

SCIOER C Programming

The docker image (<https://hub.docker.com/r/scioer/c-programming>) provides a fully interactive e-text for programmers who wish to improve their knowledge of the Object Oriented programming in Java.

At this time the mapping of the ports in the container cannot be changed so you will have to have the following ports free in order to run the container: 3000, 8000, 8888

Learner use of the resource

The container can be run from the command line easily. A volume will be mounted in the directory from which the command is run:

```
docker run -p 3000:3000 -p 8888:8888 -p 8000:8000 -v "$(pwd)/course:/course" -it scioer/oo-java:W23
```

The container is fully interactive and can be used to access several resources: - a wiki (<http://localhost:3000>) - java 11 language documentation (<http://localhost:8000/docs>) - prerecorded lectures (<http://localhost:8000/lectures>) - interactive tutorials(<http://localhost:8888>)

The password is "password" for the tutorials and the wiki. The login name for the wiki is admin@example.com. If you log in to the wiki you can add your own notes and materials to it.

Python CLI for managing the container

We also provide a [python application for configuring, starting and stopping this container](#) for people who do not wish to run it directly from docker.

- Using python3 version 3.7 or greater type "pip install sci-oyer" (or "pip3 install sci-oyer" if you have two versions of python)
- You may need update your PATH variable. Read the last bit of the output carefully and follow the instructions.
- You can verify the install by typing scioer --help to see if you get the help output.
- To install the c container type "scioer config" It is fine to use the default values for everything except the docker image. The docker image for the oo-java container is `scioer/oo-java:W23`
- Once the install has finished type `scioer start` . You'll see a message that says 'starting'. It will take a few minutes to pull the image the first time you do this.
- To get a terminal into the container type `scioer shell` .
- To stop the container type `scioer stop` . `scioer start` will restart the container type scioer stop to stop the container and scioer start to restart it.

Instructor use of the resource

Instructors are free to install this resource, edit any of the components, and then distribute the edited docker image. However, it is likely easier to simply edit the content resources individually and rebuild the container using the `scioer-builder` . The resources used to create this course are available at: <https://github.com/sci-oyer/>

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About this SCIOER resource

This resource is part of an investigation into a semi-automated process for creating Self-Contained, Interactive Open Educational Resources (SCIOER) for use by students and instructors in the discipline of Computer Science. Resources created through the SCIOER process are self-contained and provide all the tools necessary for learners. The interactive nature of the resource encourages experimentation and incremental practice. Learners are able to annotate SCIOER resources with their personal observations and learnings.

More information about this and other SCIOER resources is available:

- <https://github.com/orgs/sci-oer/>
- <https://hub.docker.com/u/scioer>
- email: info@scioer.ca

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