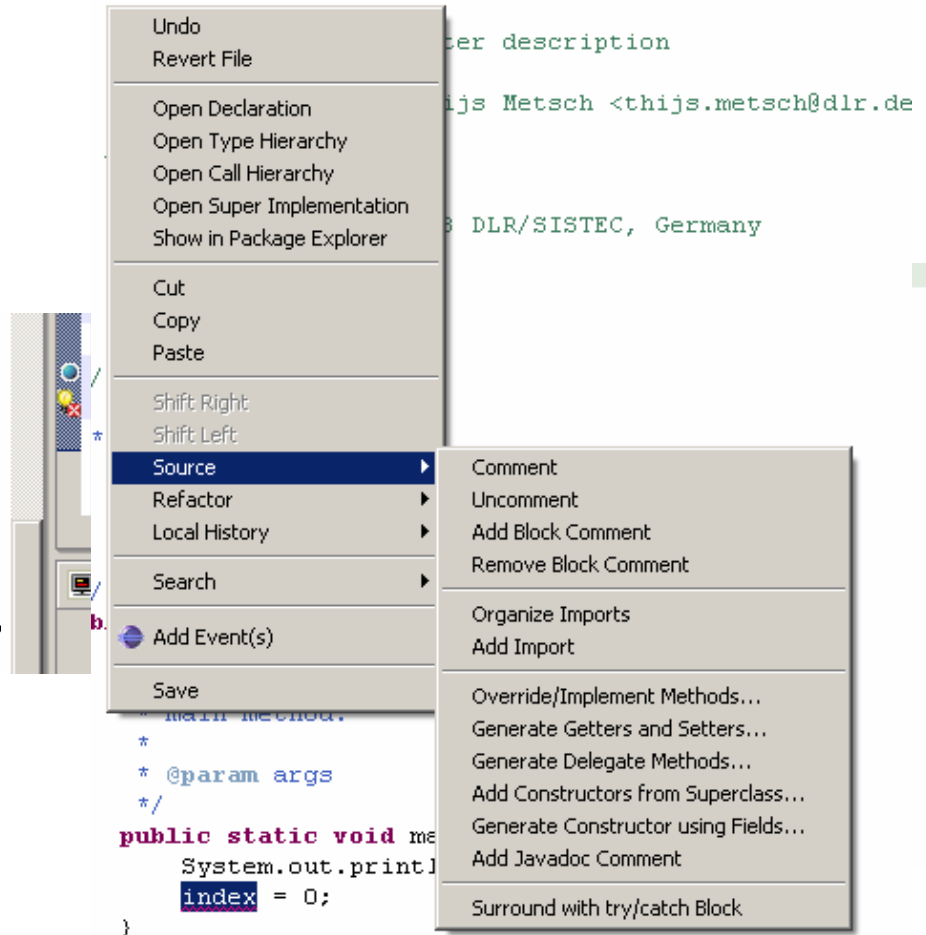
- ▶ File → New → Project
- ▶ Projekte haben eigene Einstellungen
 - Projekt auswählen
 - Rechte Maustaste
 - Properties
- ▶ Package / Klasse hinzufügen
 - Projekt auswählen
 - Rechte Maustaste
 - New → Class / Package





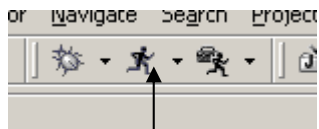
Einführung - Editor

- ▶ **Syntax highlighting**
- ▶ **Zeigt Fehler an**
 - **Schlägt Lösungen vor**
 - **Breakpoints setzen**
 - **TODOs setzen**
- ▶ **Weitere Funktionen**
 - **Comment / Uncomment**
 - **Code Completion**
 - **Code Formatter**
 - **Refactoring**
 - **Organize Imports**
 - **JavaDoc**





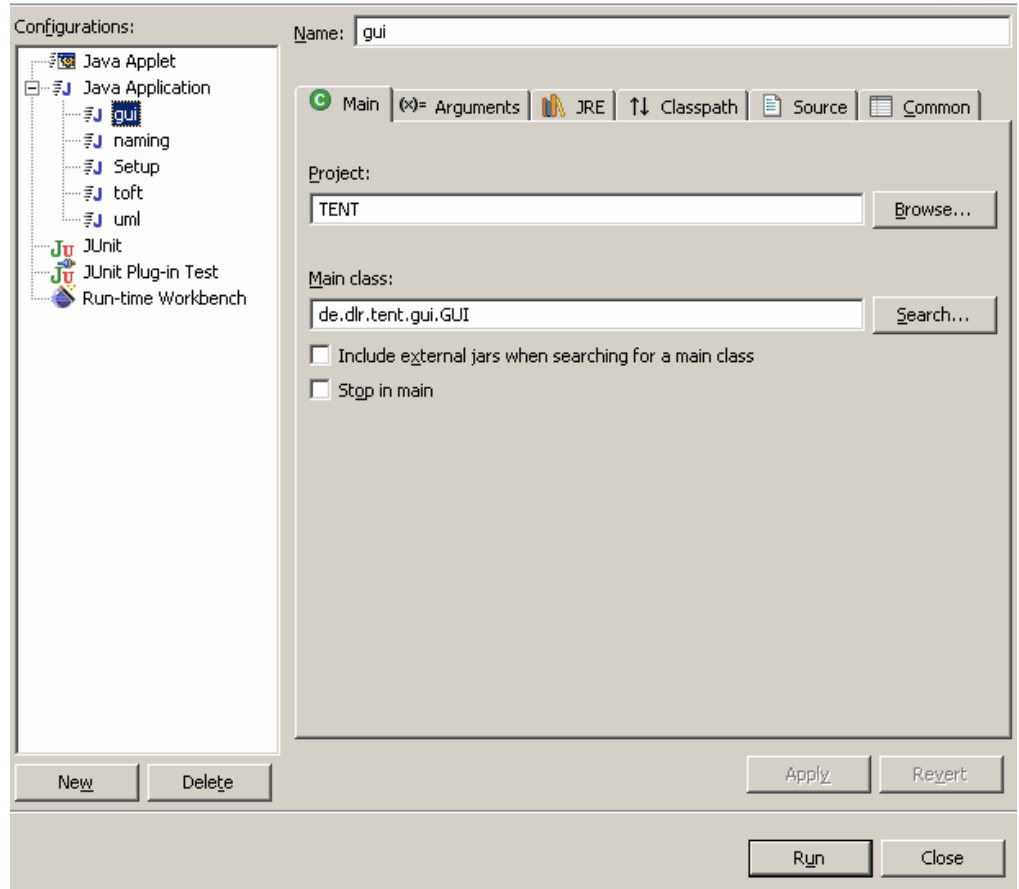
Einführung - Kompilieren



Run

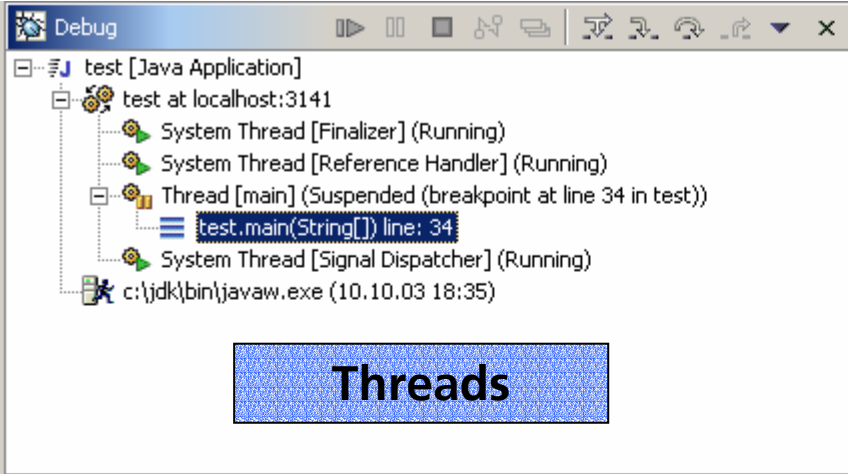
- ▶ Java Perspective
- ▶ Argumente
- ▶ Classpath
- ▶ Etc...

Create, manage, and run configurations





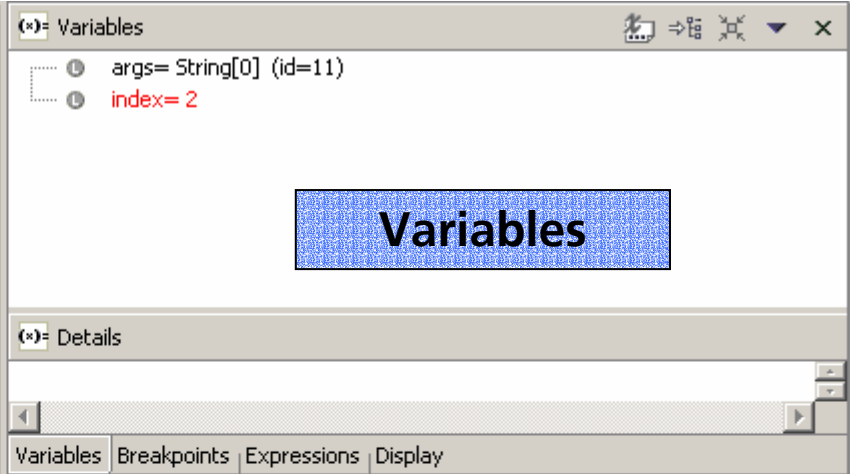
Interaction



Debug test [Java Application]

- test at localhost:3141
 - System Thread [Finalizer] (Running)
 - System Thread [Reference Handler] (Running)
 - Thread [main] (Suspended (breakpoint at line 34 in test))
 - test.main(String[]) line: 34
 - System Thread [Signal Dispatcher] (Running)
- c:\jdk\bin\javaw.exe (10.10.03 18:35)

Threads



Variables

- args= String[0] (id=11)
- index= 2

Details

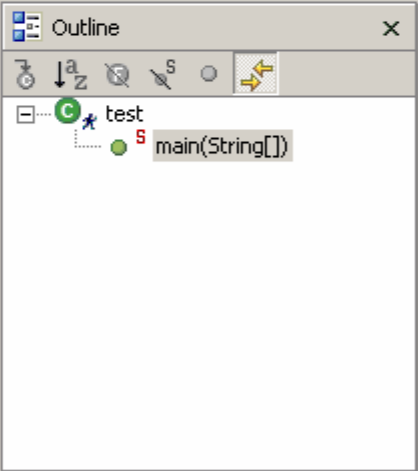
Variables Breakpoints Expressions Display

Variables



```
/**
 * main method.
 *
 * @param args
 */
public static void main(String[] args) {
    System.out.println("hello world");
    int index = 0;
    while ( index < 10 )
        System.out.print (index++);
}
```

Editor



Outline

- test
 - main(String[])



Console - test

```
hello world
01
```



Eclipse im Einsatz - Java

- ▶ OO Programmiersprache
- ▶ <http://java.sun.com>
- ▶ Einfach zu erlernen

- ▶ Eclipse in der Praxis:
 - Hello World – Text
 - Hello World – Swing / GUI

- ▶ Eclipse hilft bei Code-Standards
 - TODOs / Tasks
 - JavaDoc Kommentare
 - Variablen - klein, eindeutige Namen, z.B. someValue
 - Methoden, Klassen - groß, eindeutige Namen, z.B. StringToChar



Weitere Informationen / Fragen

<http://www.eclipse.org>

<mailto:thijs.metsch@dlr.de>

Newsgroups auf news.eclipse.org



Ausblick

Weitere Funktionen – Plug-Ins:

- ▶ CVS
- ▶ UML
- ▶ Ant
- ▶ Plug-In Entwicklung
- ▶ ...