



**SE
TU**

Ollscoil
Teicneolaíochta
an Oirdheiscirt

South East
Technological
University

SETU Code Lab User Manual

Diarmuid O'Neill

South East Technological University

30/03/2026

Guide

This is a step-by-step guide on how to install and run SETU Code Lab locally, intended for lecturers. SETU Code Lab has been containerized using Docker, making it easy to set up and run on any machine. Before proceeding, ensure [Docker](#) and [Git](#) are installed on your machine.

Step 1.

Clone the SETU Code Lab repository using the following command in a terminal:

```
git clone https://github.com/Revolution825/SETU\_Code\_Lab.git
```

Step 2.

In the root folder *SETU_Code_Lab_Code/* there is a file called *.env.example*. Create a copy of this file and rename it to *.env*. These are your environment variables. Open *.env* in a text editor and enter custom values for *DB_PASSWORD*, *JWT_SECRET*, and *JWT_REFRESH_SECRET*.

Set *DATABASE_URL* to:

```
postgresql://setu_user:your_db_password@db:5432/setu_codelab replacing  
your_db_password with the value you chose for DB_PASSWORD.
```

Step 3.

Build the Docker images for code execution by running the following two commands in the root directory *SETU_Code_Lab_Code/* (ensure Docker desktop is running) :

```
docker build -t java-sandbox ./docker/java-sandbox/
```

```
docker build -t python-sandbox ./docker/python-sandbox/
```

Step 4.

In the root directory `SETU_Code_Lab_Code/` run the command:

```
docker compose up -d
```

This command:

1. Builds the React front end and serves it via Nginx on port 80
2. Builds and starts the Express web server on an internal port
3. Starts the PostgreSQL database and allows its data to persist by using a Docker volume

To ensure all services started correctly run:

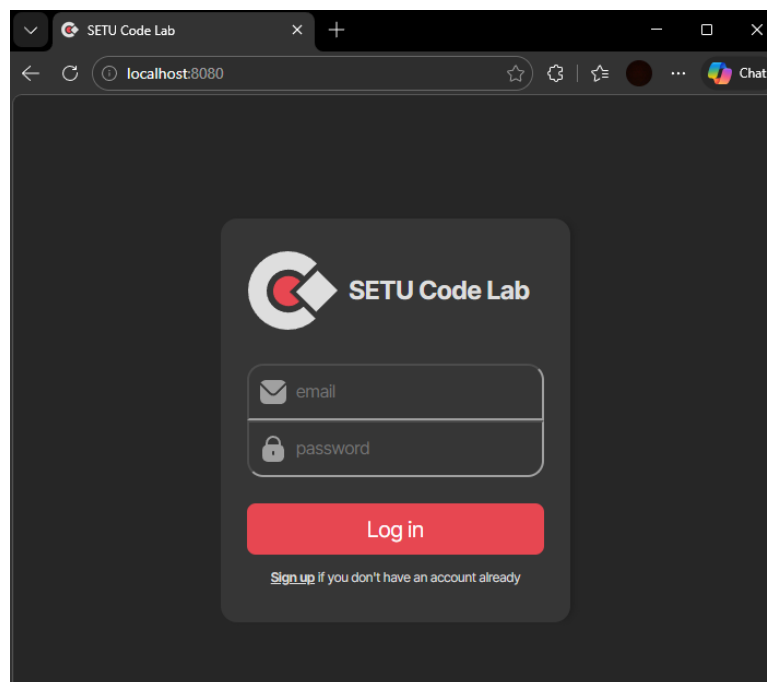
```
docker compose ps
```

All three services should show a status of *“running”*.

Step 5.

To access the platform, open FireFox, Microsoft Edge, or Google Chrome and navigate to: <http://localhost:8080>

You should be greeted by the following screen:



Cleanup

To shut down the platform run:

```
docker compose down
```

To shut down the platform and wipe the database run:

```
docker compose down -v
```