# Cheatography

## Eclipse Cheat Sheet

by Oliver Paulus (oli.p) via cheatography.com/19982/cs/2862/

### Core

| | |
|---|---|
| Ctrl+1 | Quickfix |
| Ctrl+3 | Open "Quick Access" search |
| Ctrl+␣ | Content Assist |
| Alt+⇧Shift+Z | Surround with (do, for, if, try, ..) |
| Ctrl+Z | Undo |
| Ctrl+⇧Shift+Z | Redo |

### Testing

| | | |
|---|---|---|
| Alt+⇧Shift+X, T | execute Tests | |
| Ctrl+R | execute Tests | moreUnit |
| Ctrl+J | jump to test or implementation | moreUnit |

### Comment

| | |
|---|---|
| Ctrl+/ | Comment / uncomment line or selection (adds '//') |
| Ctrl+⇧Shift+7 | Add Block Comment around selection (adds '/... */') |
| Ctrl+⇧Shift+ß | Remove Block Comment |
| Alt+⇧Shift+J | Add Element Comment (adds '/** ... */' JavaDoc) |

### Text Editing

| | |
|---|---|
| Ctrl+⇧Shift+Y | lowercase selected text |
| Ctrl+⇧Shift+X | uppercase selected text |
| Ctrl+D | Delete line |
| Ctrl+⇧Shift+Del | Delete until end of line |
| Ctrl+Del | Delete next element |
| Ctrl+⌫ | Delete previous element |
| Ctrl+Alt+↓/↑ | Copy line below/above |
| Alt+/ | Propose word completion - after typing at least one letter. Repeatedly press until reaching correct name |
| Alt+⇧Shift+A | Column (block) selection, Multiline block editing |
| ⇧Shift+Enter | Adds a blank line below the current line |
| Ctrl+⇧Shift-+Enter | Adds a blank line above the current line |

### Generate

| | |
|---|---|
| Alt+⇧Shift+S, R | Generate Getters and Setters |

### Movement

| | |
|---|---|
| Alt+↑/↓ | Move current line or selection up or down |
| Ctrl+←/→ | Jump one word to the left / right |
| Ctrl+⇧Shift+↑/↓ | Jump to previous / next method |
| Ctrl+L | Jump to Line Number. To hide/show line numbers, press Ctrl+F10 and select 'Show Line Numbers' |
| Ctrl+Q | Jump to last location edited |
| Ctrl+./, | Jump to next / previous warning or error |
| Ctrl+↑ | Scroll up |
| Ctrl+↓ | Scroll down |
| Ctrl+⇧Shift+P | Go to the matching bracket |
| Alt+⇧Shift+↑/↓ | Select the previous / next syntactical element |
| Alt+⇧Shift+↑/↓/←/→ | Extending / reducing the selection of the previous / next syntactical element |

**Tip:** Use bookmarks. Add them on left margin of the code view (where you set the breakpoints) with "right click → Add bookmark". Add the Bookmarks-View (Window → Show View → Bookmarks).

### Selection

| | |
|---|---|
| Alt+⇧Shift+↑ | Expand selection to current element |
| Alt+⇧Shift+↓ | Reduce previously expanded selection by one step |

### Search / Information

| | |
|---|---|
| Ctrl+⇧-Shift+T | Open Type |
| Ctrl+⇧-Shift+H | Open Type In Hierarchy |
| Ctrl+⇧-Shift+R | Open Resource |
| Ctrl+O | Show Outline **(second press shows the inherited members)** |




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## Search / Information (cont)

| | |
|---|---|
| F2 | Open class, method or variable information (tooltip text) |
| F3 | Open Declaration: Jump to Declaration of selected class, method or parameter |
| F4 | Open Type Hierarchy window for selected item |
| Ctrl+T | Show Quick Type Hierarchy **(toggles between supertypes and subtypes when pressed again)** |
| Ctrl+U | Find occurrences of expression in current file |
| Ctrl+mouse over method | Open Declaration or Implementation |
| Ctrl+⇧Shift+L | List of shortcuts (depending on the context) |
| Ctrl+⇧Shift+␣ | Method Parameter Hints — cursor is located at the parameter specification for method reference |
| Ctrl+⇧Shift+G | Search workspace for references to selected method or variable |
| Ctrl+G | Search workspace for declarations of to the item under the cursor |
| Ctrl+F | Quick search |
| Alt+↵ | Show properties (in Package or Project Explorer) |

## Cleanup

| | |
|---|---|
| Ctrl+⇧Shift+O | Organize Imports |
| Ctrl+⇧Shift+F | Format Source |
| Ctrl+I | Intend selected source |
| Ctrl+⇧Shift+M | Add Import / also static imports |

## Refactoring

| | |
|---|---|
| Alt+⇧Shift+R | Rename Element |
| Ctrl+2, R | Rename locally (in file), faster than Alt+⇧Shift+R |
| Alt+⇧Shift+L | Extract to local variable |
| Alt+⇧Shift+M | Extract to method |
| Alt+⇧Shift+T | Opens the context-sensitive refactoring menu |
| Alt+⇧Shift+R | Rename |
| Alt+⇧Shift+V | Move |
| Alt+⇧Shift+C | Change Method Signature |
| Alt+⇧Shift+M | Extract Method |
| Alt+⇧Shift+L | Extract Local Variable |
| Alt+⇧Shift+I | Inline |

## Editor Window

| | |
|---|---|
| F12 | Jump to Editor Window |
| Ctrl+P-gDn/PgUp- | Next / previous Editor - in the **order of their tabs** in the editor area |
| Ctrl+M | Maximize or un-maximize current Editor Window |
| Ctrl+E | Show list of open Editors. Use arrow keys and enter to switch |
| Alt+←/→ | Backward / Forward editor navigation history |
| Alt+- | Open Editor Window Option menu |
| Ctrl+F6 | Next Editor - if released it immediately, Eclipse will take you to the **last active editor** |



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### Editor Window (cont)

| | | |
|---|---|---|
| Ctrl+⇧Shift+F6 | Previous Editor | |
| Ctrl+E | Quick Switch Editor | |
| Alt+F7 | Multipage editor - next Page | |
| Alt+⇧Shift+F7 | Multipage editor - previous Page | |
| Ctrl+- | **Toogle Split Editor** (Horizontal) - since Luna | **old:** Ctrl+_ |
| Ctrl+< | **Toogle Split Editor** (Vertical) - since Luna | **old:** Ctrl+{ |
| Ctrl+⇧Shift+"Num Keypad /" | Collapse all code blocks | |
| Ctrl+⇧Shift+"Num Keypad *" | Open all code blocks | |
| ⇧Shift (and hover over element) | Show source (in tooltip) | settings: Window → Preferences → Java → Editor → Hovers |

### Outline View

| | |
|---|---|
| Reorder class members with Drag & Drop | Disable "Sort Order" - otherwise not possible |
| | Automatic reordering: Select the class, Source → Sort Members |

### Package / Project Explorer

| | |
|---|---|
| Alt+F5 | Maven → Update Project... |

### Problems View

| | |
|---|---|
| Configure to view only warnings and errors associated with a particular resource or group of resources | Problems View - Configure Contents e.g. select "on any element in same project" to restrict to current selected project |

### Templates (Java → Editor → Templates)

| | |
|---|---|
| test | Created test method |
| for | Creates for loop |
| new | Creates new instance |
| try | Creates try..catch |

### Templates (Java → Editor → Templates) (cont)

| | | |
|---|---|---|
| sysout, syserr, systrace | Creates System.out... | |
| strf | Format string | here |
| if | if null/if not null | |
| for | iterate over **map** | |
| static_final | static final field | |
| before | **junit** before method | |
| after | **junit** after method | |
| beforeclass | **junit** beforeclass method | |
| afterclass | **junit** afterclass method | |
| quote | surround selection with quotes | here |

**Tip:** It is possible to select text and use completion (Ctrl+␣) including typing of template name

### Changed Eclipse Keybindings

**Windows → Preferences → General → Keys**

Required modifications due to the german QWERTZ keyboard layout:

1. Add Block Comment - **new:** Ctrl+⇧Shift+7, **old:** Ctrl+⇧Shift+/
2. Remove Block Comment - **new:** Ctrl+⇧Shift+ß, **old:** Ctrl+⇧Shift+\
3. Toogle Split Editor (Horizontal) - **new:** Ctrl+⇧Shift+-, **old:** Ctrl+_
4. Toogle Split Editor (Vertical) - **new:** Ctrl+⇧Shift+<, **old:** Ctrl+{

**Update 12/2016:** had to add ⇧Shift to 3. and 4. because of new Eclipse Neon Zoom functionality with Ctrl+-

### Project Specific Configuration

1. Import project **Java formatter configuration**
2. Download **Checkstyle configuration** file from sonar server and reference the config file as a file resource url
3. Download **Findbugs configuration** file from sonar server and add the config file under "include filter files"
4. Download **PMD configuration** file from sonar server and first "clear all" existing rules and then import the config file

### Plugins

| | | |
|---|---|---|
| Testing Support | moreUnit | |
| | Infinitest | |
| Test Coverage | EclEmma | |
| Source Code Analyzer | FindBugs | |
| | Checkstyle | |
| | PMD | Update-Site |
| | Usus | |




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## Plugins (cont)

| | | |
|---|---|---|
| | SonarCube or SonarLint | Ignore certain warnings with //NOSONAR or @Suppr-essWarnings("squid:S00-112") |
| Refactoring | JDeodorant | |
| Subversion Eclipse Team Provider Plugin | Subclipse | |
| | use Subclipse instead of Subversive because it is **much faster** | |
| | use JavaHL native/JNI provider | |
| Task based working | Mylyn | |
| | Nice: Task-focused Change Sets | |
| | Subclipse includes an optional Mylyn connector | |
| JavaDoc | JAutoDoc | |
| Maven integration | M2Eclipse (m2e) | |
| | add needed m2e connectors. follow pom.xml hints/pro-blems. e.g: | m2e project configurators for Eclipse WTP |
| | | m2e connector for build-hel-per-maven-plugin |
| | | m2e connector for the Eclipse JDT Compiler |
| | | m2e connector for the Maven Dependency Plugin |
| | | Groovy-Eclipse m2e integr-ation |
| Decompiler | Eclipse Class Decompiler | |

## XUbuntu specific Configuration Changes

Delete following keybindings in **XFCE Settings → Window Manager → Keyboard**:
1. Ctrl+Alt+↓/↑
2. Ctrl+F6
3. Alt+F5

If running **IBus-Applet** delete keybinding definition for "Ctrl+Space" (Content Assist) in IBus-Settings

Use **gnome-color-chooser** and change options:
1. **This only works for Eclipse < 4.5, because Eclipse Mars 4.5 and higher uses GTK3 by default (gtkrc-2.0 settings will not be used).** You can force Eclipse 4.5 and higher to use GTK2 with the following export or change GTK3 theme options: export SWT_GTK3=0
2. Tooltip colors (background: yellow, foreground: black)
3. Global colors → Input field selected (foreground: black)

Disable "pink/purple highlights" in Xubuntu 14.10 and higher: disable custom hightlight-color in **gtk-theme-config**

## Settings

| | | |
|---|---|---|
| show "." files in package explorer | **"Package Explorer → View Menu → Filters → uncheck .*"** or "Package Explorer → Customize View… → Filters → uncheck .*" | |
| Package Explorer Option "Link with editor" | Link file to package explorer | |
| Favorites Imports | Windows → Preferences → Java → Editor → Content Assist → Favorites, New Type... | x[1] |
| | Add types for Assertion library Hamcrest and/or AssertJ, Mockito and JUnit-Assert | |



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| Settings (cont) | |
|---|---|
| Show line numbers | Window → Preferences → General → Editors → Text Editors → "Show line numbers" |
| Show print margin | Window → Preferences → General → Editors → Text Editors → "Show print margin" |
| Paste multiline strings | Window → Preferences → Java → Editor → Typing → "Escape text when pasting into a string literal" |
| Import code templates collection | $x^2$ |
| Import code template "sur-round with quotes" | $x^2$ |
| MoreUnit Config-uration | Test source folder: "src/test/java" |
| | Test Type: "Junit4" |
| | uncheck "Use test-prefix for test-methods" |
| | Rule for naming test files → Pattern: ${srcFile} (Test\|IT\|ITCase) |
| | **if you have legacy tests with Test prefix:** Rule for naming test files → Pattern: (Test)${srcFile} (Test\|IT\|ITCase) |

| Settings (cont) | | |
|---|---|---|
| Formatter Options | Window → Preferences → Java → Code Style → Formatter → Off/On Tags **for //@formatter:off and //@formatter:on** | here |
| | Check the **Never join lines** preference accessible on the Line Wrapping and the Comments tabs of the Java Formatter preference page | here |
| Improve Perfor-mance | Window → Preferences → Validation, Disable All | |
| | Add **-Xverify:none** to eclips-e.ini | tell the VM not to validated all the .class files it is loading |
| | Window → Preferences →General → Startup and Shutdown | remove plugins not needed |
| | increase -Xms and -Xmx heap memory options (start and max) in eclipse.ini | e.g. -Xms512m -Xmx2048m |
| | increase -XX:MaxPermSize option (if java < 1.8) | e.g. -XX:MaxPermSize=512m |
| Enable inform-ative Eclipse Compiler Warnings | Window → Preferences → Java → Compiler → Errors/Warnings | **set to Warning and keep sub checkboxes checked (if any)** |
| | *Potential Programming problems* | Potential resource leak |
| | *Unnecessary code* | Value of parameter is not used |



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| Settings (cont) | | |
|---|---|---|
| | | Unused type parameter |
| | | Unnecessary declaration of thrown exception |
| | | Unnecessary 'else' statement |
| | | Unnecessary cast of 'instanceof' operation |
| | *Generic types* | Redundant type arguments (1.7 and higher) |
| | *Annotations* | Unhandled token in '@SuppressWarnings' set to **"Ignore"** |
| | *Null analysis* | Redundant null check |
| Indent using spaces | Window → Preferences → XML Files → Editor | Select "Indent using spaces" and set "Indentation Size: 4" |
| | Window → Preferences → General → Editors → Text Editors | Set "Displayed tab width: 4" and select "Insert spaces for tabs" |
| Save Actions | Window → Preferences →Java →Editor → Save Actions | |
| | check "Perform the selected actions on save" | |
| | check "Format source code", "Format all lines" | |
| | check "Organize imports" | |
| | check "Additional actions" and **add the following:** | |

| Settings (cont) | | |
|---|---|---|
| Code Style | • *"Use blocks in if/while/for/do statements"* | |
| | • *Use lambda where possible* | **if you use Java >= 8** |
| Add final modifier to private fields* | • *Add final modifier to private fields* | |
| | • *Add final modifier to local parameter* | |
| | • *Add final modifier to local variables* | |
| Unused Code | • *Remove unused imports* | |
| | • *Add missing '@Override' annotations* | |
| | • *Add missing '@Override' annotations to implementations of interface methods* | |
| | • *Add missing '@Deprecated' annotations* | |
| | • *Remove unnecessary casts* | |
| | • *Remove unnecessary '$NON-NLS$' tags* | |
| Limit maximum number of open editors | Window → Preferences → General → Editors | |
| | check "Close editors automatically" | |
| | choose value (e.g. 20) for "Number of opened editors before closing" | |



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## Settings (cont)

| | | |
|---|---|---|
| JDT Core/Null Analysis to avoid NPEs | Window → Preferences → Java → Compiler → Errors/Warnings, Section *Null analysis* | if you use Java < 8 (cannot use Optional) and cannot use Guava Optional e.g. for legacy projects |
| | check "Enable annotation-based null analysis" | you can use the Eclipse annotations, the JSR-305 annotations (old), custom ones or the JSR-308 annotations from Checker Framework |
| Maven | Window → Preferences → Maven → User Interface | |
| | check "Open XML page in the POM editor by default" | **Reason:** show pom.xml source code is faster than loading the "Overview" tab all the time |
| JUnit | Window → Preferences → Java → JUnit enable "Add 'ea' to VM arguments when creating new JUnit launch configuration" | enable JVM assertions by default |
| Show heap memory status | Window → Preferences → General | enable "Show heap status" |
| Enable "-Quick Diff" | Window → Preferences → General → Editors → Text Editors → Quick Diff | enable checkboxes and select correct reference source option |

**x¹:** TDD-Style mockito: org.mockito.Mockito, BDD-Style mockito: org.mockito.BDDMockito, org.junit.Assert, org.hamcrest.Matchers, org.assertj.core.api.Assertions
**x²:** Java → Editor → Templates

## General

| | | |
|---|---|---|
| Refresh **all** Projects (with some closed in between) | In **Package Explorer** | Ctrl+A, F5 |
| Use Working Sets for better performance | Package Explorer → open the drop-down menu → Select Working Set | |
| | If Ctrl+⇧Shift+R and Ctrl+⇧Shift+T does not reflect active Working Set check the small arrow on the top right of the dialogue to select Working Set | |

## Troubleshooting Projects

| | |
|---|---|
| Maven dependency issues | **try without eclipse project resolution** |
| | **clean projects** |
| | **Error message** `The archive: <pa th_ to_ jar _ does not exist.` |



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## Troubleshooting Projects (cont)

you can use this command to search for the projects referencing old jar: `find -name '.clas spath' -exec grep -Hin 'examp le- 1.2.3.jar' {} \;`

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Published 27th December, 2014.
Last updated 25th January, 2017.


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