

## **1. Download github and install.**

## **2. If you do not have an account please register for a github account.**

Send your github account name to [hammond@tamu.edu](mailto:hammond@tamu.edu) to get access to the repository.

## **3. Clone**

Once you have access to the repository, open the github application on your computer, click the coursesketch repository and click “clone to computer”. **Make sure to note the location that it is installed.**

### **DO NOT FORK**

if you have a mac then you will have an easy life using github

if you have windows and you are struggling using github then you can download other git clients or if you are advance you just the command line. (something that will probably happen at least once because the windows interface sometimes breaks)

## **4 Download intillij (latest version):**

and install it (this is done by moving it the location you want to put it and open it)

If it does not open chances are that the sdk is not installed.

google “java sdk 7” and follow the instructions to download it and install it.

When you open intillij for the first time it should look like this

If it says that you need legacy java 6 se runtime on a mac use this

<http://thegothicparty.com/dev/article/how-to-install-legacy-java-se-6-runtime-for-mac-10-10/>



# IntelliJ IDEA

Version 14.0.2

Create New Project

Import Project

Open

Check out from Version Control ▾

Configure ▾   Get Help ▾

---

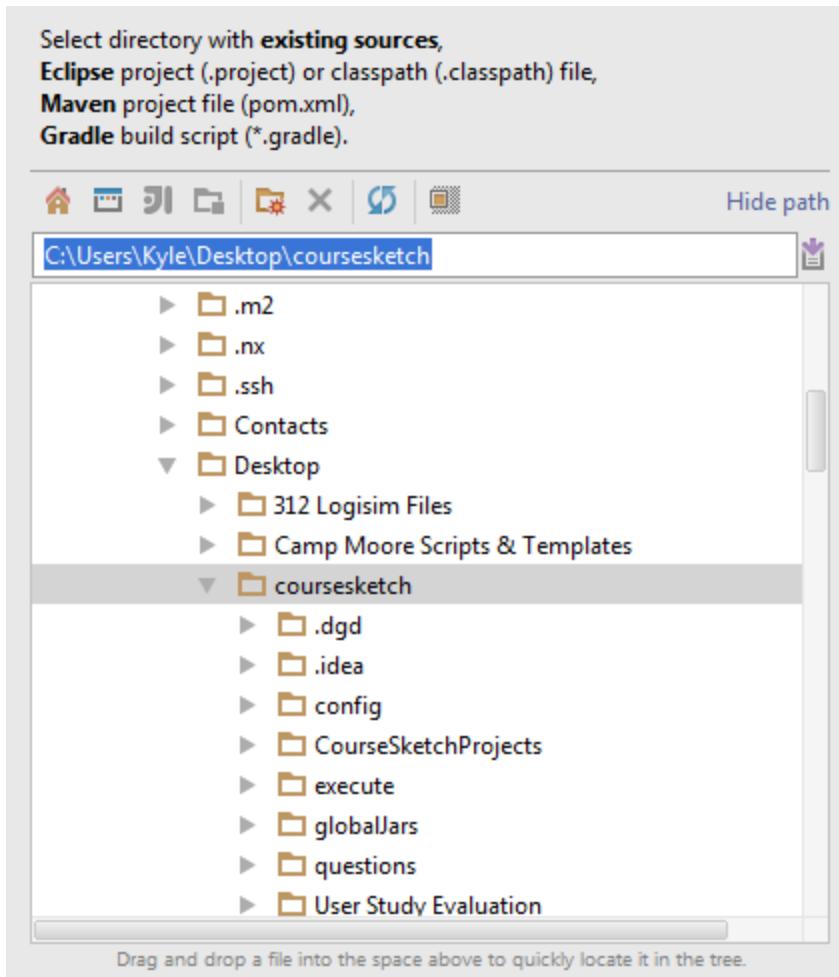
From this page we import the project

## 5. IMPORT PROJECT

On this page click import project

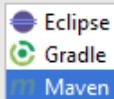


It should bring you to a file viewer. Find the coursesketch folder select it and press next

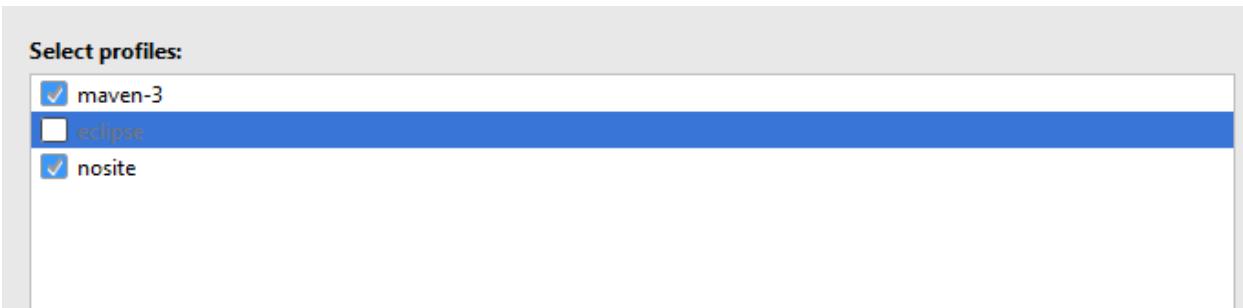


Here you select import project from external model and select maven.

- Create project from existing sources
- Import project from external model

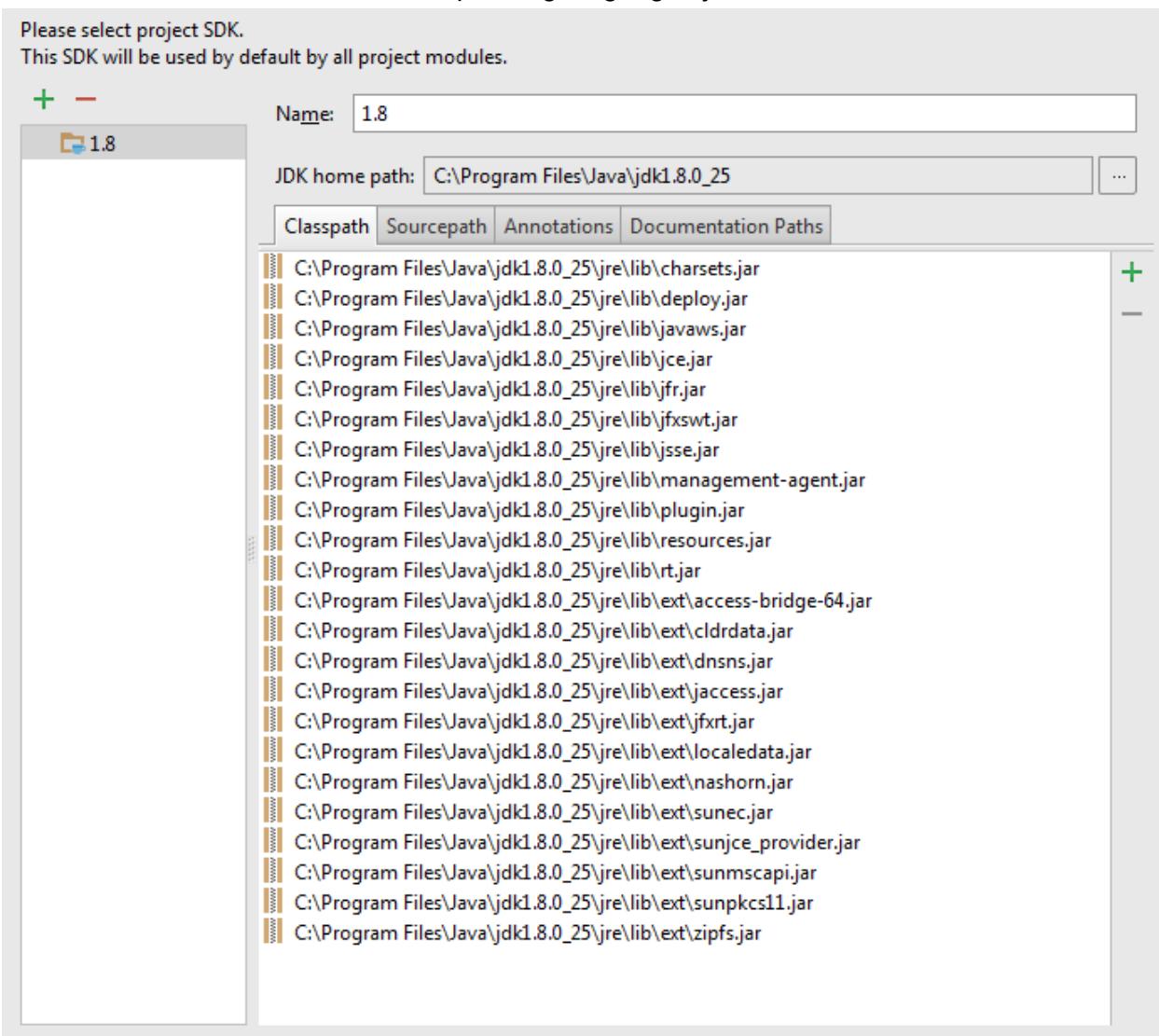


Click next till you find this screen

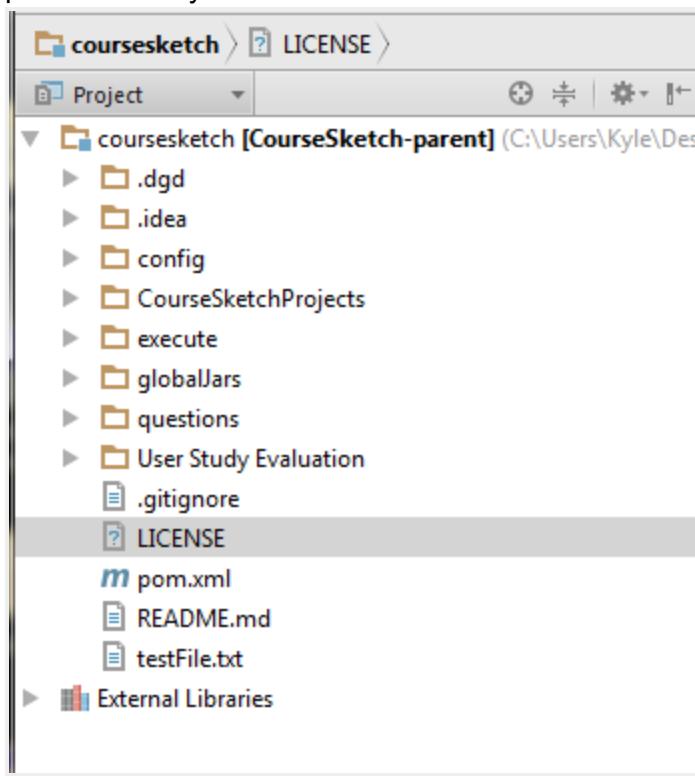


Click next till you find this screen: NOTE it may be blank

If it is blank press the + button and select the jdk you installed earlier (or install it now) The location of it is different for different operating so google “jdk location <OS>”



press next till you are done. It should show this on the left hand side.



## 6. Download google app engine (python)

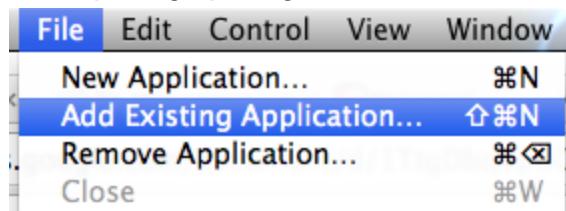
<https://developers.google.com/appengine/downloads>

if you do not have python installed on your computer you should install the latest version of 2.7

## 7. IMPORT APPLICATION into Google App Engine

after downloading open up google app engine launcher (it may be various places depending on the operating system)

After opening up we go to file and add an existing application



Navigate to course sketch -> CourseSketchProjects and select "coursesketchwebclient"  
click ok

after adding it should show a line in the launcher

## **8. RUNNING google app engine**

select the new application and click the run button (should be an arrow)  
after the browse button is available click browse.  
(on a mac you may have to click on the launcher to have it redraw and enable the button)

## **9. Download and run mongodb**

(<http://docs.mongodb.org/manual/installation/>)

After you have installed it you only have to run mongodb (stop after step #2) and the second half of the guide focuses on testing so you do not need to worry about.

## **10. Download maven**

[WINDOWS ONLY]

if you are using windows then we have a script that *should* set it up for you. This can be found in the config section of course sketch. after that please skip to step 12.

if you have a package manager use that to install maven.

If not windows (and no package manager):

google “install maven <OS>”

after it is installed you should be able to run:

**mvn -v**

and it should not throw any errors

the next thing you have to do is set the JAVA\_HOME variable.

**Mac**

<http://stackoverflow.com/a/26456579/2187510>

Then

`/usr/libexec/java_home -v '1.7*' Or 1.8*` if you installed Java 8 instead

**Windows**

Run the batch file (RunMe.bat) in the coursesketch config\windows folder. This will setup maven, protobuf, and protoc in the directory of your choice. You may skip to step 12.

## **11. Download protobuf**

We are currently using version 2.6

google “protobuf download 2.6”

then follow instructions

Linux:

if you run into protoc errors it could be in the wrong place.

It needs to be in:

/usr/local/bin/protoc

## **12. Compiling servers**

On a mac open up terminal  
change directory till you are inside course sketch:

On windows go to github and select the course sketch repo. Then open a terminal (it should open in the directory of CourseSketch)

Both:

```
$ mvn clean install -Dsmart -Dnosite
```

### **Different possible errors:**

can not compile to target version 1.7: It means your JAVA\_HOME is not set to the correct version (probably running 1.6) point it to 1.7 or 1.8 (which ever one you have)

JAVA\_HOME is not defined: You never set the path for java home (needs to be found)

you have X number of checkstyle errors: Everything was installed correctly. But you either have an old version of master or you should fix them.

Can not find binary for protoc: it means protobuf is either in the wrong spot or was never installed correctly.

```
[ERROR] Failed to execute goal com.google.protobuf.tools:maven-protoc-plugin:0.3
.2:compile (default) on project ProtoFiles: protoc did not exit cleanly. Review
output for more information. -> [Help 1] - it means protobuf is either in the wrong spot or was
never installed correctly.
```

## **13: RUNNING COURSE SKETCH**

### **App Engine**

make sure google app engine is running (see #8)

### **Mongodb**

Open up the terminal

type:

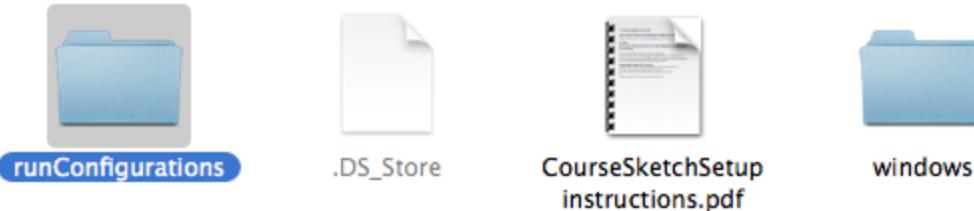
```
mongod
```

mongodb should now be running

## Servers (Automatically)

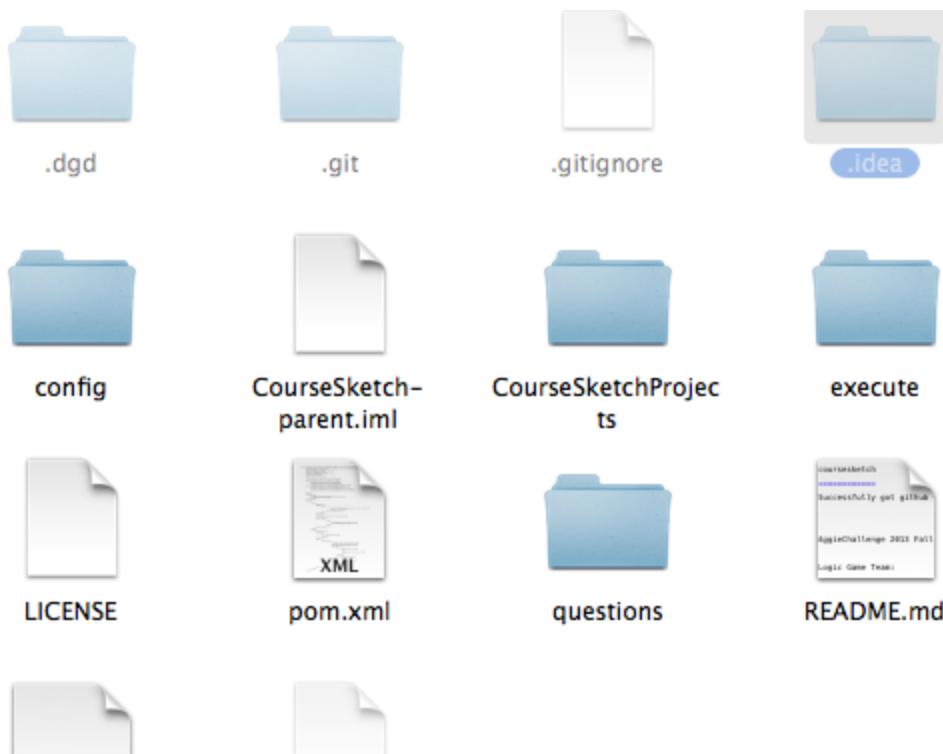
If you complete this option you do not need to go through the manual method as you will already be set up.

Inside the instructions folder there should be a folder called runConfigurations



Please copy that folder.

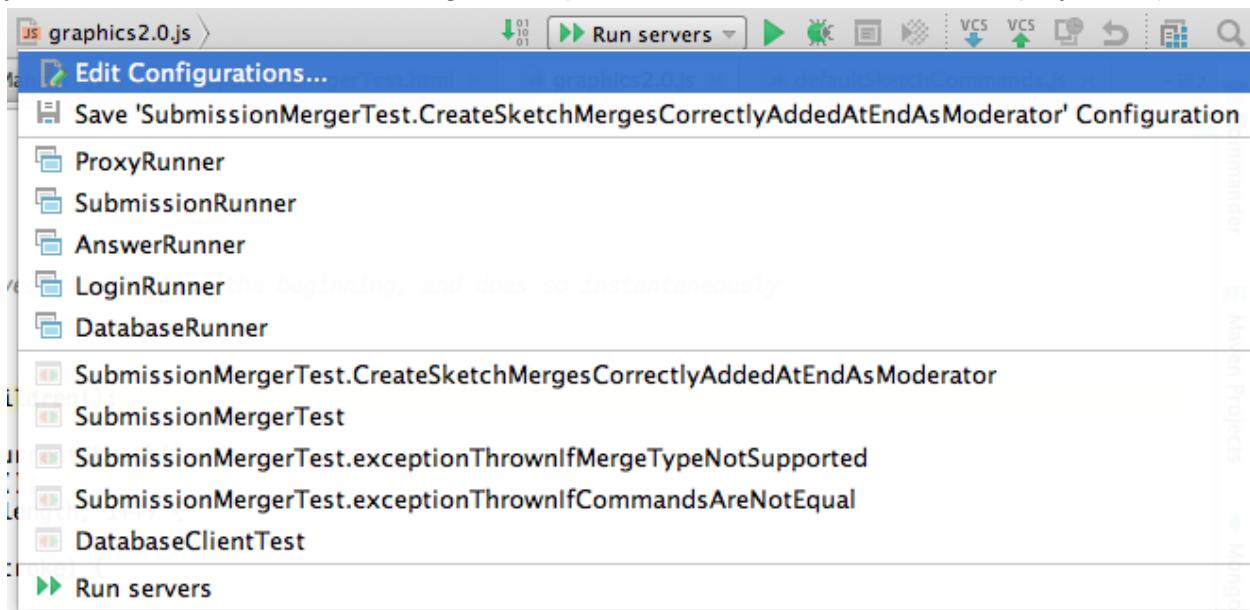
And put it inside a folder called .idea



The .idea folder should be in the main directory of CourseSketch

## Servers (Manually)

you have to create a launch configuration (select the down arrow next to the play arrow)



Click edit configurations

After the window pops up click the + button and choose “Application”

It should pop up with a blank configuration

Configuration    Code Coverage    Logs

Main class:  ...

VM options:

Program arguments:

Working directory: /Users/gigemjt/workspace/coursesketch  ...

Environment variables:  ...

Use classpath of module: <no module>

Use alternative JRE:  ...

Enable capturing form snapshots

▼ Before launch: Make

↓ 01 Make

01

+ - ⚒ ▲ ▼  Show this page

Fill it out and a couple of additional configurations for each server:

### Proxy

Name:   Share  Single instance only

Main class:

VM options:

Program arguments:

Working directory:

Environment variables:

Use classpath of module:

Use alternative JRE:

Enable capturing form snapshots

## Submission

Name:   Share  Single instance only

Main class:

VM options:

Program arguments:

Working directory:

Environment variables:

Use classpath of module:

Use alternative JRE:

Enable capturing form snapshots

## Answer checker

Name: AnswerRunner  Share  Single instance only

Main class: connection.AnswerCheckerRunner

VM options:

Program arguments: local

Working directory: /Users/gigemjt/workspace/coursesketch

Environment variables:

Use classpath of module: **AnswerCheckerServer**

Use alternative JRE:

Enable capturing form snapshots

## Login Server

Name: LoginRunner  Share  Single instance only

Main class: connection.LoginRunner

VM options:

Program arguments: local

Working directory: /Users/gigemjt/workspace/coursesketch

Environment variables:

Use classpath of module: **LoginServer**

Use alternative JRE:

Enable capturing form snapshots

## Database Server

Name: DatabaseRunner  Share  Single instance only

Main class: connection.DatabaseRunner

VM options:

Program arguments: local

Working directory: /Users/gigemjt/workspace/coursesketch

Environment variables:

Use classpath of module: DatabaseServer

Use alternative JRE:

Enable capturing form snapshots

Run order:

LOGIN  
DATABASE  
SUBMISSION  
ANSWER CHECKER  
PROXY

Or install multirun (below in additional setup)

## 14: FINAL SETUP

good news if you made it this far you are 99%. please feel free to look at the code, follow additional optional setup below or follow any additional instructions you are given in class

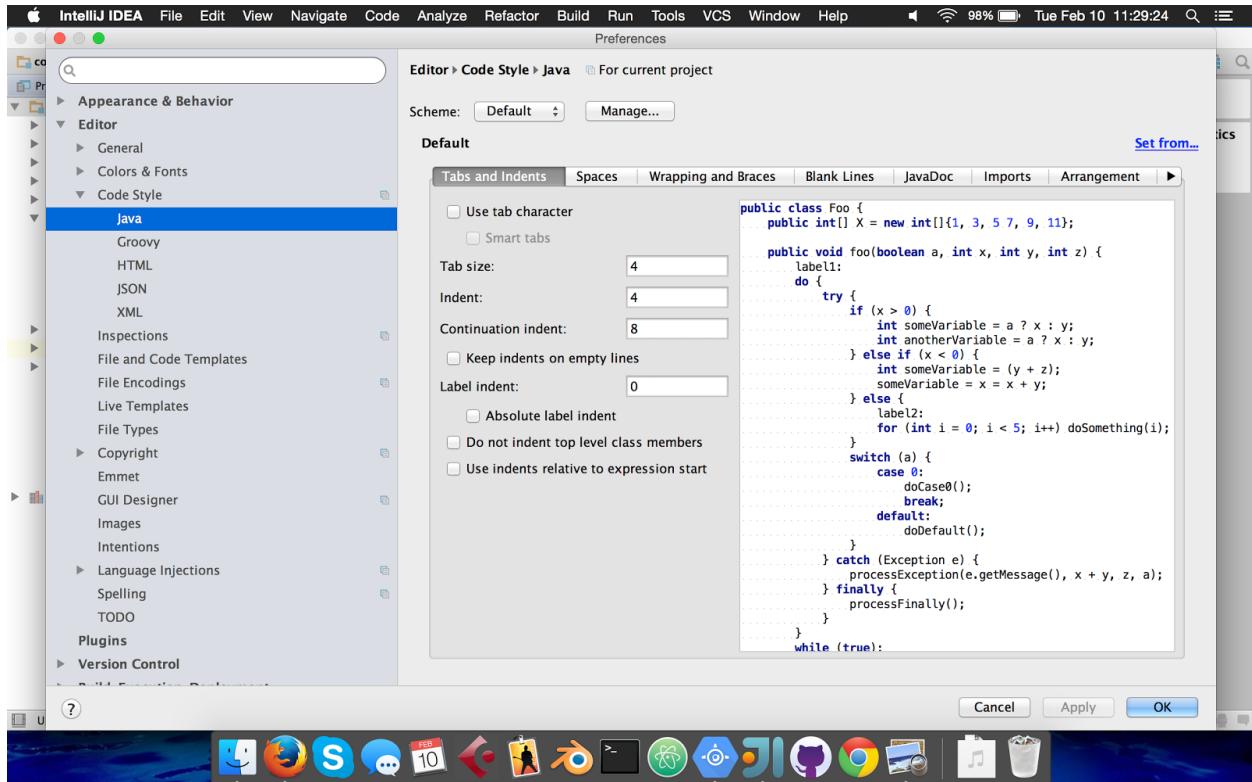
## 15. Additional Setup (Optional but recommended)

### Import settings

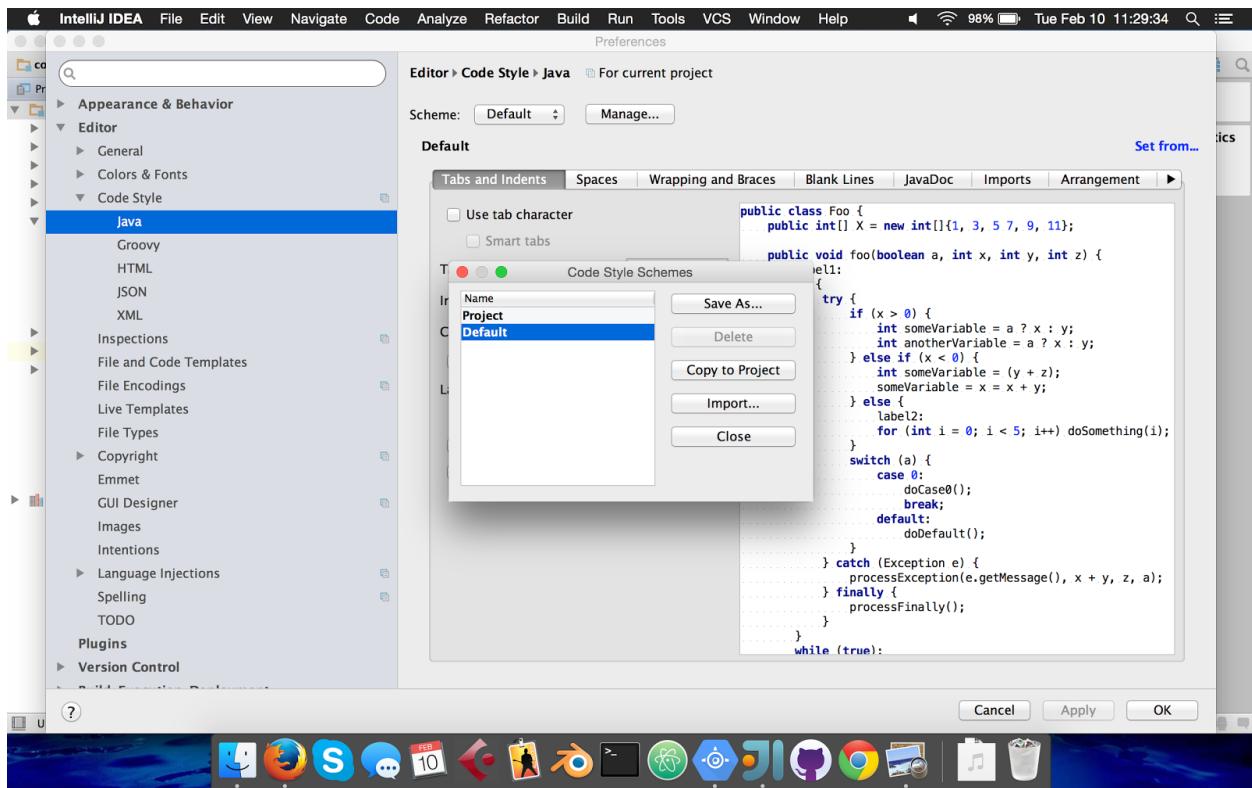
Import settings for IntelliJ (this helps with auto formatting)

Go to settings (under preferences for mac) OR go to help -> find action and type "settings"

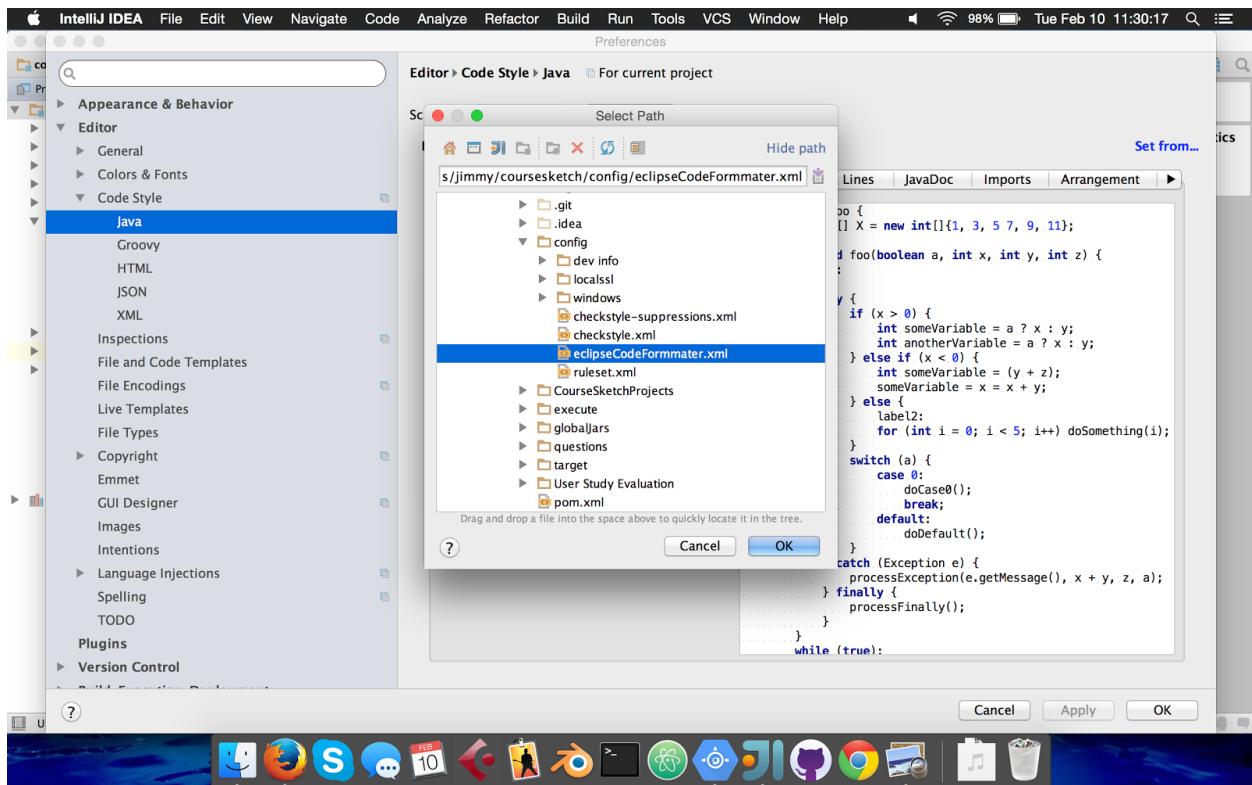
It should pull up this screen:

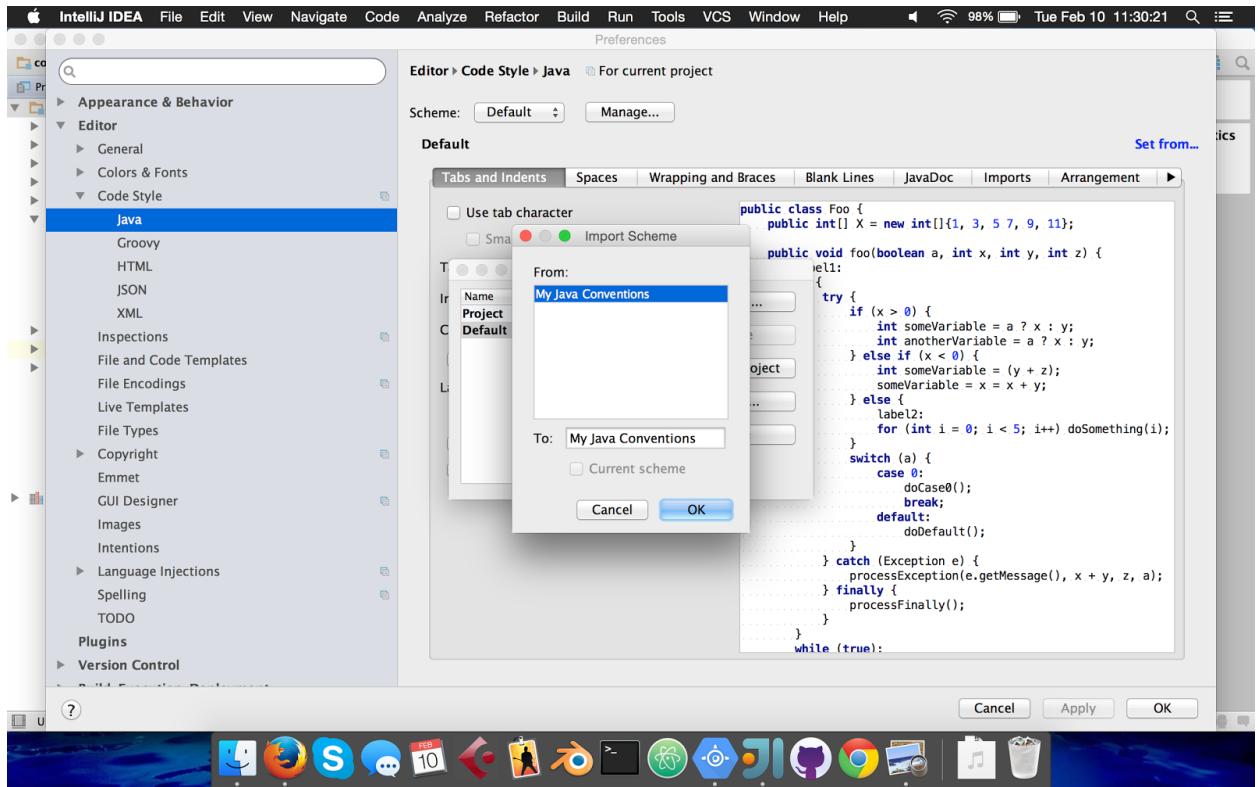


## Click on Manage



## Choose import





## How to Install checkstyle for IntelliJ

go to help -> find actions

then type plugins

then click browse repositories

BROWSE REPOSITORIES

checkstyle Category: All ▾

Sort by: name ▾

	INSPECTION	TOOLS INTEGRATION	SEARCH AND REPLACE	CODE TOOLS	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION
	<b>CheckStyle-IDEA</b>						
	469,940	469,940	469,940	469,940	469,940	469,940	469,940
	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
	2 weeks ago	8 years ago	one month ago	one month ago	10 months ago	10 months ago	one month ago
	<b>JetStyle</b>	17,657	17,657	17,657	17,657	17,657	17,657
	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION
	<b>jQAssistant Plugin</b>	54	54	54	54	54	54
	SEARCH AND REPLACE	SEARCH AND REPLACE	SEARCH AND REPLACE	SEARCH AND REPLACE	SEARCH AND REPLACE	SEARCH AND REPLACE	SEARCH AND REPLACE
	<b>QAPlug</b>	86,432	86,432	86,432	86,432	86,432	86,432
	CODE TOOLS	CODE TOOLS	CODE TOOLS	CODE TOOLS	CODE TOOLS	CODE TOOLS	CODE TOOLS
	<b>QAPlug - Checkstyle</b>	63,966	63,966	63,966	63,966	63,966	63,966
	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION
	<b>QAPlug - FindBugs</b>	69,531	69,531	69,531	69,531	69,531	69,531
	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION
	<b>QAPlug - Hammurapi</b>	26,027	26,027	26,027	26,027	26,027	26,027
	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION
	<b>QAPlug - PMD</b>	70,059	70,059	70,059	70,059	70,059	70,059
	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION	TOOLS INTEGRATION

INSPECTION

**CheckStyle-IDEA**

★★★★★ 469940 downloads  
Updated 12/27/14 ver 4.11.2

This plugin provides both real-time and on-demand scanning of Java files with CheckStyle 6.1.1 from within IDEA.

**Change Notes**  
Bug fixes.

**Vendor**  
James Shiell  
<http://infernus.org/>  
[james@infernus.org](mailto:james@infernus.org)

**Plugin homepage**  
<https://github.com/jshiell/checkstyle-idea>

**Size**  
4.1 M

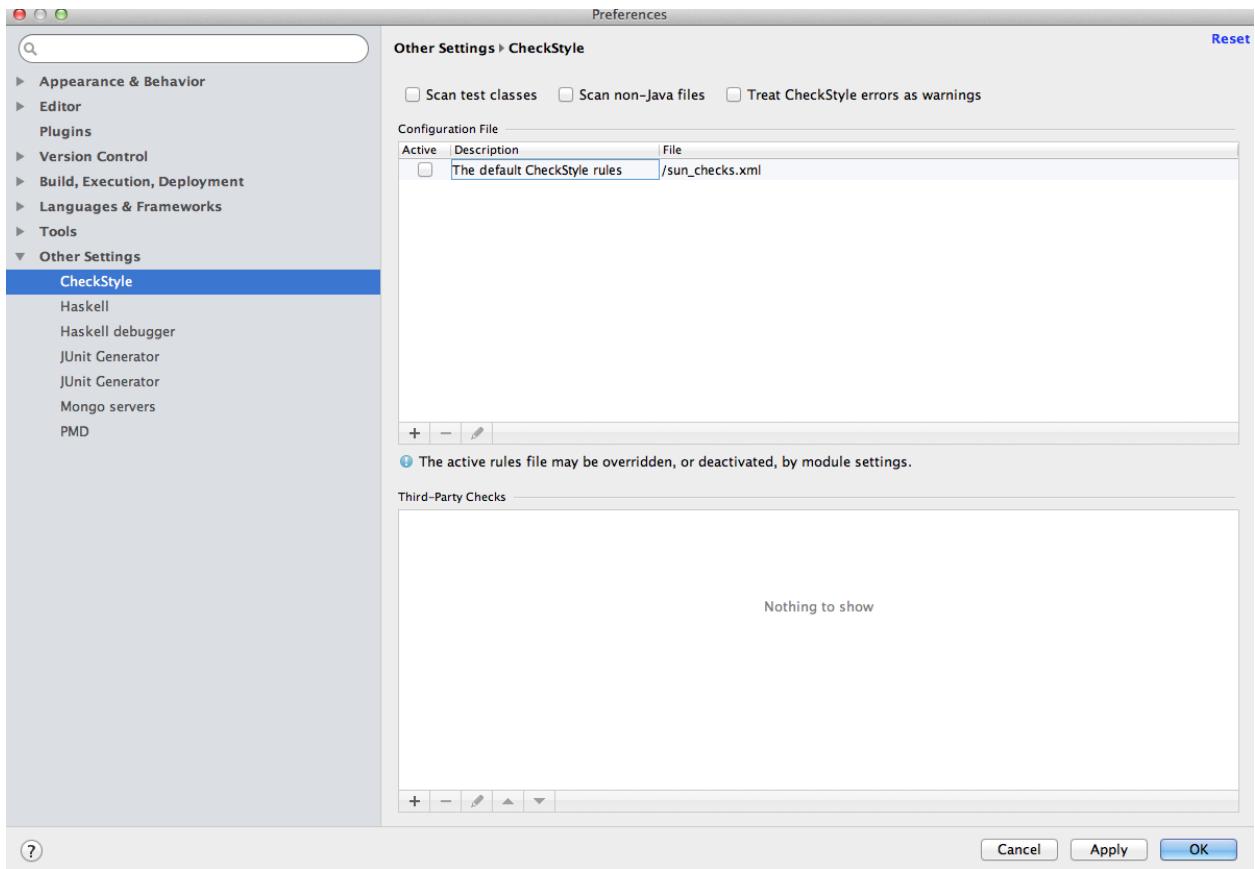
HTTP Proxy Settings... Manage repositories... Close

Now go to other settings

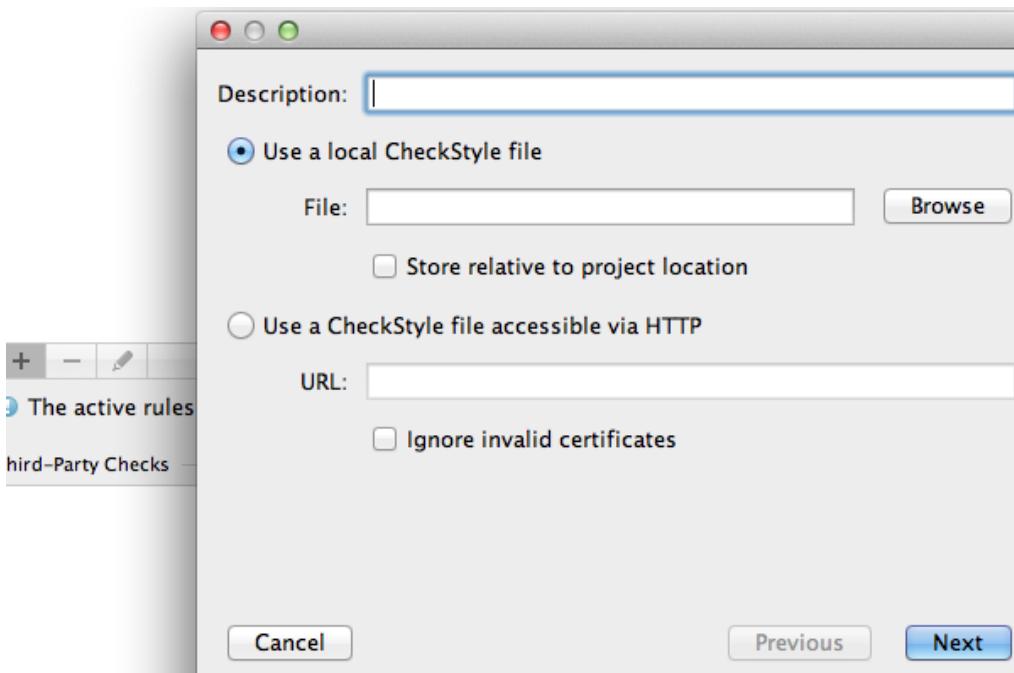
Enter action or option name:

other settings

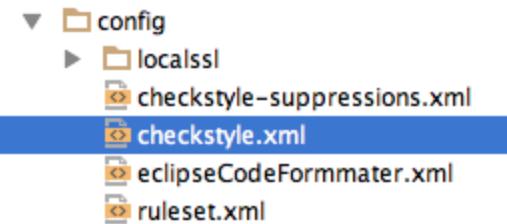
Other Settings



After you are at this page under “Configuration File” click the +



Click browse and find the file under config -> checkstyle.xml



Add a description and click next then finish

And select the newly added line. And click Apply



## Install Multirun

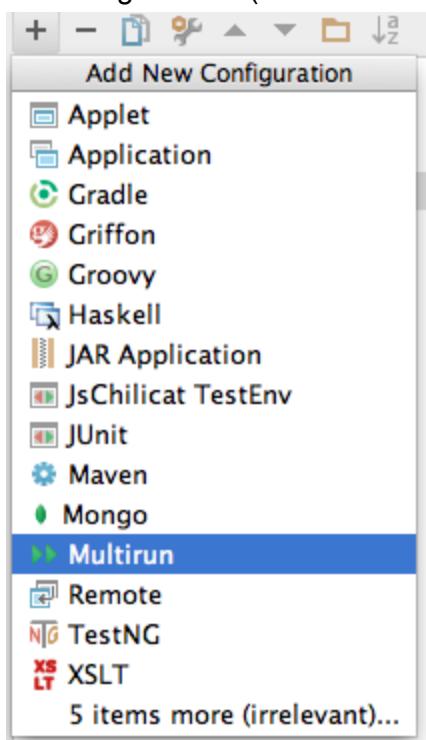
same process as above with installing checskyle

go to plugins and browse repository but type “Multirun” instead

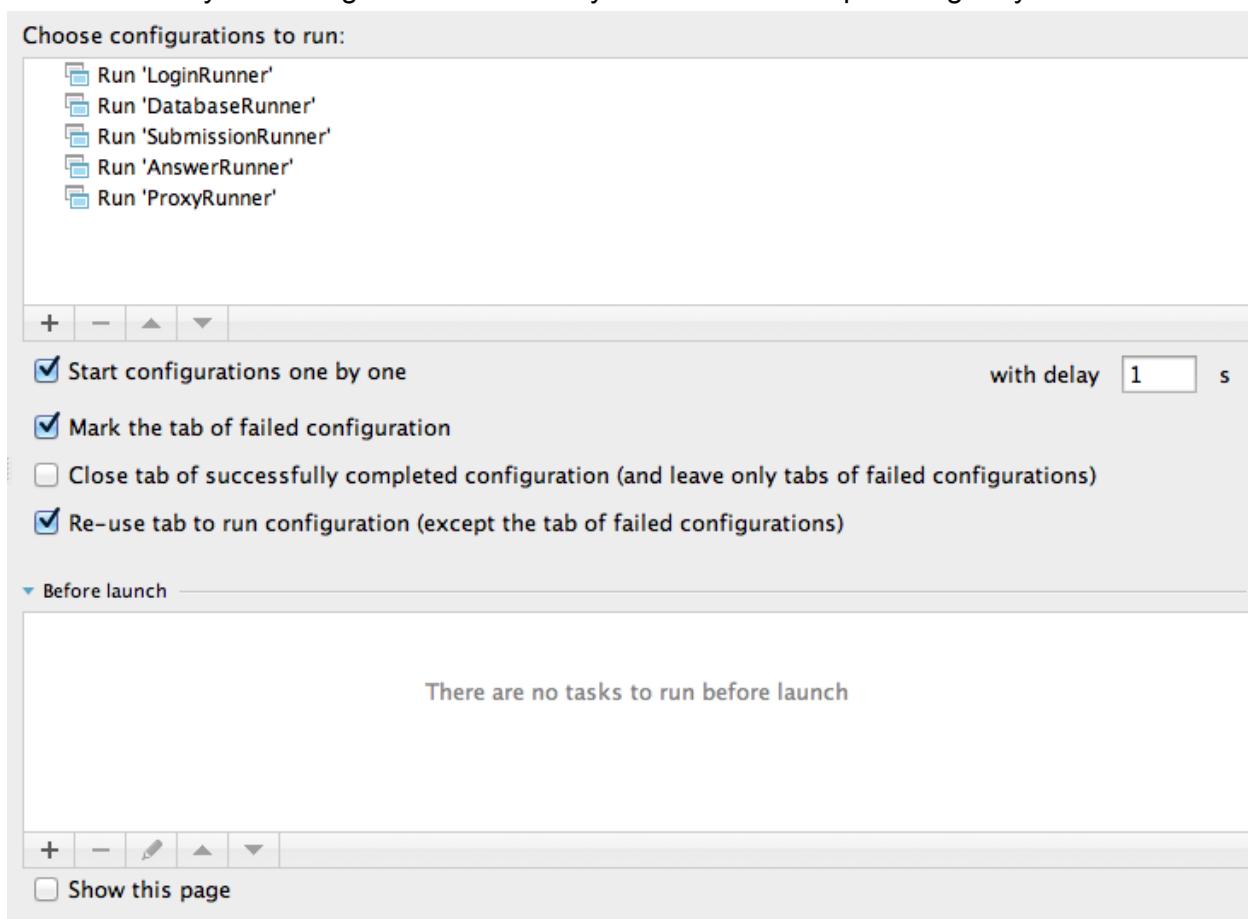
(this is the plugin webpage)

<https://plugins.jetbrains.com/plugin/7248?pr=idea>

When you add a new configuration you can create a multirun configuration that runs multiple run configurations (A lot of this is explained in running the application)



Here is what my run configuration looks like yours should end up looking very similar:



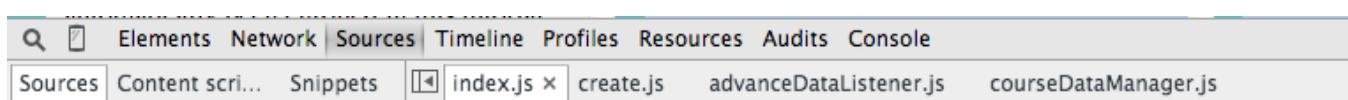
## Chrome workspace

This allows you to edit files in chrome and have that reflected in your physical editor. Great for fixing tiny bugs with perfect autocomplete.

This requires that app engine is already set up (see #8)

(If you have any issues visit [here](#) but the instructions will accomplish your goal just fine)

Go into the dev console (you can right click anywhere and click inspect element). Then go to the source page view



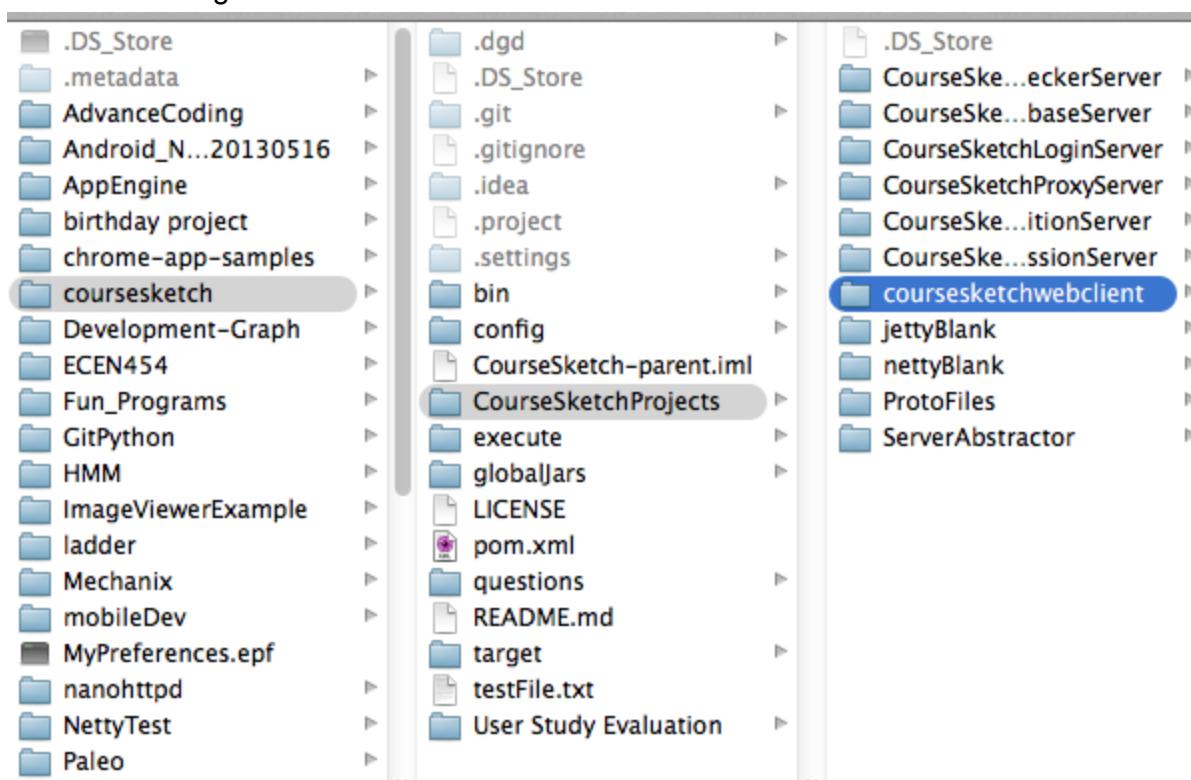
Next look on the left hand side and see a series of folders.

The screenshot shows a browser developer tools window. On the left, the 'Sources' tab is active, displaying a portion of a JavaScript file with line numbers 123 through 134. Line 130 is highlighted with a blue box. A tooltip 'Add Folder to Workspace' appears over the line 130 code. On the right, the 'Call Stack' panel is visible, showing a stack trace with several frames, some of which have checkboxes next to them. The status bar at the bottom indicates 'Line 130, Column 1'.

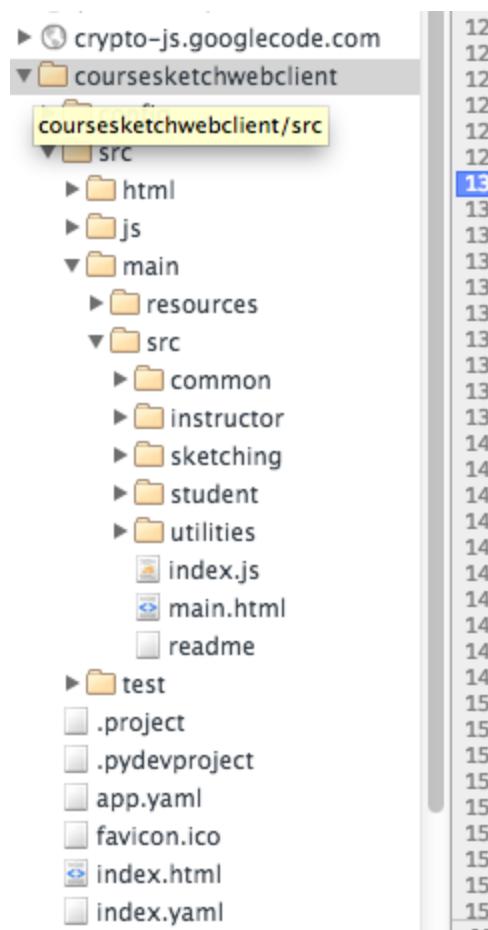
Right click and a box that says "Add Folder to Workspace" should appear.

This screenshot is similar to the one above, but a right-click context menu is open over the same line 130 code. The menu item 'Add Folder to Workspace' is highlighted with a blue box. The rest of the interface and code content are identical to the previous screenshot.

Click it and navigate to the coursesketchwebclient



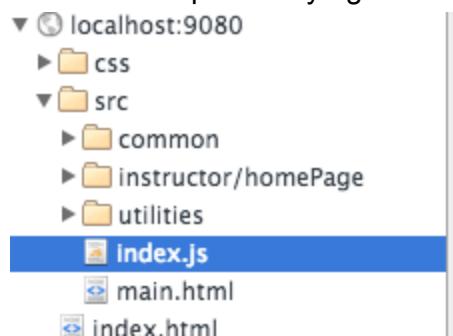
It should now have a folder that looks this when you expand it.



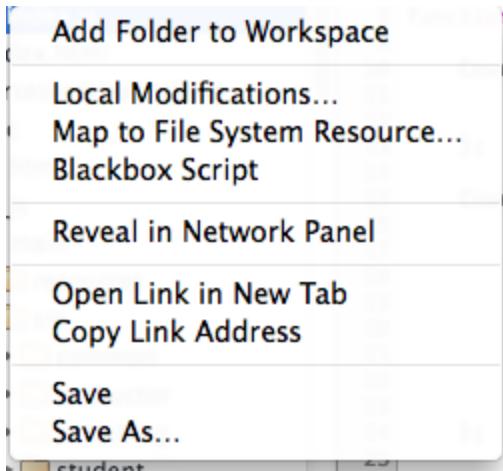
Now we need to map a file to the physical location.

So this is the actual website itself coming from the local server.

You need to specifically right click index.js (any other and a bunch of things get messed up)



Now select “Map to File System Resource”



Then choose the option of index.js that is shown below.

It was the first one for me but it may not be the first one for you.

```
defined(CourseSketch)) {  
  alue  
  tch  
  tch  
    index.js  
  t).  
    coursesketchwebclient/src/main/src/index.js  
} }
```

Now if you edit a js file in chrome it will update locally if you save it.

This also allows you to edit javascript without needing to reload the page and instead it will just run the new code.

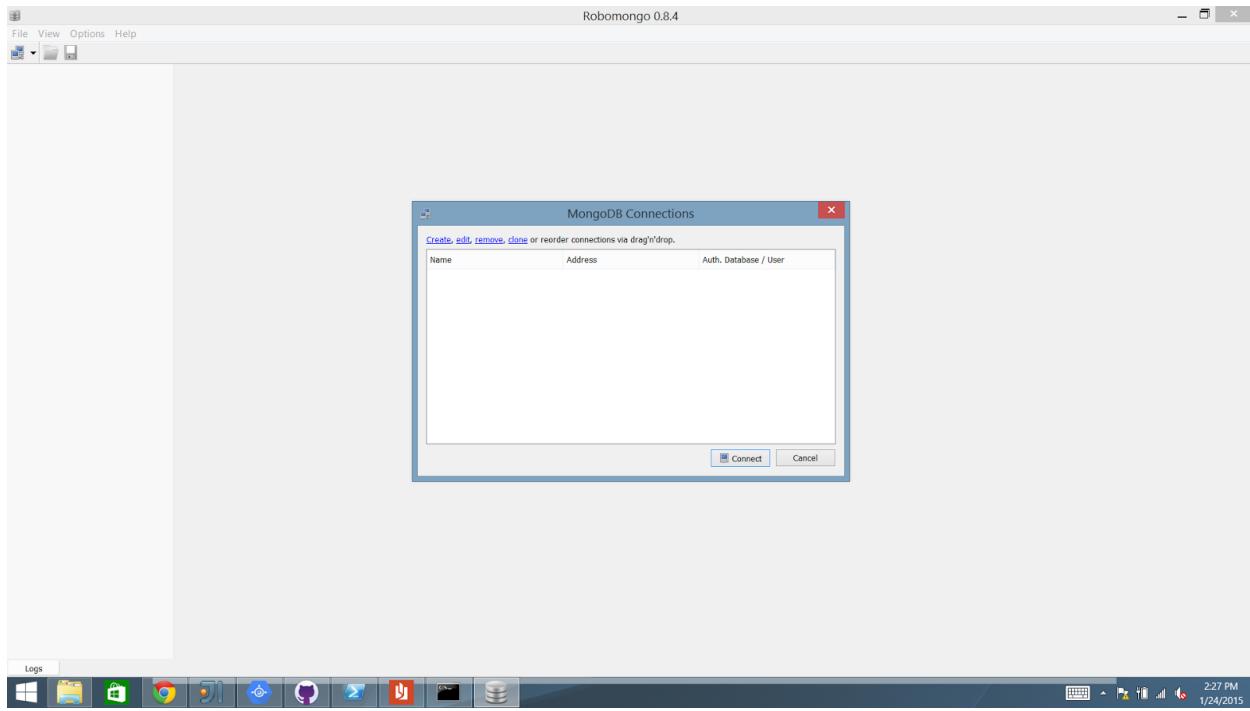
## Viewing Mongo Database

The screenshot shows the Robomongo 0.8.4 interface. The title bar says "Robomongo 0.8.4". Below it, it says "Shell-centric cross-platform MongoDB management tool". The main window has a sidebar on the left with databases and collections listed. The main pane shows a query result for "events" collection with a timestamp of "2012-09-04 21:59:59". The bottom of the screen shows a toolbar with various icons and a status bar indicating "2:21 PM 1/24/2015".

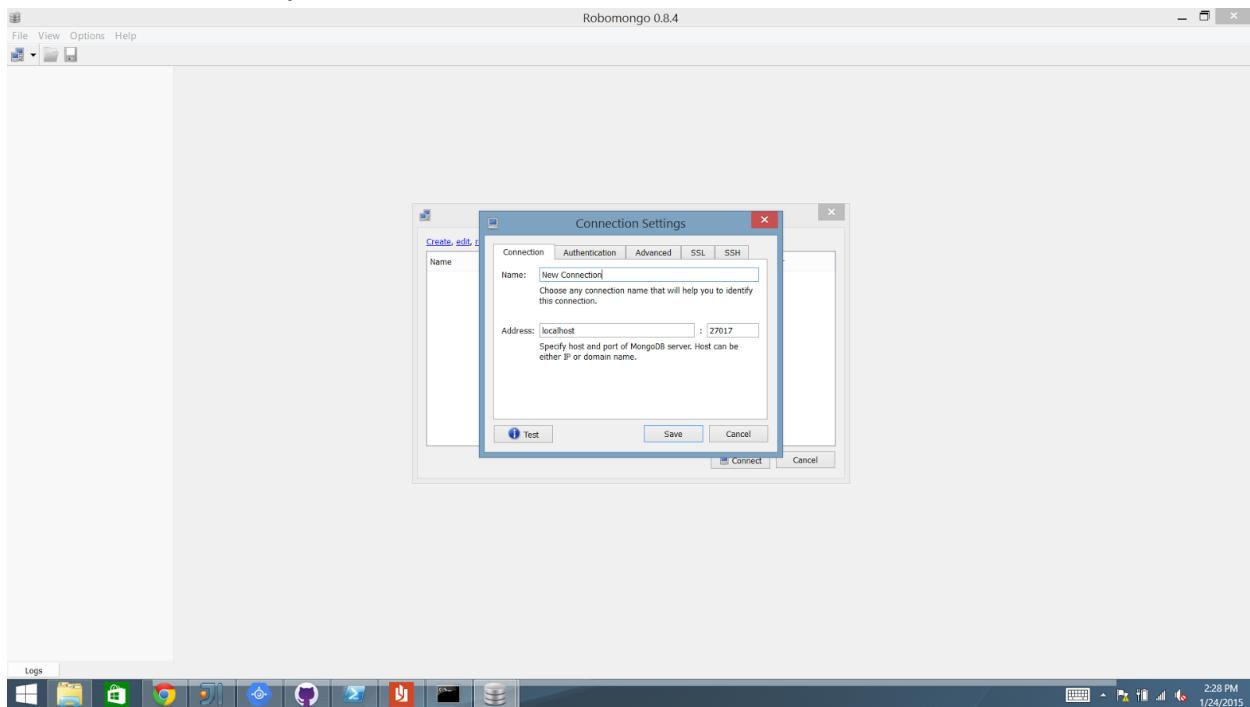
To install ROBOMONGO

Google Robomongo and click the right operating system.

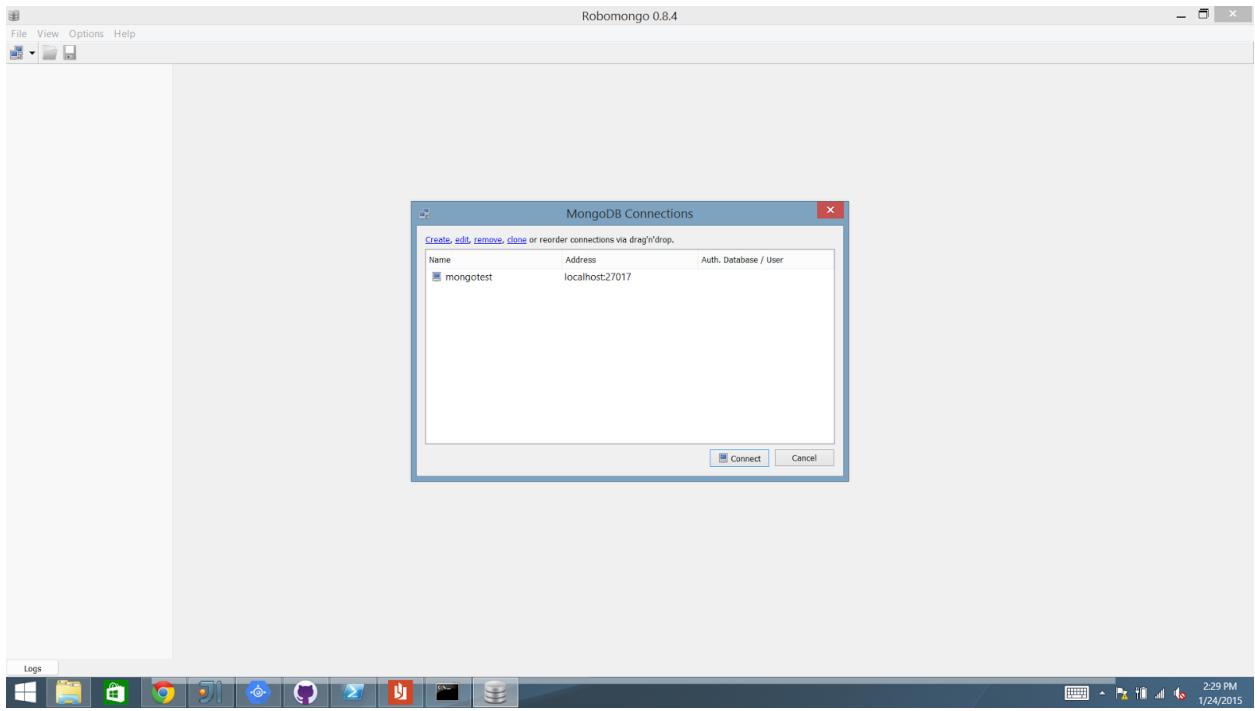
Open it up and click connect under the file bar.



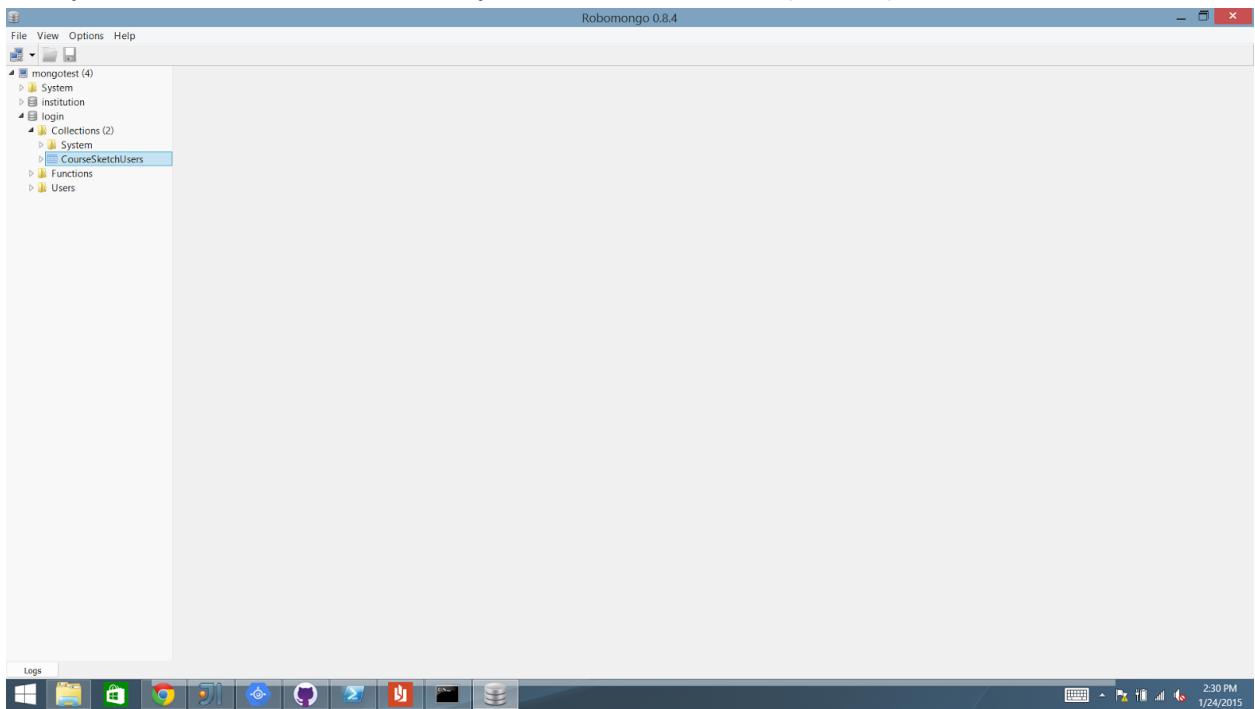
click create and then you should see this screen



put something in the name section EX(mongotest)  
then press save

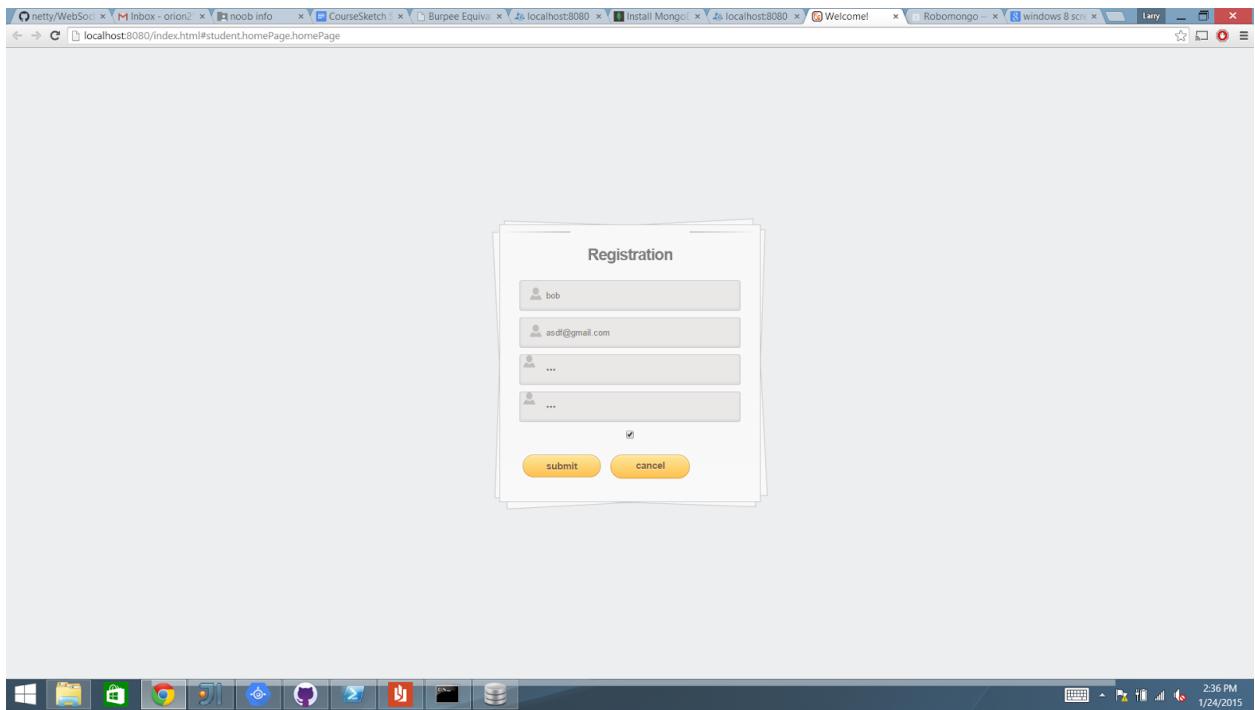


after you selected and connect and you should be able to open it up and look like this



## How to set up fake data

### make an instructor account



go back to Robomongo

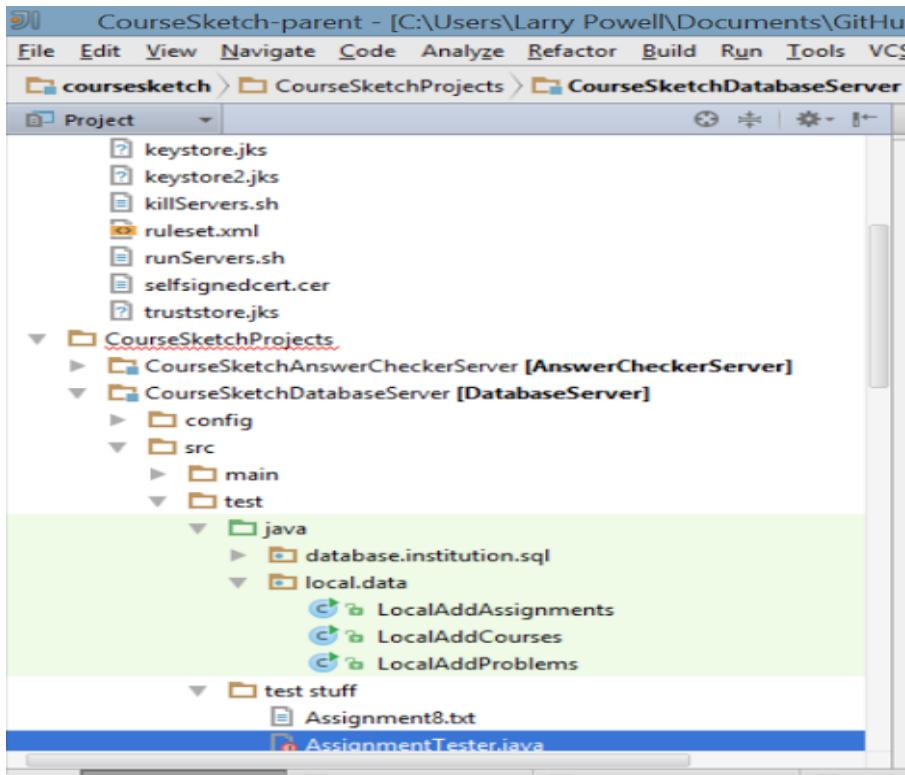
A screenshot of the Robomongo application interface. On the left is a sidebar with a tree view of databases and collections. The main area shows a table with data from the "db.CourseSketchUsers" collection. The table has columns for "Key", "Value", and "Type". One row is expanded to show its fields: \_id, UserName, Password, Email, IsInstructor, InstructorId, StudentId, StudentClientId, and InstructorClientId. The table shows one document with the following values:

Key	Type
_id	Object
UserName	String
Password	String
Email	String
IsInstructor	Boolean
InstructorId	String
StudentId	String
StudentClientId	String
InstructorClientId	String

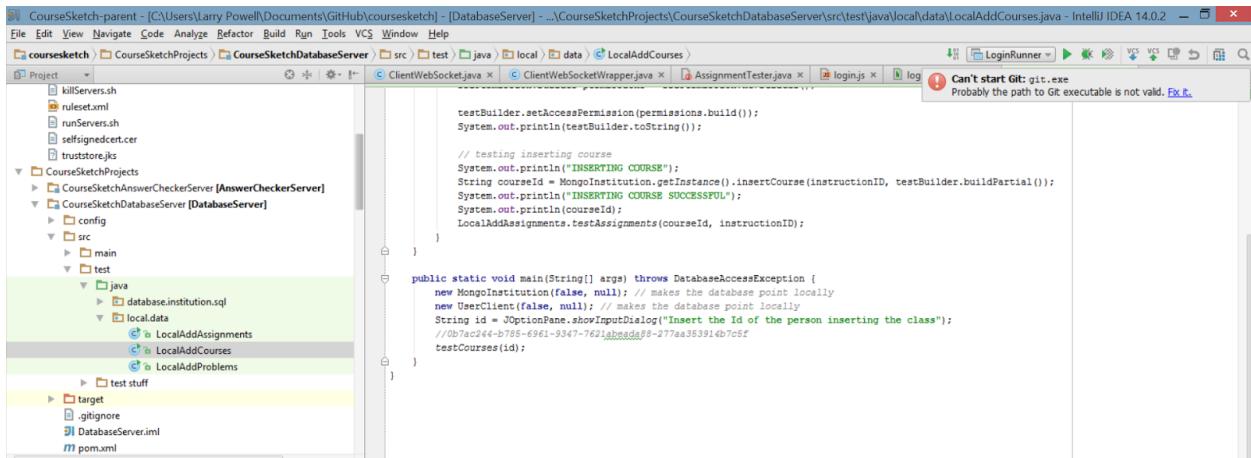
The timestamp at the bottom right of the screen is 2:43 PM on 1/24/2015.

COPY the instructor ID

go back to intelliJ and open up database server



Open up LocalAddCourses



run program you should see this window

coursesketch] - [DatabaseServer] - ...\\CourseSketchProjects\\CourseSketchDatabaseServer\\src\\test\\java\\local\\data\\LocalAddCourses.java - IntelliJ IDEA 14.0.2

File Window Help

src test java local data LocalAddCourses

ClientWebSocket.java ClientWebSocketWrapper.java AssignmentTester.java login.js log

Can't start Git: git.exe  
Probably the path to Git executable is not valid. Fix it.

```

import ...

public class LocalAddCourses {
    public static void testCourses(String instructionID) throws DatabaseAccessException {
        String[] name = new String[]{"CourseSketch 101"};
        String[] description = new String[]{"Hi Welcome to CourseSketch, you have automatically been enrolled in this tutorial."
            + " To expand the description of a class click the down arrow."};
        for (int k = 0; k < name.length; k++) {
            SrlCourse.Builder testBuilder = SrlCourse.newBuilder();
            testBuilder.setAccess(SrlCourse.Accessibility.SUPER_PUBLIC);
            testBuilder.setSemester("FALL");
            testBuilder.setName(name[k]);
            testBuilder.setDescription(description[k]);
            SrlPermission.Builder permissions = SrlPermission.newBuilder();

            testBuilder
                .setInsertionId(1)
                .setPersonId("54c417460d453d5147378a92")
                .setCourseId("54c417460d453d5147378a92")
                .setAssignmentId("54c417460d453d5147378a92")
                .setProblemBankId("54c417460d453d5147378a92")
                .setName("Problem41")
                .setGradeWeight("50%");

            insertCourse(instructionID, testBuilder.buildPartial());
            System.out.println("INSERTING COURSE SUCCESSFUL");
            System.out.println(courseId);
            LocalAddAssignments.testAssignments(courseId, instructionID);
        }
    }
}

```

LocalAddCourses

paste the ID you copied in Robomongo and put it in the field  
you should see these values at the bottom

Run: LoginRunner DatabaseRunner SubmissionRunner AnswerRunner ProxyRunner LocalAddCourses

```

courseId: 54c417460d453d5147378a91
assignmentId: "54c417460d453d5147378a92"
problemBankId: "54c417460d453d5147378a93"
name: "Problem41"
gradeWeight: "50%"

INSERTING PROBLEM
{ "$addToSet": { "Admin": { "$each": [ "group54c417460d453d5147378a90"]}, "Mod": { "$each": [ "group54c417460d453d5147378a8f"]}, "Users": { "$each": [ "group54c417460d453d5147378a8e"]}}}
INSERTING PROBLEM SUCCESSFUL

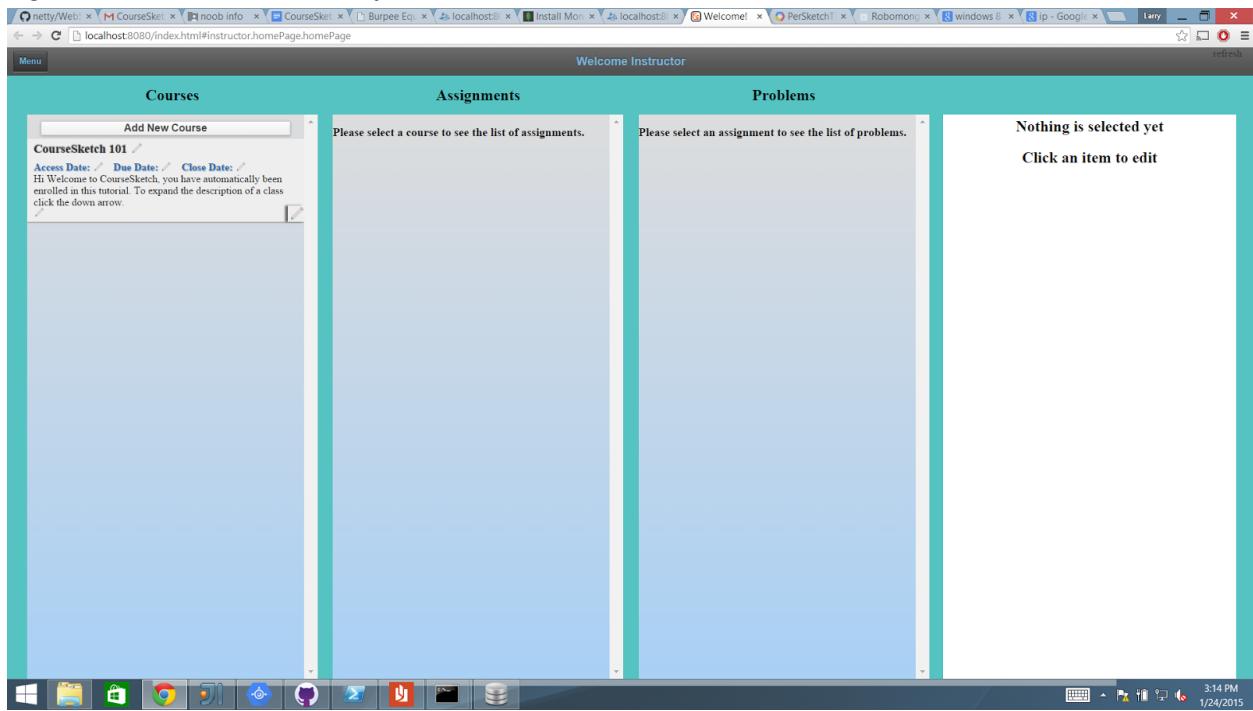
Process finished with exit code 0

```

All files are up-to-date (moments ago)

422:1 CRLF:1 UTF-8:1 Git: allnetty 3:06 PM 1/24/2015

log back into course sketch you should see this window



## YOU MADE IT!!!!!!

If you made it this far you followed all instructions and you are now 100% setup to develop coursesketch.