

You need to install the following software.

## JDK Development Kit (Java, latest version)

[Download for Windows](#)

[Download for Mac](#)

After installation, run terminal and type: `java --version`. You should see the current version of installed Java.

## Leiningen

For Mac:

1. Install *brew*. You may check if you have it already via terminal command: *brew*. If you don't have it yet, you can [install it from here](#). On this page, you can see a command to install it.
2. Run command using terminal: *brew install leiningen*.
3. After installation, in terminal type: *lein*. You should see help information.

For Windows:

1. Create a folder in a convenient place, for example, C:\Projects\leiningen.
2. Save [this file](#) to the folder with the name "lein.bat". Note: you must save the file with extension "bat".
3. In Windows Search, type "Environment" and you will see "Edit the system environment variables". Then press button "Environment variables...". Find variable "Path" and add there the path you created for lein.bat (without this file name). If there are two Path variables in both lists, add the path to both.
4. Confirm your changes via pressing "Ok" buttons.
5. Run CMD and type: *lein*. You should see help information. Note: if you have CMD window opened, you need to close and open it again to refresh loaded environment variables.
6. If *lein* says some dependencies are missed, run *lein self-install*.

## IntelliJ IDEA

You may obtain Academic License for JetBrains products, including IntelliJ IDEA. Use [this link](#) and follow the details. Also, you may use IntelliJ IDEA Community (Win or Mac) for free. Check [this link](#). Scroll down, because at the first place you will see commercial version of IntelliJ.

After installation, run IntelliJ IDEA, go to Plugins, find and install a plugin named "Cursive". After you install it, please visit [this website](#) and get a free license.

## Project creation

To create a new Clojure project, do the following.

1. Using Mac Terminal or Windows CMD, change active directory. For example, `cd c:\projects\clojure-course`.
2. Run: `lein new app <your project name>`. The project name mustn't contain spaces. For example, `lein new app clojure-projects`.

Leiningen will create a scaffold of a project in the given directory.

## IntelliJ IDEA Setup

Run IntelliJ IDEA and open folder with your project. Open any \*.clj file. You can find them in `src` folder. You may see a notification "Project SDK is not defined". Typically, it happens very first time only. Click on blue link "Setup SDK" at the right on the same notification bar. You may choose one of installed or download a new one via context menu item. If there is the blue link, go to File > Project Structure. You will see a menu where you can choose a Java SDK.

We need to add a new configuration. Click on "Current file" on the top panel and choose "Edit configurations...".

Click "+", then find "Clojure REPL" and choose it child node named "Local". The settings panel will appear. Set Name as *REPL* and press "Ok". REPL stands for "read-eval-print loop".

On the top panel instead of "Current file" you will see a dropdown menu with *REPL*.

To run a configuration, press a button with green triangle that is close to the dropdown menu (it reminds "Play" icon). A new terminal window will appear at the right with nREPL server started. You may type commands at the bottom. For example, type `(+ 2 2)` and press "Enter". You will see `4` as output.

By default, Leiningen created a "hello world"-file named *core.clj*. The file contains function "-main". We can run it with a green triangle icon next to the function name.

You may load a clojure file into REPL terminal via right mouse click in the file editing space, then choose REPL > Load file in REPL. I suggest memorizing a keyboard shortcut because we'll use it often.

## Troubleshooting

If you opened a Clojure project in IntelliJ Idea and the project structure gone in few seconds, open *project.clj* file and you will see "Add project..." proposition in the top-right corner. Click on it to solve the issue.