Activity - IntelliJ Client-Server App

⌄ **Details**

This activity will help you setup your environment for Project 3 (Page Views in Vue)

Setup your environment

The recommended requirements for running IntelliJ IDEA are the following:

- The latest 64-bit Mac OS, or
- 64-bit Windows 10, and
- 8 GB RAM, and
- an SSD Drive with 5GB of free space, and
- monitor with 1920x1080 resolution

It's possible to run IntelliJ with less than 8 GB of RAM, but it can be slow. It's possible to run IntelliJ with a regular hard drive, but it takes a while to boot up. We highly recommend these requirements.

To setup the environment for your web applications, do the following:

- Create a working directory named **CS5244**. This is where all of your projects will be located. Your Tomcat directory will all be located here.
- Make sure you have installed the latest version of the **Java 11 SDK (https://www.oracle.com/technetwork/java/javase/downloads/jdk11-downloads-5066655.html)** that your system supports. Note that it should be fine to use OpenJDK and it should also be fine to use a Java 13.
- Download and install **IntelliJ IDEA Ultimate** **(https://www.jetbrains.com/student/)** edition. Note that you will need to setup an account and give them your student email address. **It may take them a day to verify it, so please do not wait until the last minute.**
- Download and install the latest version of **Tomcat 9** **(https://tomcat.apache.org/download-90.cgi)**. Download the core binary distribution. If you have a Mac, download the tar.gz file. If you have a Windows machine, download the 64-bit Windows zip file. To install Tomcat, simply put the archive file in your working directory and unzip it. Note that you should *not* use Tomcat 10 – we will be running your site on Tomcat 9. Also, even if you have another version of Tomcat on your machine, you should still install the latest version of Tomcat 9 in your CS5244 directory.
- Download and install **Node.js** **(https://nodejs.org/en/download/)**. The easiest thing to do is just click on the installer icon for Windows (gets the .msi file) or MacOS (gets the .pkg file) and follow the instructions.
- **Install Vue-CLI** **(https://cli.vuejs.org/guide/installation.html)**. Once Node is installed, you should be able to install the Vue Command Line Interface by running the following commands in your

terminal (note that the second command is needed since we are using Vue 2 not Vue 3):

```
npm install -g @vue/cli
npm install -g @vue/cli-init
```

- **This step is only for those who already have Node.js and/or Vue-CLI on their machines.**
  Update them to the latest version using the following commands in your terminal:

```
npm cache clean -f
npm install -g n
sudo n stable
npm update -g @vue/cli
npm install -g @vue/cli-init
```

- Install the vue.js plugin for IntelliJ IDEA. Open IntelliJ and go to "preferences" in the menu. It will open a window and one of the categories should be "plugins". When you click on it, you should see tabs for "Marketplace" and "Installed". Search for "vue" in the Marketplace tab and click the install button. You may have to restart IntelliJ for the plugin to take effect.
- Install the Vue.js devtools extension for Chrome. Go the the extensions manager for Chrome and search for the Vue.js devtools extension. Install it. If you use Firefox, you can install it there also.

Create the Client-Server application in IntelliJ IDEA

In this section you will create an IntelliJ IDEA project called [Name]ClientServer, where [Name] is your first name according to the "Name" post on Piazza (pinned to the top of your feed). This will be the name that you like to be called in conversation. If the name shown in the Piazza post is not the one you go by, please let use **by responding to that post** and we will change it.

The project will have two separate modules in it. One of them will be a module named "server", and the other module will be named "client". The server module will be a Gradle project with Java and Web plugins; and the client module will be a static Vue project that will invoke the vue-cli took when it is created. Please use the following slides to walk through the project. If you have any questions about it, ask on Piazza.

- **Client-Server-App slides   (https://drive.google.com/file/d/1_3oVNJDX4N2Qv81J9B6a7qWt-tXEtzOP/view?usp=sharing)**

Make sure that you can view both the client and the server at the same time in separate browser windows, similar to the screenshot in the image below.