



# IntelliJ IDEA Dojo

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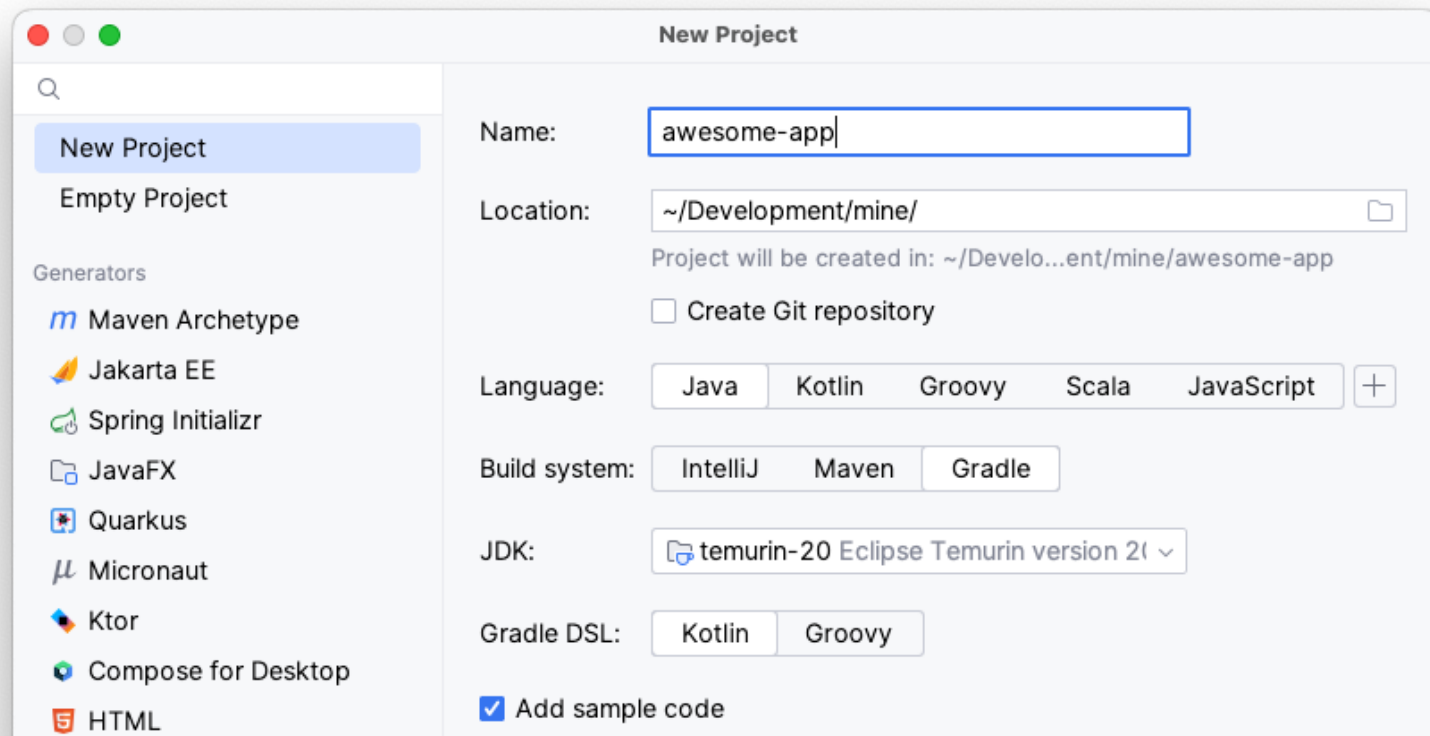


New Projects



# New Projects

- Typically, projects are created outside the IDE, which a build tool. i.e., Maven, Gradle, etc.
- IntelliJ offers some good choices without resorting to “IntelliJ-only” type projects





Opening Projects



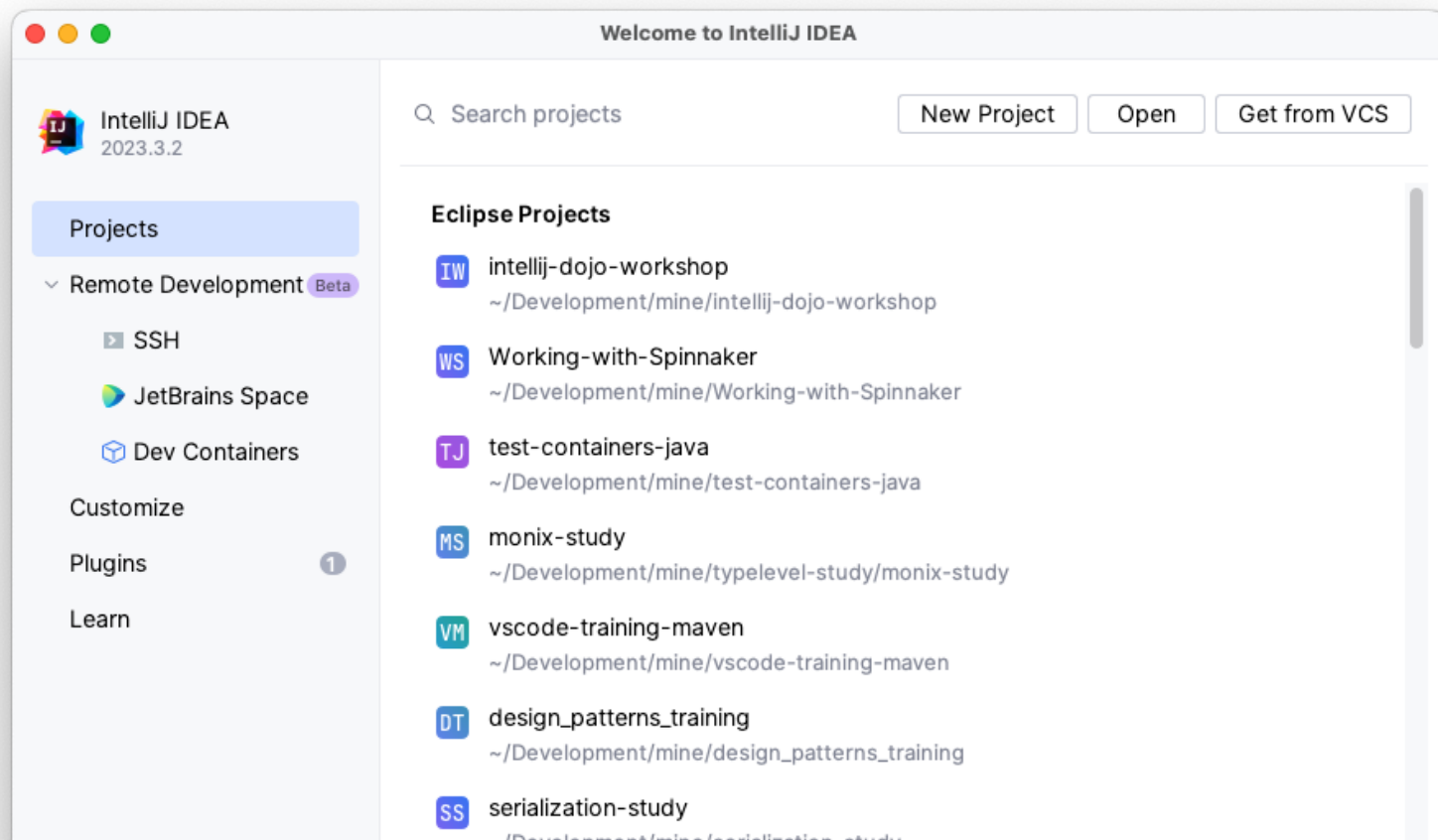
# Opening Projects

- Typically, projects are created outside the IDE, which a build tool. i.e., Maven, Gradle, etc.
- Therefore, really all that needs to be done is open the project.
- This can be done with [**File > Open**] or [**File > Recent Projects**]



# Opening Projects

- When you start IntelliJ for the first time, or when you close out of currently open projects, you can open your projects in the Welcome to IntelliJ window.





Command Line





# Opening Projects using the Command Line



- If you want to open a project into IntelliJ from command line you can do so from command line by typing `idea .` After some setup...

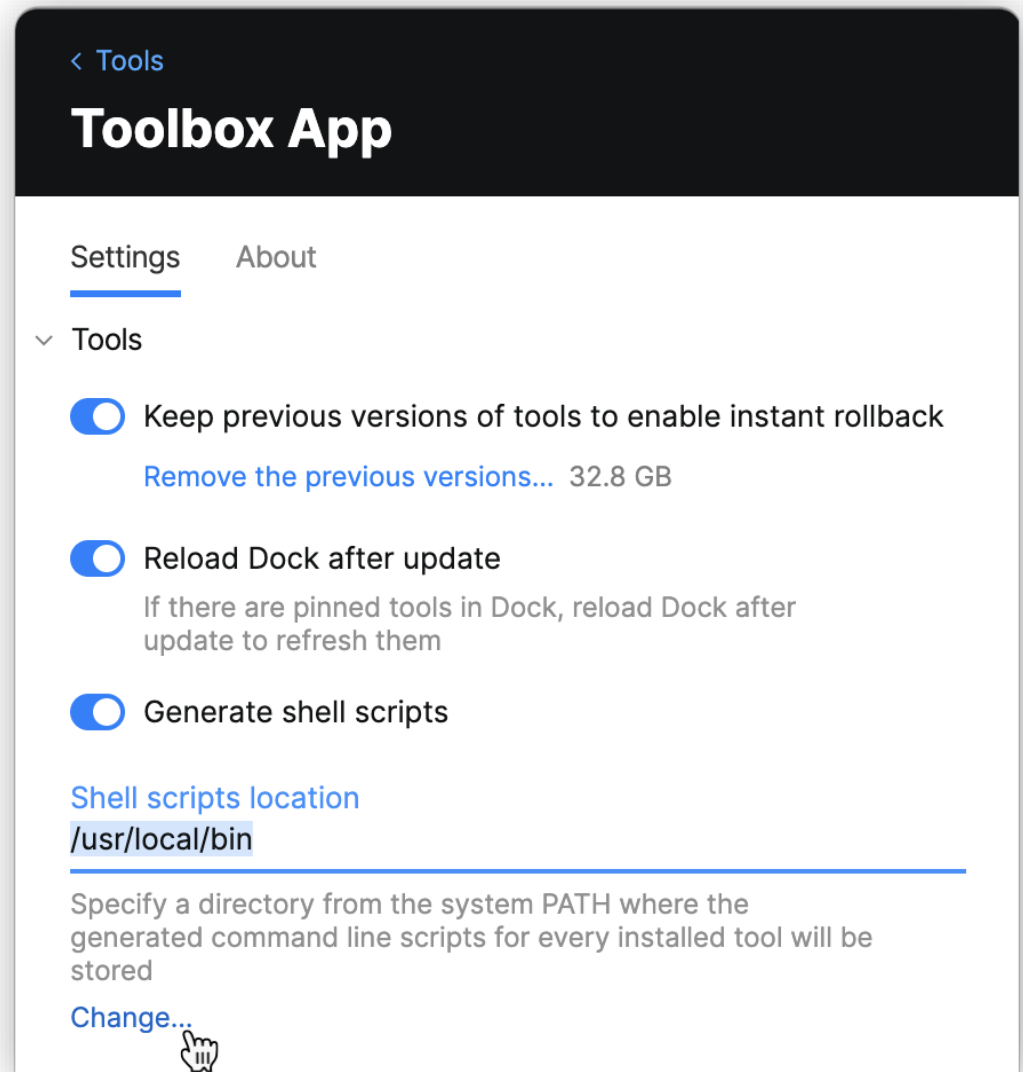
A screenshot of a macOS terminal window. The title bar at the top shows the user 'danno@MacBook-Pro' and the current directory '~/Development/mine/java-tdd'. The terminal content shows a prompt '(base) ~' followed by the command 'idea .' which has been executed. The output of the command is not visible. The terminal window has a light yellow background and a dark gray border.

```
danno@MacBook-Pro:~/Development/mine/java-tdd
(base) ~$ idea .
```



# Generating Scripts

- In your JetBrains  toolbox, click on the bolt. 
- Click on **Settings**
- Toggle on “Generate Shell Scripts” and either keep or override the location of the scripts
- For Windows users, put this location on your PATH





Tool Windows



# Tool Windows Navigation



**ALT-0...ALT-9**

Open Corresponding Tool Window

**CTRL-E**

View Recent Files, Includes Tool Windows

**CTRL-SHIFT+E**

View Recent Files, Includes Tool Windows

**ESC**

Return to the Editor

**CTRL+SHIFT+F12**

Maximize the Editor

**SHIFT+ESCAPE**

Close Current Tool Window

**CTRL+ALT+SHIFT+LEFT/ CTRL+ALT+SHIFT+RIGHT**

Shrink or Expand Tool Window



# Tool Windows Navigation



COMMAND(⌘) + 0...COMMAND(⌘) + 9

Open Corresponding Tool Window

COMMAND(⌘)-E

View Recent Files, Includes Tool Windows

COMMAND(⌘)-SHIFT+E

View Recent Edited Locations

ESCAPE(⏏)

Return to the Editor

COMMAND(⌘)+SHIFT(⇧)+F12

Maximize the Editor

SHIFT(⇧)+ESCAPE(⏏)

Close Current Tool Window

CONTROL(^) + OPTION(⌥) + LEFT(←) /

CONTROL(^) + OPTION(⌥) + RIGHT(→)

Shrink or Expand Tool Window



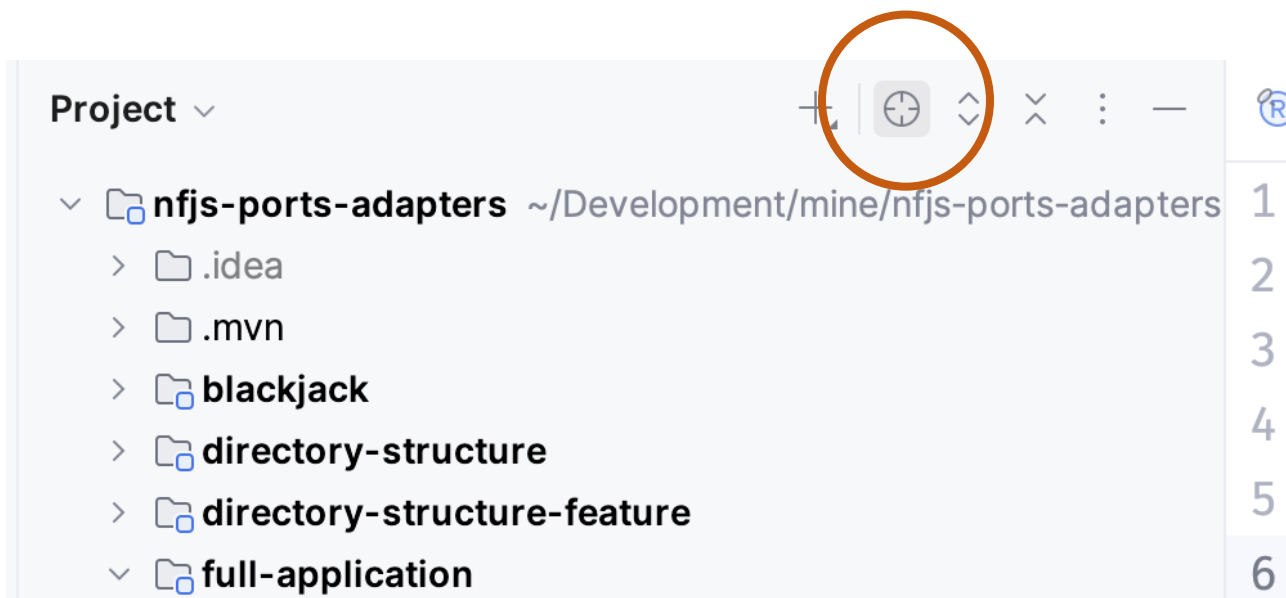
Select Open File



# Select Open File



ALT + F1 + <Number>  
Navigate, Select In...



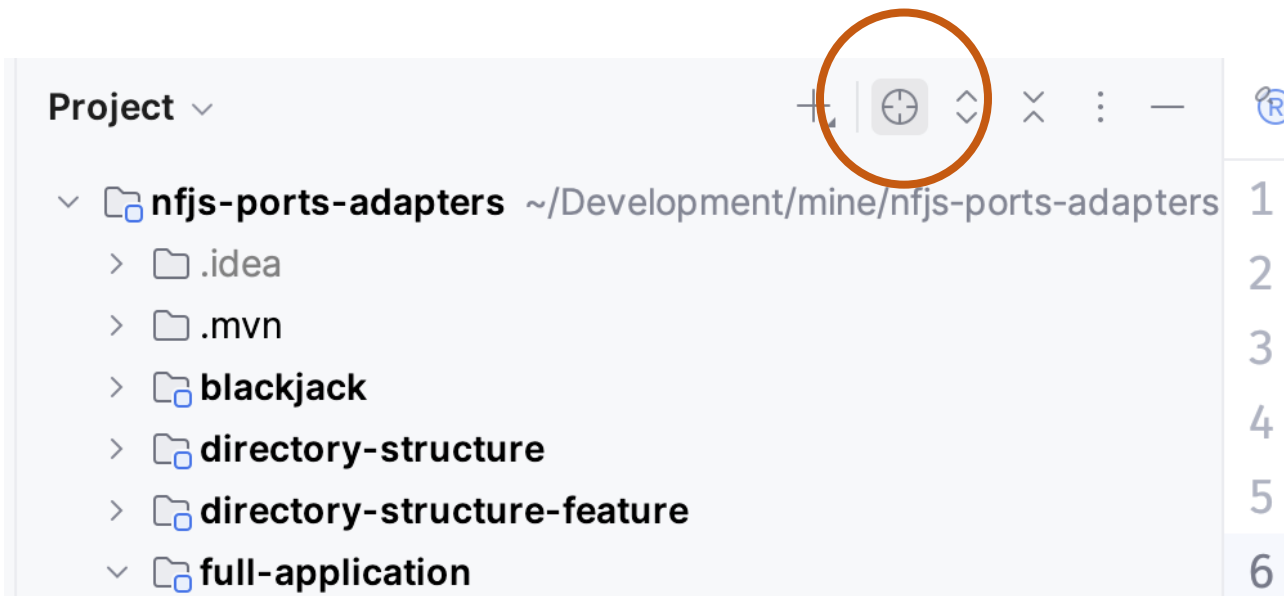
Select In	
1	Project View
2	RFS pane
3	Bookmarks
4	File Structure
5	Coverage
6	Database
7	Navigation Bar
8	Commit
9	Web Browser
0	Reveal in Finder
A	Terminal
B	Project Structure
m	C Maven



# Select Open File



OPTION(⌘) + F1 + <Number>  
Navigate, Select In...



Select In	
1	Project View
2	RFS pane
3	Bookmarks
4	File Structure
5	Coverage
6	Database
7	Navigation Bar
8	Commit
9	Web Browser
0	Reveal in Finder
A	Terminal
B	Project Structure
m	C Maven





Find Action



# Action Keys



CTRL-SHIFT-A Find Action

CTRL-CTRL Run Anything

SHIFT-SHIFT Search Everywhere



# Action Keys



SHIFT(↑)+COMMAND(⌘) + A Find Action

CONTROL(^) + CONTROL(^) Run Anything

SHIFT(↑)+ SHIFT(↑) Search Everywhere



Tab Management



# Tab Management Keys



**CTRL+RIGHT/LEFT**

Go to Next or Previous Tab

**CTRL+F4**

Close Current Tab



# Tab Management Keys



SHIFT(↑) + COMMAND(⌘) + ]/[

Go to Next or Previous Tab

COMMAND(⌘) + W

Close Current Tab

COMMAND(⌘) + SHIFT(↑) + W

Close All Tabs



Dojo: Tool Windows



Finding Stuff





# Finding Items



CTRL-N Go to class

CTRL-SHIFT-N Go to file

CTRL-ALT-SHIFT-N Go to symbol



# Finding Items



COMMAND(⌘) + O Find Class

COMMAND(⌘) + SHIFT(⇧) + O Go to File

COMMAND(⌘) + OPTION(⌥) + O Go to Symbol



Dojo: Finding Items



# Navigating Errors



# Navigating Errors



**F2**

Move to the Next Highlighted Issue

**ALT+ENTER**

Propose a Fix



# Navigating Errors



F2

Move to the Next Highlighted Issue

**OPTION(⌘) + RETURN(↵)**

Propose a Fix



Dojo: Finding Errors



Generating Files & Code





Generating Files and Code





ALT+INSERT Generate File or Code



# Generating Files and Code



COMMAND() + N or  
CONTROL(^) + RETURN()

Generate File or Code



Formatting Code



# Formatting Code



**CTRL + ALT + L**

Format All Code (includes imports)

**CTRL + ALT + O**

Optimize Imports

**CTRL + ALT + I**

Format Line by Line



# Formatting Code



COMMAND( $\text{⌘}$ ) + OPTION( $\text{⌥}$ ) + L

Format All Code (includes imports)

CONTROL( $\text{⌃}$ ) + OPTION( $\text{⌥}$ ) + O

Optimize Imports

CONTROL( $\text{⌃}$ ) + OPTION( $\text{⌥}$ ) + I

Format Line by Line



Dojo: Generating Code



Structure



# File Structure



**ALT + 7**

View the Structure of the Class

**CTRL+F12**

File Structure Popup





File Structure



COMMAND( $\text{⌘}$ ) + 7

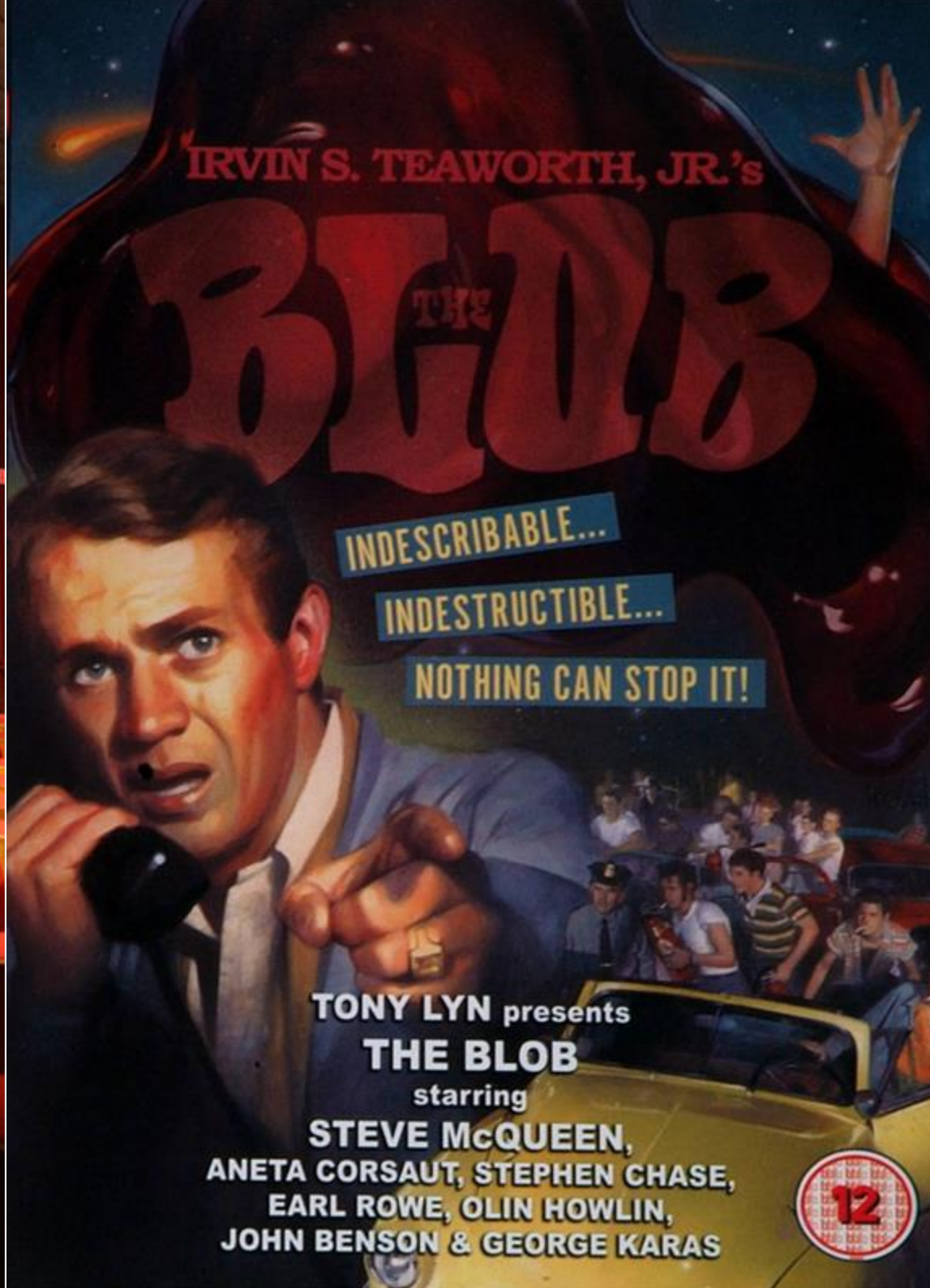
View the Structure of the Class

COMMAND( $\text{⌘}$ ) + F12

File Structure Popup



The Blob





# Selecting Code Blocks



CTRL + W Increase Code Block

CTRL + SHIFT + W Decrease Code Block



# Selecting Code Blocks



OPTION(⌘) + UP(↑) Increase Code Block

OPTION(⌘) + DOWN(↓) Decrease Code Block



# Editing Basics



# Editing Basics



CTRL+Y Delete Line at Caret

CTRL+D Duplicate Line at Caret

CTRL+X Cut Line at Caret

CTRL+C Copy Line at Caret

CTRL+V Paste Line at Caret

CTRL+SHIFT+V Paste From History



# Editing Basics



COMMAND(⌘)+DELETE(⌫)

Delete Line at Caret

COMMAND(⌘)+D

Duplicate Line at Caret

COMMAND(⌘)+X

Cut Line at Caret

COMMAND(⌘)+C

Copy Line at Caret

COMMAND(⌘)+V

Paste Line at Caret

COMMAND(⌘)+SHIFT(⇧)+V

Paste From History





# Prefer Tab over Enter

```
@Test
```

```
void testMath() {
```

```
    var result = Math.abs(30);
```

```
}
```

Tab

or

Enter

?

```
new *
```

```
@Test
```

```
void testMath() {
```

```
    var result = Math.d|abs(30);
```

```
}
```

Ⓜ **decrementExact**(int a) int

Ⓜ **decrementExact**(long a) long



# What happens with Enter

```
new *
```

```
@Test
```

```
void testMath() {
```

```
    var result = Math.decrementExact(|)abs(30);
```

```
}
```

int a  
long a



# What happens with Tab

```
new *  
@Test  
void testMath() {  
    var result = Math.decrementExact(30);  
}
```



# Surround Blocks and Selections



# Surround Blocks and Selections



CTRL + ALT + T Surround Block or Selection



# Surround Blocks and Selections



COMMAND( $\text{⌘}$ ) + OPTION( $\text{⌥}$ ) + T  
Surround Block or Selection



Dojo: Using Blobs



Usages





# Usages



**CTRL + ALT + B** Go to Implementation

**CTRL + B** Go to Declaration

**ALT + F7** Find Usages

**CTRL + SHIFT + F7** Highlight Usages in Files

**CTRL + ALT + LEFT / RIGHT**

Navigate back / forward

**CTRL + SHIFT + F**

Find In Files



COMMAND( $\mathbb{H}$ ) + OPTION( $\neg$ ) + B

Go to Implementation

COMMAND( $\mathbb{H}$ ) + B

Go to Declaration

OPTION ( $\neg$ ) + F7

Find Usages

COMMAND( $\mathbb{H}$ ) + SHIFT( $\uparrow$ ) + F7

Highlight Usages In Files

COMMAND( $\mathbb{H}$ ) + OPTION( $\neg$ ) + LEFT( $\leftarrow$ ) / RIGHT( $\rightarrow$ )

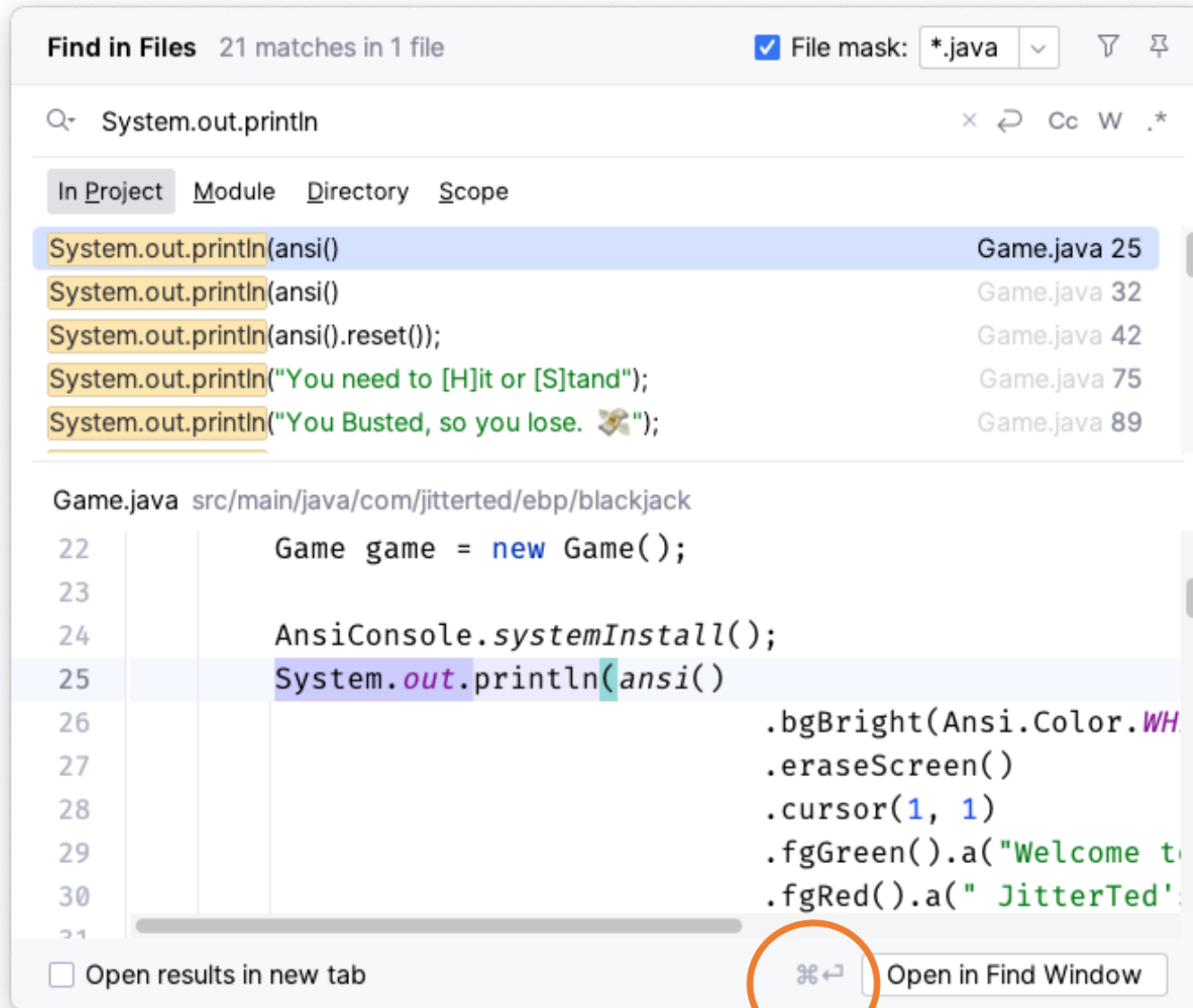
Navigate back / forward

COMMAND( $\mathbb{H}$ ) + SHIFT( $\uparrow$ ) + F

Find in Files



# Dock "Find in Files" to Find Window





Dojo: Usages



Code Completion



# Code Completion



**CTRL + SPACE**

Basic Code Completion

**CTRL + ALT + SPACE**

Code Completion that shows inaccessible members

**CTRL + SPACE (x2)**

Code Completion that shows inaccessible members

**CTRL + SHIFT + SPACE**

Type Sensitive Code Completion

**CTRL + SHIFT + ENTER**

Complete Statement

**CTRL + P**

Parameter Info

**CTRL + SHIFT+P**

Type Info



# Code Completion



CONTROL(^) + SPACE

Basic Code Completion

CONTROL(^) + OPTION (⌘) + SPACE

Code Completion that shows inaccessible members

CONTROL(^) + SPACE (x2)

Code Completion that shows inaccessible members

CONTROL(^) + SHIFT(⇧) + SPACE

Type Sensitive Code Completion

COMMAND(⌘) + SHIFT(⇧) + RETURN(↵)

Complete Statement

COMMAND(⌘) + P

Parameter Info

CONTROL(^) + SHIFT(⇧) + P

Type Info



Moving Code





# Moving Code



**CTRL + SHIFT + UP/DOWN**

Move either line or method, depending on caret location



# Moving Code



SHIFT (⇧) + COMMAND(⌘) + UP(↑)/DOWN(↓)

Move either line or method, depending on  
caret location



Dojo: Moving Code



Code Documentation  
& Help



# Code Documentation and Help



**CTRL + Q**

Quick Documentation Lookup

**CTRL + SHIFT + I**

Quick Definition Lookup

**ALT+Q**

Context Info

**CONTROL(^) + SHIFT (↑) + P**

Type Info (Twice to show more)



# Code Documentation and Help



CONTROL(^) + J

Quick Documentation

OPTION(⌘) + SPACE or COMMAND (⌘) + Y

Quick Definition Lookup

CONTROL(^) + SHIFT (⇧) + Q

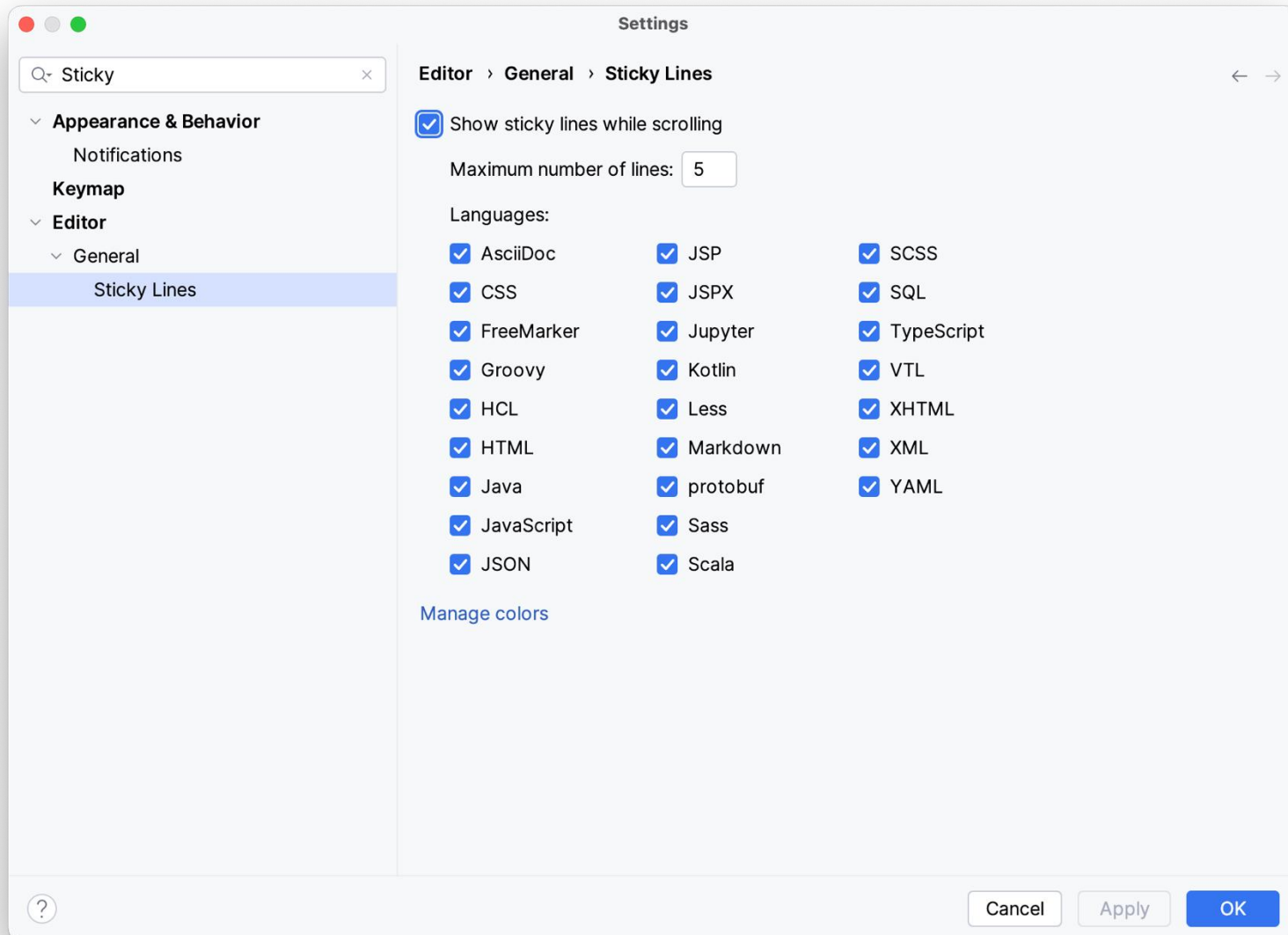
Context Info

CONTROL(^) + SHIFT (⇧) + P

Type Info (Twice to show more)



# Turning off Sticky Lines





Dojo: Documentation  
and Info





Running



# Running



All runs are contextual, this includes main methods, tests, test folders, HTTP files, and more.

**CTRL + SHIFT + F10**

Run and mark your context configuration

**SHIFT + F10**

Run the last context configuration

**ALT+SHIFT+F10**

Select context configuration and run



# Running



All runs are contextual, this includes main methods, tests, test folders, HTTP files, and more.

**CONTROL(^) + SHIFT (⇧) + R**

Run and mark your context configuration

**CONTROL(^) + R**

Run the last context configuration

**CONTROL(^) + OPTION(⌘) + R**

Select context configuration and run



Testing



**CTRL + SHIFT + T**

Toggle Between Test and Production



Testing



COMMAND(⌘) + SHIFT (⇧) + T

Toggle Between Test and Production



Dojo: Running and  
Testing



Debugging





**CTRL+F8**

Toggle Breakpoint

**CTRL + SHIFT+ F8**

View Breakpoints

**CTRL+SHIFT+F9**

Run Context Configuration Debug

**SHIFT+F9**

Debug the Last Context Configuration

**ALT+SHIFT+F9**

Select Context Configuration and Debug





# Debugging



COMMAND() + F8

Toggle Breakpoint

COMMAND() + SHIFT () + F8

View Breakpoints

CONTROL(^) + SHIFT () + D

Debug and Mark your Context Configuration

CONTROL(^) + D

Run Previous Test Selection

CONTROL(^) + OPTION() + D

Select Context Configuration and Debug



Dojo: Debugging



Refactoring



# Refactoring (Part 1)



**CTRL + ALT+ SHIFT + T**

Refactor This...

**F5**

Copy item

**F6**

Move item

**SHIFT+F6**

Rename globally

**ALT+DELETE**

Safe Delete



## Refactoring (Part 2)



Ctrl + Alt + N Inline

Ctrl + Alt + M Extract Method

Ctrl + Alt + V Extract Variable

Ctrl + Alt + F Extract Field

Ctrl + Alt + C Extract Constant

Ctrl + Alt + P Extract Parameter



# Refactoring (Part 1)



CONTROL(^) + T

Refactor This

F5

Copy item

F6

Move item

SHIFT(⇧)+F6

Rename globally

COMMAND(⌘)+DELETE

Safe Delete



## Refactoring (Part 2)



COMMAND( $\text{⌘}$ ) + OPTION( $\neg$ ) + N

Inline

COMMAND( $\text{⌘}$ ) + OPTION( $\neg$ ) + M

Extract Method

COMMAND( $\text{⌘}$ ) + OPTION( $\neg$ ) + V

Extract Variable





## Refactoring (Part 3)



COMMAND( $\text{⌘}$ ) + OPTION( $\neg$ ) + F

Extract Field

COMMAND( $\text{⌘}$ ) + OPTION( $\neg$ ) + C

Extract Constant

COMMAND( $\text{⌘}$ ) + OPTION( $\neg$ ) + P

Extract Parameter



Dojo: Refactoring



HTML/XML Editing



# HTML/XML Editing

<http://docs.emmet.io/abbreviations/syntax/>

<https://docs.emmet.io/cheat-sheet/>



Dojo: Hey Emmet



Version Control

# Version Control



**ALT + O**

Version Control Window

**CTRL + K**

Commit

**CTRL+T**

Update Project

**CTRL + SHIFT + K**

Push

**ALT + ` (Backquote)**

Version Control Quick Help



# Version Control



COMMAND(⌘) + O

Version Control Window

COMMAND(⌘) + K

Commit

COMMAND(⌘) + T

Update Project

COMMAND(⌘) + SHIFT(⇧) + K

Push

CONTROL(^) + V

Version Control Quick Help





# Version Control Conflicts



# Version Control Conflicts

Merge Revisions for /Users/danno/tmp/beginning-java\_2023-05-30/src/main/java/com/salesforce/Person.java

3 changes. 5 conflicts.

Apply non-conflicting changes: >> Left << Right Do not ignore Highlight words

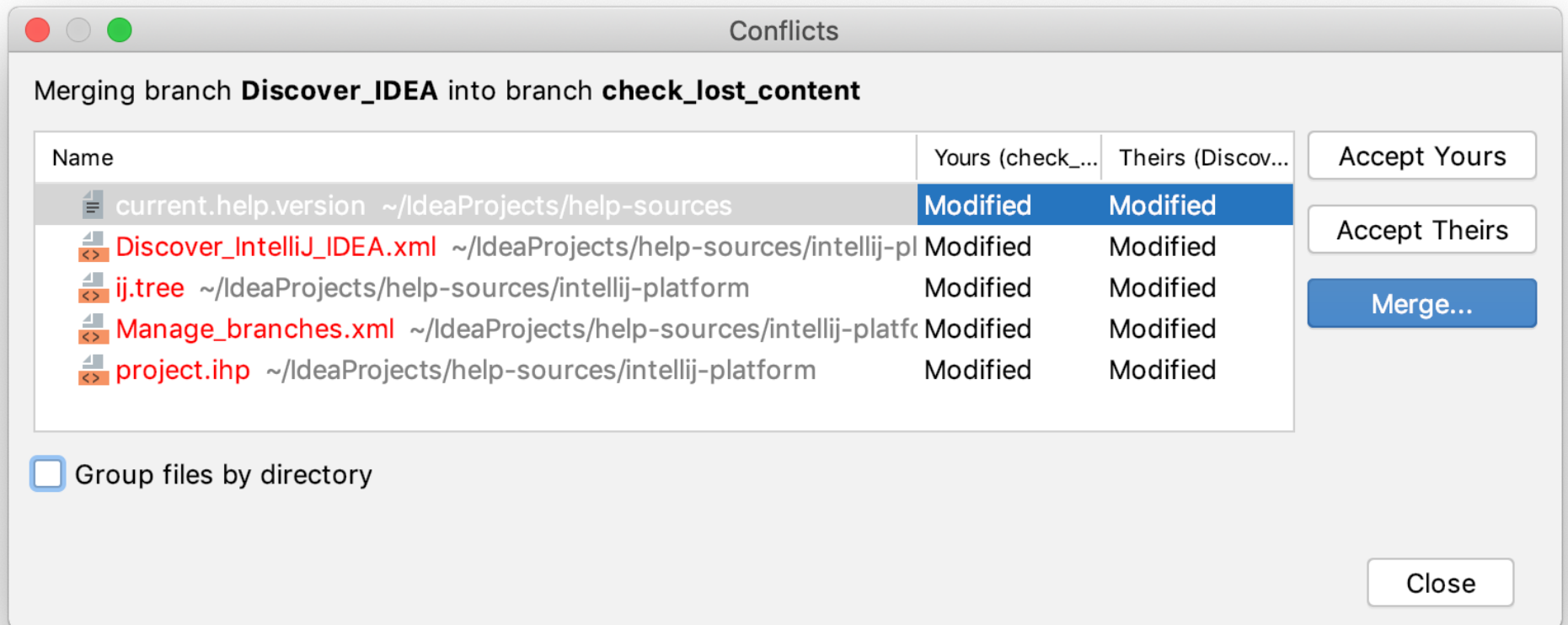
Result

Your version	Result	Changes from server (revision cb0e7b28bfb39483ca282a29a799003a19a57251)
import java.util.Optional; import java.util.StringJoiner; import java.util.function.Supplier;	import java.util.StringJoiner; import java.util.function.Supplier;	import java.util.Objects; import java.util.Optional; import java.util.StringJoiner; import java.util.function.Supplier;
public class Person { private final String firstName; private final String lastName;  private final String middleName;  private final LocalDate birthLocalDate; private final Supplier<LocalDate> todaysLocalDate;	public class Person { private String firstName; private String lastName;  private String middleName;  private LocalDate birthDay; private final Supplier<LocalDate> todaysDate;	public class Person { private String firstName; private String lastName;  private String middleName; private LocalDate birthDate; private final Supplier<LocalDate> todaysDate;
protected Person(String firstName, String middleName, String lastName, LocalDate birthLocalDate, Supplier<LocalDate> todaysLocalDate) {	protected Person(String firstName, String middleName, String lastName, LocalDate birthDay, Supplier<LocalDate> todaysDate) {	protected Person(String firstName, String middleName, String lastName, LocalDate birthDate, Supplier<LocalDate> todaysDate) {
this.firstName = firstName; this.middleName = middleName; this.lastName = lastName; this.birthLocalDate = birthLocalDate; this.todaysLocalDate = todaysLocalDate;	this.firstName = firstName; this.middleName = middleName; this.lastName = lastName; this.birthDay = birthDay; this.todaysDate = todaysDate;	this.firstName = firstName; this.middleName = middleName; this.lastName = lastName; this.birthDate = birthDate; this.todaysDate = todaysDate;
}	}	}
public static Person withNoMiddleName(String firstName, String lastName, LocalDate birthLocalDate) {	public static Person withNoMiddleName(String firstName, String lastName, LocalDate birthDay) {	public static Person withNoMiddleName(String firstName, String lastName, LocalDate birthDate) {
return new Person(firstName, null, lastName, birthLocalDate);	return new Person(firstName, null, lastName, birthDay, todaysDate);	return new Person(firstName, null, lastName, birthDate, todaysDate);
}	}	}
public static Person withMiddleName(String firstName, String , LocalDate birthDay) {	public static Person withMiddleName(String firstName, String mi , LocalDate birthDay) {	public static Person withMiddleName(String firstName, String m , LocalDate birthDate) {
return new Person(firstName, middleName, lastName, birthDay);	return new Person(firstName, middleName, lastName, birthDay, todaysDate);	return new Person(firstName, middleName, lastName, birthDate, todaysDate);
}	}	}
public String getFirstName() { return firstName;	public String getFirstName() { return firstName;	public String getFirstName() { return firstName;
}	}	}
public String getLastName() { return lastName;	public String getLastName() { return lastName;	public String getLastName() { return lastName;
}	}	}
public String getFullName() { if (middleName == null) { return String.format("%s %s", firstName, lastName); } else { return String.format("%s %s %s", firstName, middleName, lastName);	public Optional<String> getMiddleName() { return Optional.ofNullable(middleName); }  public int getAge() { return (int) ChronoUnit.YEARS.between(birthDay, todaysDate);	public Optional<String> getMiddleName() { return Optional.ofNullable(middleName); }  public int getAge() { return (int) ChronoUnit.YEARS.between(birthDate, todaysDate);

Accept Left Accept Right Cancel Apply



# Accept or Merge





# Color Meanings

Merge Revisions for /Users/anna.gasparyan/IdeaProjects/help-sources/intellij-platform/topics/Big\_Data\_Tools\_Configuration.xml

Apply non-conflicting changes: >> Left << All << Right Do not ignore Highlight words 8 changes. 1 conflict.

Your version	Result	Changes from server (revision ad635f2ba...)
<tab title="Zeppelin" 47	48	Mandatory parameters:</p> 49
<list> 49	50	<list> 50
<li><control>URL</c 50	51	<li><control>URL</cont 51
<li><control>Login< 51	52	<li><control>Login</co 52
</list> 52	53	</list> 53
<p>Optionally, you can s 53	54	<p>Optionally, you can set 54
<list> 54	55	<list> 55
<li><control>Name</c 55	56	<li><control>Name</conf 56
<li><control>Login a 56	57	<li><control>Login as a 57
<li><control>Enable 57	58	<li><control>Per projec 58
By default, all 58	59	Deselect it if you 59
<li><control>Per pro 59	60	<li><control>Enable con 60
Deselect it if y 60	61	By default, the new 61
<li><control>Scala V 61	62	<li><control>Scala Vers 62
plugin bundles. 62	63	plugin bundles. If 63
<li><control>Enable 63	64	<li><control>Enable HTT 64
connection with 64	65	connection with the 65

Accept Left Accept Right Cancel Apply

Deleted line

Modified line

Newly added line

Conflicting changes



# Accepting Conflicts

	45	46	public
	46	47	re
	47	48	}
	48	49	
lastName);	49	50	public
	50	51	re
	51	52	}
	52	53	
	53	54	public
middleName,	54	55	re
	55	56	}
	56	57	
	57	58	@Overr
	58	59	public

Accept

Day) {	31	<<X	
hDay, LocalDa	32		return
	33		}
	34		
String middl	35	@	public st
, birthDay, l	36	<<X	, Loc
		Accept	return
	38		}
	39		
	40		public St
	41		return
	42	✓	}



# Ignoring Conflicts

```
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58
```

Ignore

```
pub  
}  
pub  
}  
pub  
}  
@Ov  
pub
```

lastName);  
ame, middleName,

```
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59
```

Ignore  
Ctrl+click to resolve conflict

```
public Optional<  
    return Optio  
}  
Ag  
(  
@Override  
public boolean e  
    if (this ==  
    if (o == nul  
else;
```

sDate.ge1



# Version Control Conflicts



**F7**

Next Difference

**SHIFT+F7**

Previous Difference



# Version Control



**F7**

Next Difference

**SHIFT(↑) + F7**

Previous Difference





Column Selection Mode



# Column Selection Mode



ALT+SHIFT+INSERT Column Selection Mode

ALT+ALT Quick Column Selection Mode



# Column Selection Mode



SHIFT(⇧)+COMMAND(⌘) + 8

Column Selection Mode

OPTION(⌥) + OPTION(⌥)

Quick Column Selection Mode



Multicursors



# Multicursors



**ALT+SHIFT+ [Click]**

Start Multicursors

Delete Single Multicursor

Note: Can be used in selections (blobs) as well

**ALT+J**

Select Next Word Occurrence

**ALT+SHIFT+J**

Select All Word Occurrences

Can be used with Find...

**ALT + SHIFT + G**

Add Carets At The End of Lines in Selected Block



# Multicursors



**OPTION(⌘) + SHIFT(⇧) + [Click]**

Start Multicursors

Delete Single Multicursor

Note: Can be used with selections (blobs) as well

**CONTROL(^) + G**

Select Next Word Occurrence

**CONTROL(^) + COMMAND(⌘) + G**

Select All Word Occurrences

Can be used with Find...

**OPTION(⌘) + SHIFT(⇧) + G**

Add Carets At The End of Lines in Selected Block



Hierarchies



# Hierarchies



**CTRL+H**

Type Hierarchy - Show Parent and Child Classes

**CTRL+SHIFT+H**

Method Hierarchy – Show subclasses where the method overrides the selected method as well as what is overridden

**CTRL+ALT+H**

Call Hierarchy – Callers (Supertypes) or Callees (Subtypes) of a method, if on a field it will show the the methods that interact with it





# Hierarchies



**CONTROL(^) + H**

Type Hierarchy - Show Parent and Child Classes

**COMMAND(⌘) + SHIFT(⇧) + H**

Method Hierarchy – Show subclasses where the method overrides the selected method as well as what is overridden

**CONTROL(^) + OPTION(⌥) + H**

Call Hierarchy – Callers (Supertypes) or Calleees (Subtypes) of a method, if on a field it will show the the methods that interact with it



Presentation Mode



Build Tools Support



# Build Tools Support



- Maven
- Gradle
- SBT
- Leiningen
- Rake
- Buildr
- Ant
- Gant



Live Templates



# Live Templates



- Use live templates to insert common constructs into your code, such as
  - Loops,
  - Conditions,
  - Various declarations
  - Print statements



Dojo: Live Templates



Alternative Languages





# Alternate Languages



- Kotlin
- Scala
- Groovy
- Ruby/JRuby
- Python
- JavaScript
- Haskell
- Other Languages



Audience Favorites

# Thanks!

Email: [dhinojosa@evolutionnext.com](mailto:dhinojosa@evolutionnext.com)

Mastodon: <https://mastodon.social/@dhinojosa>