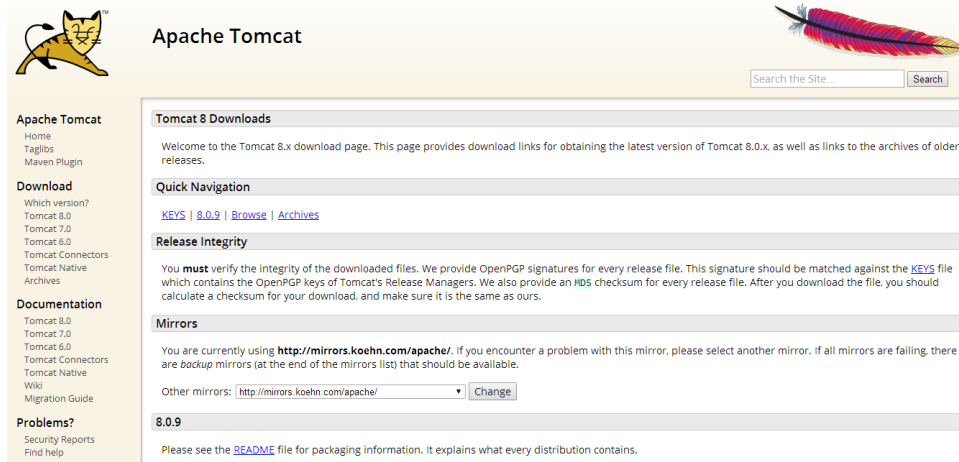
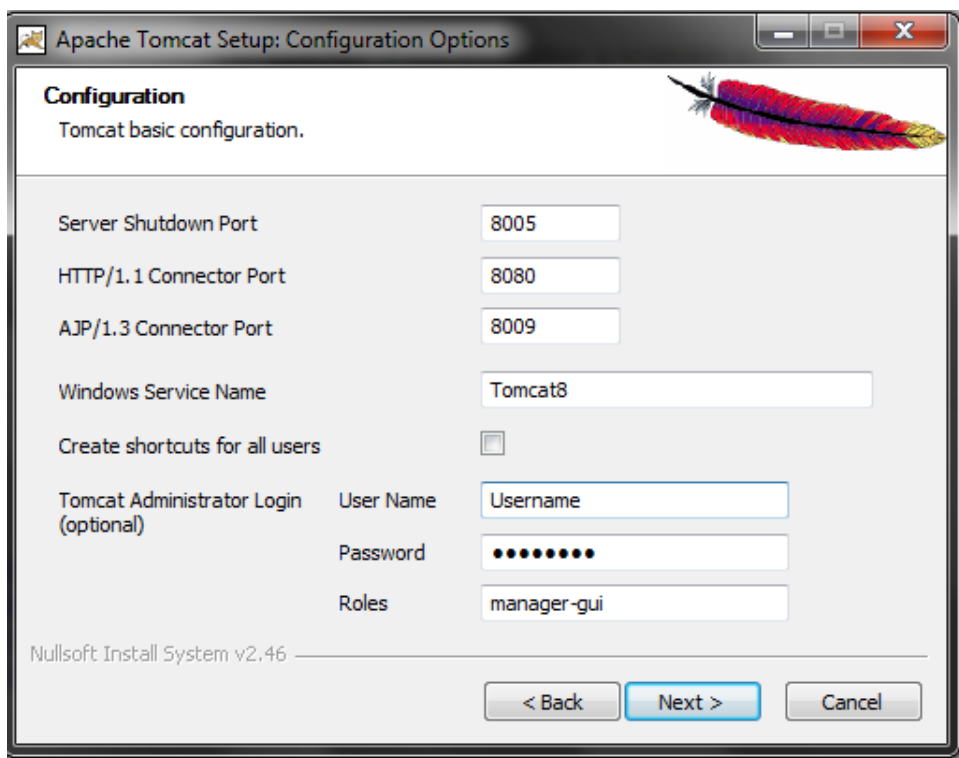


Download apache tomcat at <http://tomcat.apache.org/download-80.cgi>

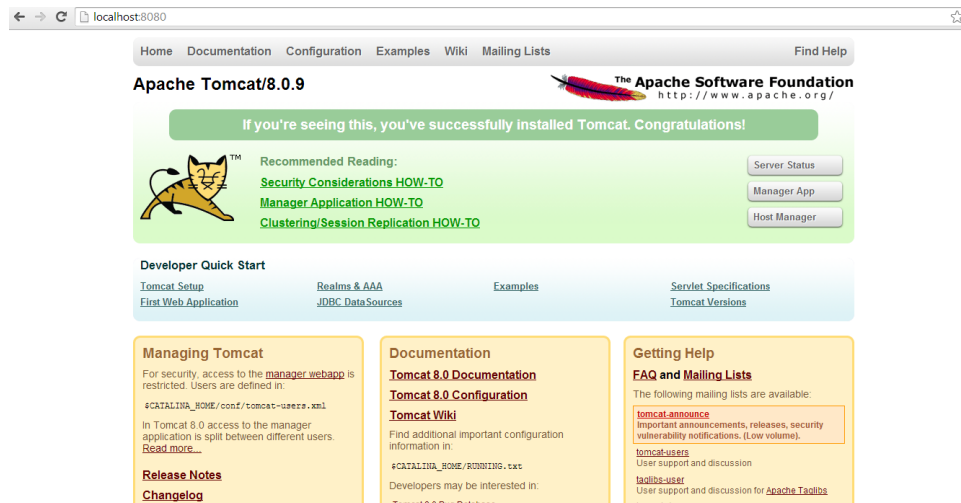


For the type of install, just choose "Normal" don't change any of the settings except for the username and password. You can choose whatever you want, but make sure to remember it.



Make sure to take note where Tomcat installs. Navigate to this folder and you should see a folder named "ROOT". (....\Apache Software Foundation\Tomcat 8.0\webapps\ROOT). This is the folder other people will see when they type your IP address into their browser. You can start your Tomcat web server by opening the "Monitor Tomcat" program. You can test if your server is running by typing 127.0.0.1:8080 into your web browser. Or localhost:8080 (these are the same thing). Note: at this point, you won't be able to view your website on other computers. I'll cover this later.

You should see a webpage like this at 127.0.0.1:8080



You can delete everything in the ROOT folder - none of this is of use to you. It is simply Tomcat's default webpage that they display. You can now start to build your website. In your empty ROOT folder, create a new file named "index.jsp". You MUST have either an "index.jsp" or "index.html" file in ROOT, this is similar to a main() function. This is the page that loads first when users go to your website. Also note that you can turn any html file into a .jsp file, but not the other way around. You may use premade templates online that are written in .html format, but rename them .jsp, and edit them to your liking. Please read their terms and conditions, and leave any links to their website on your page if they request it. I highly suggest using templates since it will save you the work of learning css. You will need to learn a tiny bit of html, but you can probably find everything to do with html at <http://www.w3schools.com/>. You can also pick up some knowledge of other languages here if you wish.

HTML Templates: <http://all-free-download.com/free-website-templates/free-download-html-website-templates.html>

Also for the templates, the simpler, the better. It will have less HTML and be easier to edit to your liking.

As for learning jsp, here is a book in PDF format. Note, this book is probably overkill. However, if you run into any weird issues, it should be able to help: [http://www.tutorialspoint.com/jsp/jsp\\_tutorial.pdf](http://www.tutorialspoint.com/jsp/jsp_tutorial.pdf). Here is the quick tutorial I used to set up an example site: <http://www.jsptut.com/> I would recommend learning jsptut.com before starting your project, and using the PDF to learn anything jsptut missed.

I recommend creating your application in swing first. I think having a finished project to port over to a web server is a much safer idea than creating it on the web server first.

Now that you have the foundation of your website/webserver, you should be ready to open your website to the rest of the world. These instructions will be for my specific internet provider, but all the names of things are quite similar.

First find out what your IP address is. I recommend going to <http://www.cmyip.com/> this way, you know that it is your Public IP, and not your Private IP. Copy this number xxx.xxx.xxx.xxx into your web browser. This will take you to your router's "web site". This is where I won't be able to help you very much. You will need to navigate until you find something along the lines of "Port Forwarding" or "Virtual Servers". If you google "How to forward ports on a <Insert your router's name here>" You should find the solution. Anyways, this is what the page should look like once you find it:

### Firewall > Virtual servers

This function will allow you to route external (Internet) calls for services such as a web server (port 80), FTP server (Port 21), or other applications through your Router to your internal network. [More Info](#)

[Clear Changes](#) [Apply Changes](#)

Add Active Worlds [Add](#)

Clear entry 1 [Clear](#)

	Enable	Description	Inbound port	Type	Private IP address	Private port
1.	<input type="checkbox"/>		-	TCP ▼	192.168.2.	-
2.	<input type="checkbox"/>		-	TCP ▼	192.168.2.	-
3.	<input type="checkbox"/>		-	TCP ▼	192.168.2.	-
4.	<input type="checkbox"/>		-	TCP ▼	192.168.2.	-
5.	<input type="checkbox"/>		-	TCP ▼	192.168.2.	-
6.	<input type="checkbox"/>		-	TCP ▼	192.168.2.	-
7.	<input type="checkbox"/>		-	TCP ▼	192.168.2.	-
8.	<input type="checkbox"/>		-	TCP ▼	192.168.2.	-
9.	<input type="checkbox"/>		-	TCP ▼	192.168.2.	-
10.	<input type="checkbox"/>		-	TCP ▼	192.168.2.	-

Now open port 8080 to enable traffic on that port (Apache Tomcat runs on this port).

	Enable	Description	Inbound port	Type	Private IP address	Private port
1.	<input checked="" type="checkbox"/>	WebServer	8080 - 8080	TCP ▼	192.168.2.4	8080 - 8080
2.	<input type="checkbox"/>		-	TCP ▼	192.168.2.	-

For "Private IP Address" you won't have the same as shown. To find this you will have to open your cmd window or terminal window and-

Windows: type "ipconfig"

Macintosh: type "ifconfig -a"

It should be listed under "IPv4 Address".

Now you should be able to access the web server on your Local Area Network (LAN) by typing in the private ip followed by :8080 (192.168.2.4:8080 for me for example).

You should be able to access the web server on computers on different networks by typing in the public IP found earlier followed by :8080.

If this does not work, your firewall is being overprotective. Lookup how to open a port on your firewall for your machine. It's very common so it should be easy to google.

Test connecting from a computer from another network. It should work!

I recommend using Git or something similar so you can easily keep track of everything.

Also: I highly recommend making the web application on your local machines first. It is a hassle to keep updating your remote machine. Test that it works before the presentation, but don't use it until then.

Here is the software I use for remote connections: <http://www.teamviewer.com/en/index.aspx>

It is cross platform, so you can use it on Mac, Windows, and Linux. It is very straightforward to set up. Note, you can't restrict access. I'd recommend only the owner of the machine you are hosting on to be able to access it.

I think that should be it. Good luck, and let me know if you have any questions/issues.