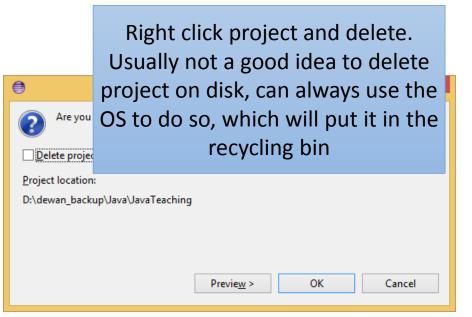
### JavaTeaching and Importing a github repository

Dong Nie

#### Example used: JavaTeaching

•							Jav	a - com
File Ed	lit Source	Refactor	Navigate	Search	Project	Saros	Run	Window
1	. R ¢	<b>B</b> : =5	<b>V</b>   _r	@  .			1 🔪	☆▼
🛱 Pack	age Explorer	X	New					+
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<u> </u>	colabTeachi							
	commonutil		Open in	New Win	dow			
	comp110-gr		Open Ty	/pe Hierar	chy			F4
	> de.fu_berli		Show In				Alt+Shi	ft+W ▶
	de.fu_berlin.i		-				_	
	de.fu_berlin.i						C	trl+C
	de.fu_berlin.i		Copy Q	ualified N	ame			
	de.fu_berlin.i distTeaching		Paste				C	trl+V
, <u>e</u> j	distTeaching		Delete				D	elete
	> EclipseHel	per [Ecl						
	FileExample		Build Pa	ith				•
	GIPC [GIPC	master]	Source				Alt+Sh	ift+S ►
	> gplus-quic		Refacto	r			Alt+Sh	ift+T ►
	grail13	2	Import					
Þ 🚮	javareflectco	mmon						
Þ 🚮	javareflectse	rver [Die 🖆	Export					
⊳ 🚮	JavaTeaching	g [JavaT	Find Bu	qs				

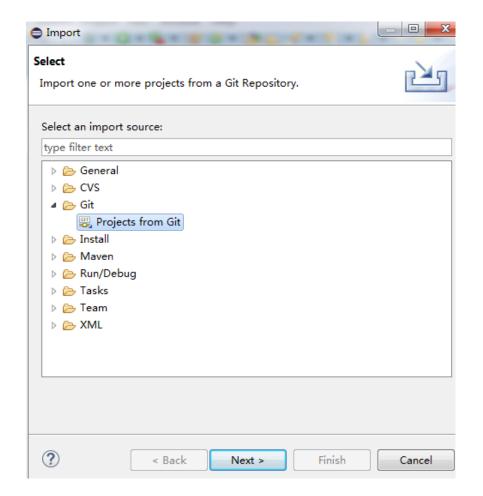
If you have already loaded JavaTeahcing from zip file, you should delete it before starting on this exercise



#### Eclipse: File->import

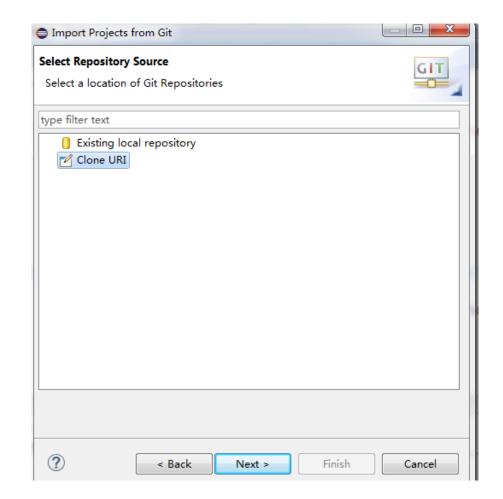
🖨 Ja	va - Assignment1/src/com/unc/nie/P	rocString.java - Eclipse	
File	Edit Source Refactor Navigate	Search Project Ru	n Window Help
	New	Alt+Shift+N ►	<b>♀</b> ▼ ₩ ♂ ▼ ⊵ ∅
	Open File		
	Close	Ctrl+W	ProcString.java 🛛
	Close All	Ctrl+Shift+W	product*=hh;
	Save	Ctrl+S	outLine+=" "+hh;
8	Save As		<pre>System.out.println("the num isDigit=0;</pre>
Ð	Save All	Ctrl+Shift+S	}
	Revert		}else//other character {
	Move		<pre>System.out.println("unexpected c if(isDigit==1)</pre>
-4	Rename	F2	{
8	Refresh	F5	<pre>endInd=i;//the endInd is exc num=line.substring(beginInd,</pre>
	Convert Line Delimiters To	+	<pre>int hh=Integer.parseInt(num)</pre>
₽	Print	Ctrl+P	<pre>sum+=hh; product*=hh;</pre>
	Switch Workspace	•	outLine+=" "+hh; System.out.println("the num
	Restart		isDigit=0;
	Import		n ۲
	Export		isDigit==1)//for the last digit
	Properties	Alt+Enter	
	1 ProcString.java [Assignment1/src/	]	

#### Choose Git: Projects from Git, and click "next"



If you do not see the Git choice, see PPT on importing Egit in reference material or install most recent version of Eclipse

#### Choose Clone URI, and click "next"



#### Use the url: https://github.com/pdewan/JavaTeaching.git

Import Projects f	rom Git	
Source Git Reposit Enter the location	of the source repository.	GIT
Location	0	
URI:	https://github.com/pdewan/JavaTeaching.git	Local File
Host:	github.com	
Repository path	/pdewan/JavaTeaching.git	
Connection Protocol: https Port: Authentication	•	
User:		
Password:		
Store in Secure	Store 🔲	
?	< Back Next > Finish	Cancel

Only the URI field needs to be filled, the others will be set automatically

## Choose Destination Directory (you can set default, and click "next"

Import Project	Import Projects from Git							
Local Destination Configure the local storage location for JavaTeaching.								
Destination								
Directory:	C:\Users\kosko\git\JavaTeaching	Browse						
Initial branch:		<b></b>						
Configuration								
Remote name:	origin							
?	< Back Next > Finish	Cancel						

#### Click "next"

lect a wizard to use for importing projects	TID
epending on the wizard, you may select a directory to determine the vizard's scope	
Wizard for project import	
Import existing projects	hh)
Use the New Project wizard	
🗇 Import as general project	
B Working Directory - C:\Users\kosko\git\JavaTeaching	
	hh)
?) < Back Next > Finish	Cancel

#### Finish

Cloning from https://github.com/pdewan/JavaTeaching.git	
Import Projects Import projects from a Git repository	GIT
Projects:	
type filter text to filter unselected projects	Select All
<ul> <li>JavaTeaching (C:\Users\kosko\git\JavaTeaching)</li> <li>Search for nested projects</li> </ul>	Deselect All
Working sets	
Add project to working sets	
Working sets:	Select
? < Back Next > Finish	Cancel

#### Here comes the Project with Compile Errors

🔐 J	av	aTe	aching [JavaTeaching master]			61
4	舟	src				6
	$\triangleright$		lectures.animation.loops			7(
	$\triangleright$		lectures.animation.mvc	Ш		7:
	$\triangleright$		lectures.animation.threads_commands			72
	$\triangleright$		lectures.animation.threads_commands.extra			7:
	$\triangleright$		lectures.animation.threads.synchronized_methods			74
	$\triangleright$		lectures.animation.threads.ui			71
	Þ		lectures.animation.threads.wait_notify			
	$\triangleright$	×IO	lectures.animation.threads.wait_notify.lock			7£
	$\triangleright$		lectures.arrays			79
	Þ	×I	lectures.arrays.collections_implementation		8	8(
	Þ	×	lectures.arrays.collections_kinds		1	8:
	Þ	×II	lectures.arrays.collections_kinds.extra		1	8:
	Þ	40	lectures.assertions.advanced		8	8:
	Þ	40	lectures.casting_vs_conversion			
	Þ	40	lectures.class_dual_roles.instances	1	<b>.</b>	_
	Þ	40	lectures.class_dual_roles.statics			Pr
	Þ	<b>4</b> 10	lectures.class_dual_roles.users		No o	:0
	Þ	×IO	lectures.composite.annotations			
	Þ	×I	lectures.composite.design_pattern			
	Þ	×I	lectures.composite.objects_shapes			
	Þ	×I	lectures.composite.objects_shapes_extra			
	Þ	×II	lectures.composite.tree_dag_graph_objects_windows			
	Þ	×II	lectures.composite.visitors			
	Þ	<u>.</u>	lectures.conditionals			
		<u> </u>	lectures.conditionals_advanced			
		_	lectures.constructors_pointers			
	$\triangleright$	<u>.</u>	lectures.deep_shallow_copy	1		

⊿

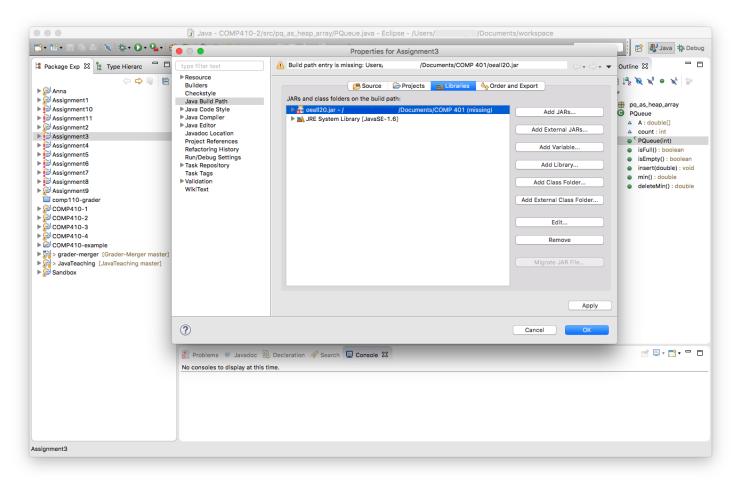
You will have errors, be sure to delete the oeall22 reference (if it exists in the class path) and add your oeall22 library (See eclipse install and objecteditor library sections and the next two slides) Until you need ObjectEditor, you can ignore the errors

#### Replacing/Adding oeall22 (or any other JAR)

		cuments/workspace
	●************************************	Quick Access
Package Exp 22     Type Hierarc     Anna     Assignment1     Assignment1     Assignment2     Assignmer     As	<pre>2 2 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4</pre>	B: Outline 13 ■ PQ_as_heap_array ♥ PQueue A A: double[] A count: int ● PQueue(onternit) ● isFull(): boolean ● isEmpty(): boolean ● isert(double): void ● minut(): double ● deleteMin(): double
Close Unrelated F Assign Working S		
Assignment3 Configure		

Right-click on the project you want to modify → Properties

### Replacing/Adding oeall22 (or any other JAR)



Go to Java Build Path → Libraries tab. Remove the old JAR (if it exists), and choose **Add External JARs**. Click Apply→OK

If you see modulepath or classpath as options, select classpath

You need not add external jar if you can live with the compiler errors in code you will not access in the first few praxes. However, if you have time, look at objecteditor PPT on how to download oeall from the web page and then use add external jar to add it. At this point there should be no errors.

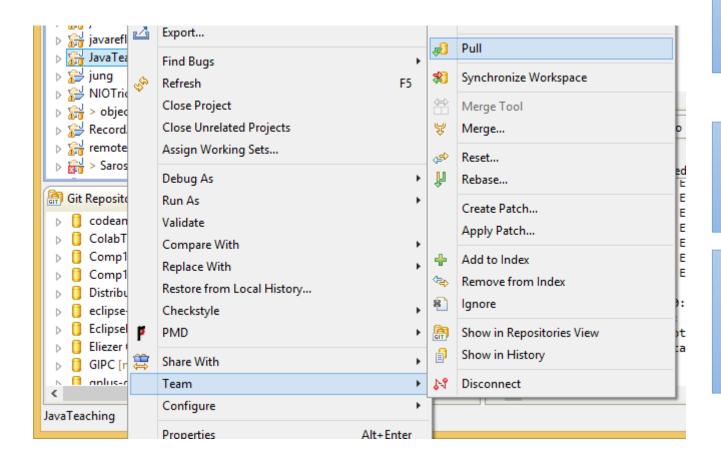
### Add junit library to your classpath

rties for JavaTeaching		•	Add Library — 🗖
he build pa <u>t</u> h:	← ← → → ▼	Add Library Select the library type to add. JRE System Library	
wan_backup\Java\lib y [jdk1.8.0_40]	Add <u>J</u> ARs Add <u>Ex</u> ternal JARs Add <u>V</u> ariable Add Libr <u>a</u> ry	JUnit Maven Managed Dependencies Plug-in Dependencies User Library	Next > Einish Cancel
	Library instead of Add r and then select Junit		

## What your libraries in build path should look after both additions

•	Properties for JavaTeaching	
type filter text	Java Build Path	← < ⇒ < <
<ul> <li>Resource Builders Checkstyle Git</li> <li>Java Build Path</li> <li>Java Code Style</li> <li>Java Compiler</li> <li>Java Compiler</li> <li>Java Editor Javadoc Location Project References Refactoring History Run/Debug Settings</li> <li>Task Repository Task Tags</li> <li>Validation WikiText</li> </ul>	<ul> <li>Source Projects Libraries Order and Export</li> <li>JARs and class folders on the build path:</li> <li>Image: Order and Export Delta (Content of the content of th</li></ul>	Add JARs         Add External JARs         Add Variable         Add Library         Add Class Folder         Add External Class Folder         Edit         Edit         Remove
You w	ill probably have a later version of the JRE system library	<u>M</u> igrate JAR File
?		OK Cancel

#### Pulling (Updating) the Project



Right click project, Team>Pull (not Pull...)

You may get conflicts if you changed files that were updated in the master version you are pulling

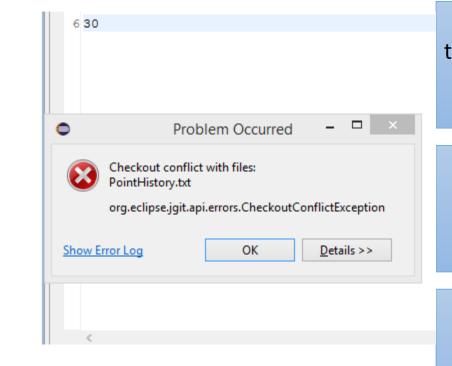
In this case, you should save the folders you changed (they will have a > next to them) and then reset the project and then pull again

#### Pulling the project

۲				Java - JavaTeac	hing/PointHistory.tb	kt - Eclipse			-	□ ×
File	Edit Source Refactor Navigate	Sear	ch Project Run Window H	Help						
	- 1 - 1 - 1 - 1	☆ •	0 - 9 - 18 6 - 2	🗁 🛷 🔹 🦢 👻 🗣 🕶	*\$\ \			Quick Access	🀉 Java	🎋 Debug
H	Package Explorer 🙁 🍃 Type Hierar	rchy		TwoClientCorrec	J TwoClientCorrec	ABufferingTestl	🕖 ExtendedShell.j	PointHistory.tx 🛛	»»29	- 8
	> Other Projects [* master]       > Graders		New	12						^
⊮0 {0	Commit Ctrl+# Push to Upstream		Go Into Open in New Window							
<b>€</b> ] -€]	Fetch from Upstream Push Branch		Open Type Hierarchy Show In	F4 Alt+Shift+W≯						
÷	Remote Switch To Advanced		Copy Copy Qualified Name Paste	Ctrl+C Ctrl+V						
æ1	Pull	×	Delete	Delete						
*	Synchronize Workspace	Ð.		Ctrl+Alt+Shift+Down						
₩ 1	Merge Tool <b>Merge</b>		Build Path Source Refactor	↓ Alt+Shift+S↓ Alt+Shift+T↓						
₽ ¢\$	Rebase Reset	2	Import	Ait+Shiit+T						
	Create Patch Apply Patch	- 21 S	Export Refresh	F5	_					
+ ~~	Add to Index Remove from Index Ignore		Close Project Close Unrelated Projects Assign Working Sets		😥 Declaration 🔗 S is time.	Search 📮 Console 🕅				
<b>[</b> ]	Show in Repositories View Show in History		Debug As Run As Validate	•						
14	Disconnect		Team	•	•					
<			Compare With Replace With Restore from Local History Checkstyle	,						
	Teaching		Configure	Al. 5 .	_					

#### Conflict

granio 🚰 > JavaTeaching [JavaTeaching master↓1] src JRE System Library [jdk1.8.0\_60] Unit 4 Referenced Libraries cloneFile counter\_config.txt Desktop.ini dn.gif hs\_err\_pid1296.log ObjectEditor.obj pointHistory.obj > PointHistory.txt 🛐 shuttle.jpg shuttle2.jpg SyncToy\_f444a069-eaec-40c7-bfd6-fb2d32a85162.dat DistributedTeaching [\* master]



This happens if you (accidentally) changed a file that was also changed by some one else – in this case the instructor

The name(s) of the changed files are given in the message, and next to the project name you see you are behind the version in the repository

If your changed files have important information, save them, or save the whole project

Then reset (hard) the project

### Saving folders changed

Click on each changed folder/file and execute CTRL-C (copy)

#### Iectures.scanning

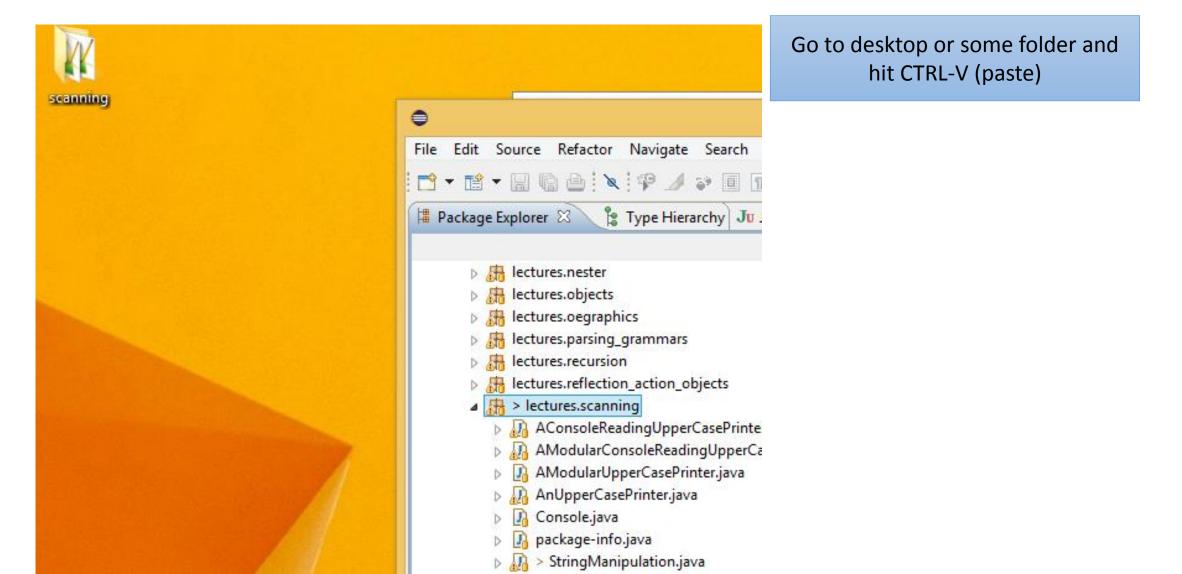
- AConsoleReadingUpperCasePrinter.java
- AModularConsoleReadingUpperCasePrinter.java
- AModularUpperCasePrinter.java
- AnUpperCasePrinter.java
- 👂 🚺 Console.java

👂 🚺 package-info.java

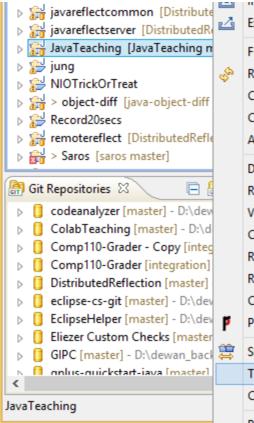
**a a** 

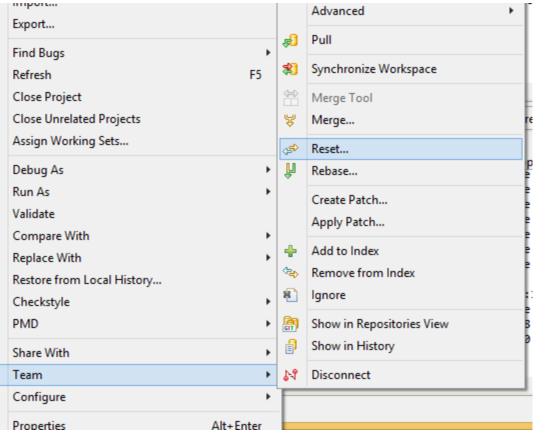
b Jacob StringManipulation.java

#### Saving folders changed



#### Resetting the Project





After doing an exercise with the code or when you get a conflict, you can reset the project

#### Right click project, select Team>reset

#### Reset Dialog to Pick Kind of Reset Option

•	Reset	×
Reset: JavaTea	aching	6
type filter text	nces	
Reset to (exp	ression): refs/heads/master	
Commit: Subject: Author: Committer:	8363af9cc9f658c87ea02c140ac746edf6ebbb5a removed qdox pdewan <dewan@cs.unc.edu> Aug 22, 2015 1:15:41 PM -0400 : pdewan <dewan@cs.unc.edu> Aug 22, 2015 1:15:41 PM -0400</dewan@cs.unc.edu></dewan@cs.unc.edu>	
	D updated) AD and index updated) AD, index, and working directory updated)	
	<u>R</u> eset Cancel	

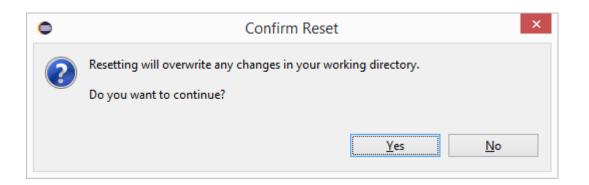
Default picks Mixed Option

#### Hard Reset Deletes all of Your Changes

•	Reset	×
Reset: JavaTeacl	ling	6
type filter text	25	
Commit: 8 Subject: re Author: p	ision): refs/heads/master 363af9cc9f658c87ea02c140ac746edf6ebbb5a emoved qdox dewan < dewan@cs.unc.edu> Aug 22, 2015 1:15:41 PM -0400	
Reset type <u>S</u> oft (HEAD of <u>M</u> ixed (HEAI	dewan <dewan@cs.unc.edu> Aug 22, 2015 1:15:41 PM -0400 updated) D and index updated) . index, and working directory updated)</dewan@cs.unc.edu>	
	<u>R</u> eset Cancel	

Pick hard and press reset

#### Hard Reset Deletes all of Your Changes



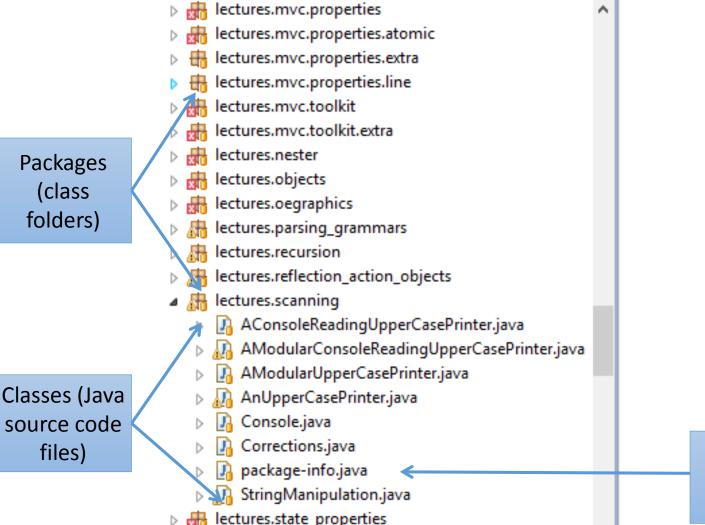
# Pull the project again to get latest non conflicting changes

۲				Java - JavaTeach	ning/PointHistory.tx	kt - Eclipse			-	□ ×
File	Edit Source Refactor Navigate	Sear	ch Project Run Window H	Help						
Ċ	- 2 - 8 6 6 🔌 🗉 🖬	☆ •	0 - 9 - 😰 🕫 - 🙋	🕒 🔗 • 🗄 • 🖗 •	🌾 🔶 ▾ 🖒 ▾			Quick Access	🀉 Java	🎋 Debug
Ħ	Package Explorer 🛛 🔋 Type Hierar	chy		TwoClientCorrec	J TwoClientCorrec	ABufferingTestl	🕢 ExtendedShell.j	PointHistory.tx 🛛	»»29	
	<ul> <li>Other Projects [* master]</li> <li>Graders</li> </ul>		New	12	1					^
₽2 21	Commit Ctrl+# Push to Upstream		Go Into		-					
~) 4] 4]	Fush to opsitean Fetch from Upstream Push Branch		Open in New Window Open Type Hierarchy Show In	F4 Alt+Shift+W ►						
<u>چ</u>	Remote Switch To Advanced		Copy Copy Qualified Name Paste	Ctrl+C Ctrl+V						
ę]	Pull		Delete	Delete						
*	Synchronize Workspace			Ctrl+Alt+Shift+Down						
<b>¥</b>	Merge Tool Merge		Build Path Source	► Alt+Shift+S						
₽ ¢₹	Rebase Reset		Refactor	Alt+Shift+T ►	-					
	Create Patch Apply Patch			F5	-					
+ ~> 8]	Add to Index Remove from Index Ignore		Close Project Close Unrelated Projects Assign Working Sets		😡 Declaration 🔗 S is time.	Search 📮 Console 🕅				
	Show in Repositories View Show in History		Debug As Run As Validate	Þ						
ы	Disconnect		Team	۱.						
<			Compare With Replace With Restore from Local History Checkstyle	۲ ۲						
Java	Teaching		Configure	•						

#### Successful Pull After Conflict

•	Pull Result for JavaTeaching	- 🗆 ×
Fetch Result		
No ref to fetch from origin -	everything up to date.	
Update Result		
Result Fast-forward		
New HEAD Update PointHis	tory.txt [66a757c]	
Merge input		
59aaa1cb: Cast version d	emo (pdewan on Nov 7, 2017 8:04 AM)	
45 66a757c7: Update PointH	listory.txt (pdewan on Aug 18, 2018 5:13 PM, committed by GitHub)	
		OK
		OK

### Going to a package and class in Java Teaching



package-info (starting point of praxes)

#### Collapsed parts

1	
3⊕	* RUNNING A PROGRAM.
56	<pre>package lectures.scanning;</pre>
57	/**
58	*
59	* IMPORTS
60	* T/F It makes sense for a class to import only those classes that are
61	* not in its package.
62	*
63	* If a class (1 refers a class (2 in a different (external) nackade

#### Open them

```
/**
* RUNNING A PROGRAM
* This is an example of a Java program called a class in Java.
* There are many ways to execute a class,
* If you are editing the class and your insertion point is in it,
* Right click->Debug As->Java Application is one way.
* Use it or some other way you know to run this program.
* If you do not see the Java Application option in Debug As, or your get a
* console message:
* "Cannot run or load class"
* then your project is misconfigured and you to delete the
* oeall.jar file from the class path.
* Look at the ObjectEditor PPT
 * http://www.cs.unc.edu/~dewan/comp401/current/Lectures/ObjectEditorLib.pdf
```