

Church of Scyence

Software Learning JS



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Church of scyence

https://github.com/churchofscyence

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# Introduction

We used the Google Angular framework to build a Learning JavaScript Application. No database is connected to this application, so any code you write to the text box will not be persistent. This application is meant to be used at all skill levels, from high school to college. This application can be used to practice the JavaScript language. Users using this application are encouraged to write their tutorial to understand the language better. There will be no tutorial provided with this application. To start this application, use the Docker Script or Angular CLI. The student must install Angular CLI and NodeJS on the command line to start the application with the Angular CLI.  It is recommended that the user install an editor such as Microsoft Visual Studio Code or IntelliJ Jet Brains WebStorn. To use the Docker Script, the user must install the Docker Desktop.

A screenshot of a computer

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# Starting Learning JavaScript Application

## Start the Application with Angular CLI

The first step is to install NodeJS on the computer. Install instructions are in the Reference section of the Software Learning JS document on the Church of Scynce GitHub in the Script Repository. The next step is to populate the node modules folder by running the npm install command, the Node Package Manager (NPM), from the Windows Command Line or Mac Terminal Windows. The first step is to populate the node modules folder by running the npm install command, the Node Package Manager (NPM), from the Windows Command Line or Mac Terminal Windows. Node Package Manager reads the angular JSON file to download all the necessary libraries.

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The 'ng service' command builds, deploys, serves, and watches your angular code changes. Angular CLI runs Webpack to build and bundle all JavaScript and CSS code. In turn, Webpack calls the TypeScript loaders, which fetches all .ts files in the Angular project and then transpiles them to JavaScript, i.e., to a .js file, which browsers can understand.

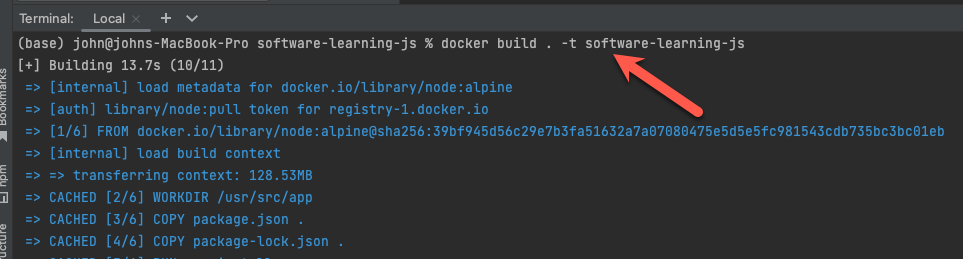
A screenshot of a computer

Description automatically generated

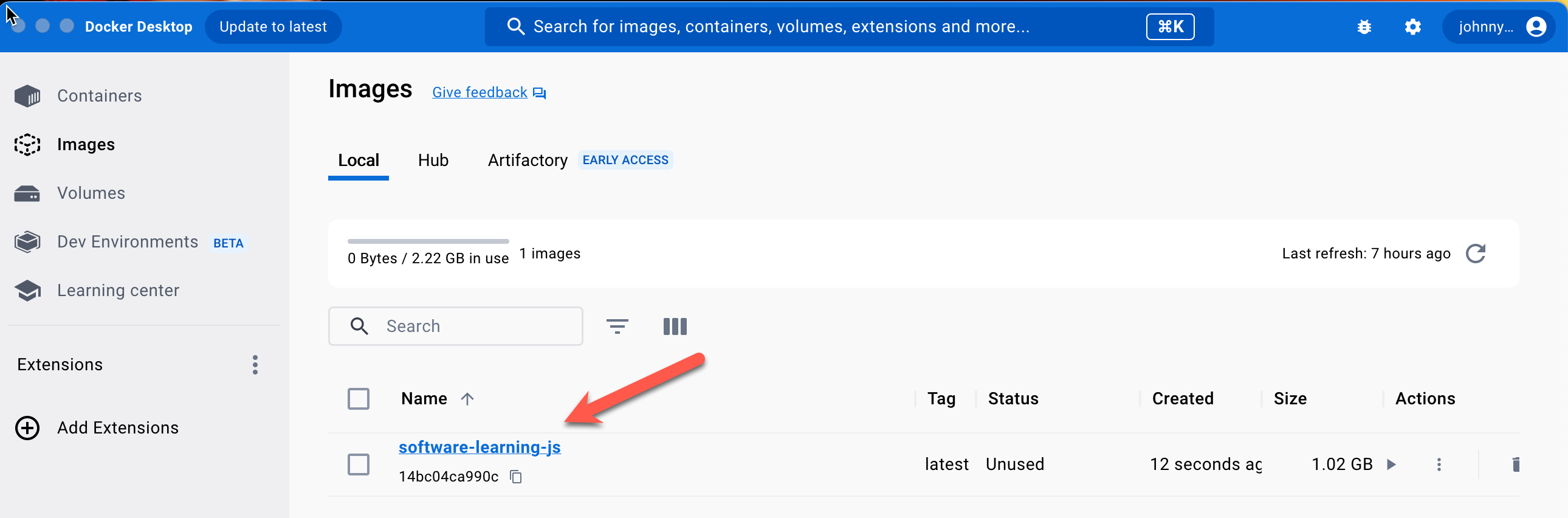
## Start the Application with Docker Script

First the user must build Docker image. A Docker image is a read-only template containing a set of instructions for creating a container that can run on the Docker platform. It provides a convenient way to package up applications and preconfigured server environments, which you can use for your own private use or share publicly with other Docker users. Docker images are also the starting point for anyone using Docker for the first time. From the command line run the following command.

$ docker build . -t software-learning-js



In the Docker Desktop, you can see that the image was created. You can see the size of the image it should be approximately one gigabyte. The name of the image is software-learning-js. The users can also check the create time verify that the image was created successfully.



The Next step is create container from the image. A Docker container image is a lightweight, standalone, executable package of software that includes everything needed to run an application: code, runtime, system tools, system libraries and settings.

$ docker run -p 4200:4200 software-learning-js

A screen shot of a computer

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You can go into Docker Desktop to access to container. After the container is create the user can open the webpage brower and navigation the the follow URL.

http://localhost:4200/

A screenshot of a computer

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# Application Guide

## Navigation Bar

From the navigation panel you can select the part of the JavaScript language in which you want to practice.  The user can select an **Array** is one of the most commonly used data types. It stores multiple values and elements in one variable. These values can be of any data type. You can store a string, number, boolean, and other data types in one variable. The to the array is Strings. A JavaScript **String** stores a series of characters like "John Doe". A string can be any text inside double or single quotes. The last item in the navigation bar is **Regular Expression** which is is a sequence of [characters](https://en.wikipedia.org/wiki/Character_(computing)) that specifies a [match pattern](https://en.wikipedia.org/wiki/Pattern_matching) in [text](https://en.wikipedia.org/wiki/String_(computer_science)).

A screenshot of a computer

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## User Interface

# References

* [How to Install Node.js on Window 10](https://www.youtube.com/watch?v=__7eOCxJyow)
* [How to install Nodejs on Mac [Any version & Easy method]](https://www.youtube.com/watch?v=SwUKKCS3r3c)
* [Running a project with ng serve](https://www.youtube.com/watch?v=-w-RfHcLt5U)
* [How To Install Docker on Windows 11](https://www.youtube.com/watch?v=WDEdRmTCSs8)
* [Docker Desktop for macOS Setup and Tips](https://www.youtube.com/watch?v=gcacQ29AjOo)
* [JavaScript Tutorial for Beginners: Learn JavaScript in 1 Hour](JavaScript%20Thttps:/www.youtube.com/watch?v=W6NZfCO5SIk)
* [Regular Expressions (RgeEx) Tutorial -Net Ninja](https://www.youtube.com/playlist?list=PL4cUxeGkcC9g6m_6Sld9Q4jzqdqHd2HiD)