Installing and Checking the Installation of the CLEARSY Safety Platform

Thierry Lecomte

ROBOSTAR

robostar.cs.york.ac.uk

11th March 2025

Royal Academy of Engineering

UKRI Engineering and Physical Sciences Research Council

Installation

- Install **ATELIER B** 24.04 CSP EDUCATIONAL VERSION Windows (unfortunately other OS cannot be used for the session)
  - Download page: https://www.atelierb.eu/en/atelier-b-support-maintenance/download-atelier-b/
  - Direct link: https://www.atelierb.eu/wp-content/uploads/2024/09/atelierb-cssp-24.04.exe
- Execute the Atelier B installer
- Install **Python** (3.6+) if not yet installed on your computer:
  - Download page: https://apps.microsoft.com/detail/9pnrbtzxmb4z?hl=en-us&gl=US
  - Download page: https://www.python.org/downloads/windows/ (and rename python.exe as python3.exe)
- Install **Cmake**
  - Download page: https://cmake.org/download/
  - Add the cmake/bin directory to the PATH
- Install **MinGW**
  - Download page: https://winlibs.com
  - Select the latest UCRT version with the POSIX
  - Add the mingw64/bin directory to the PATH

ROBOSTAR

Troubleshooting (Python installation)

- Python is often installed several times on your computer.
- Atelier B CSSP 24.04 requires **python3.exe** and **pip3.exe** to be in the PATH

- Type in a DOS terminal: *where python3*
  - You should get C:\Users\<user>\AppData\Local\Microsoft\WindowsApps\python3.exe
- Type in a DOS terminal: *where pip3*
  - You should get C:\Users\<user>\AppData\Local\Microsoft\WindowsApps\pip3.exe

- You should get the same path
- If not, either change your PATH to point to the correct directory, or copy and rename resp. python.exe in python3.exe and pip.exe in pip3.exe

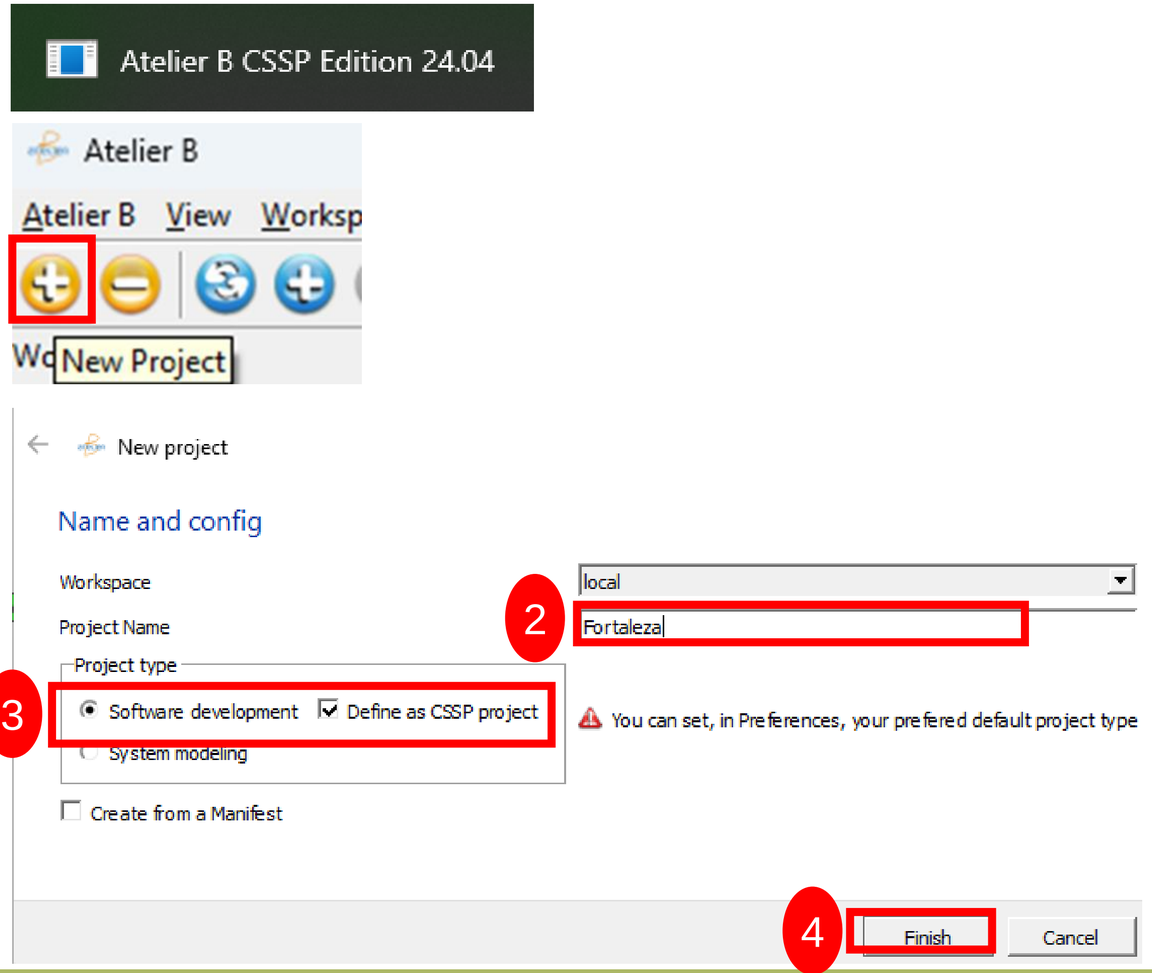
ROBOSTAR

Project Creation

We are going to create an empty project that we will modify to complete exercices

Project Creation 1/3

- Start Atelier B
- Create a new project
- Give a name and a type

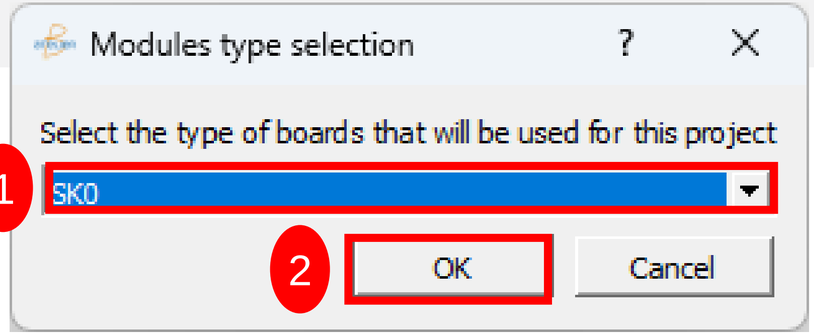


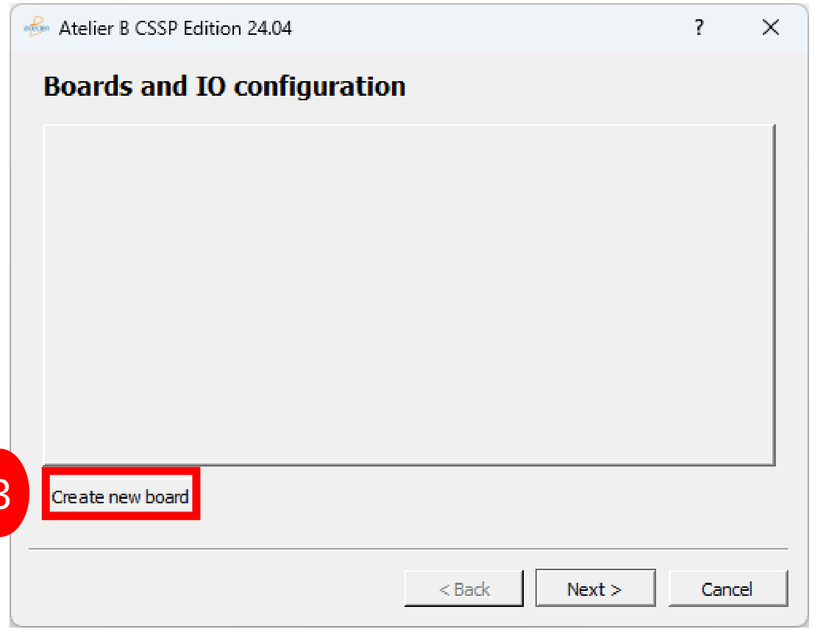
ROBOSTAR

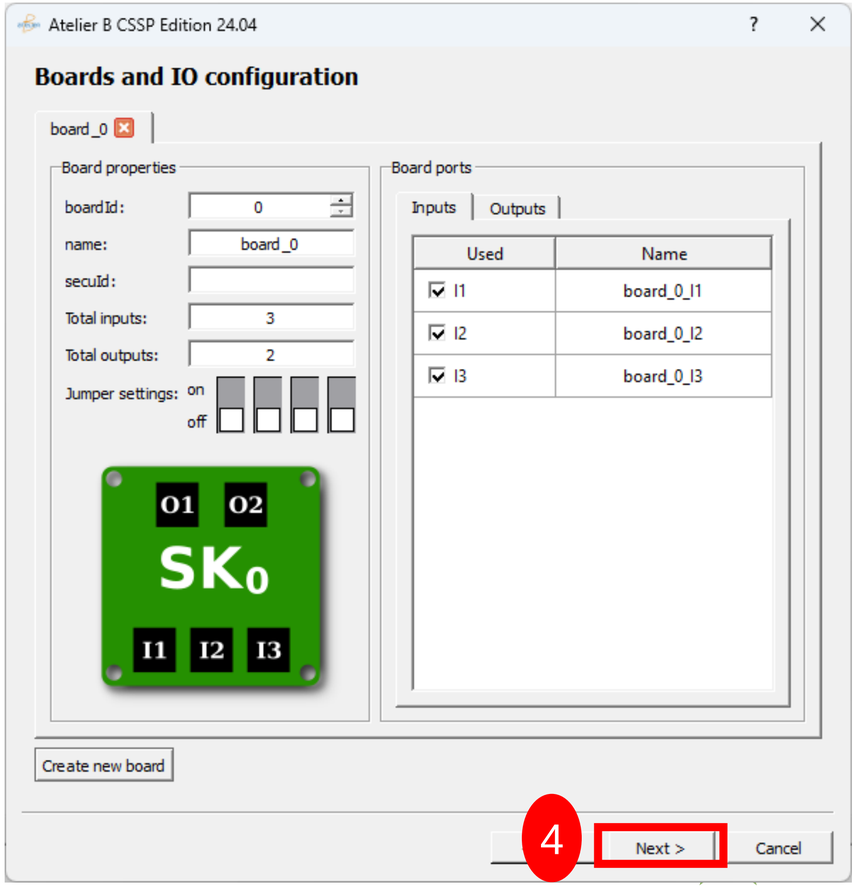
University of York, UK

Project Creation 2/3

- Select SK0
- Create a new board



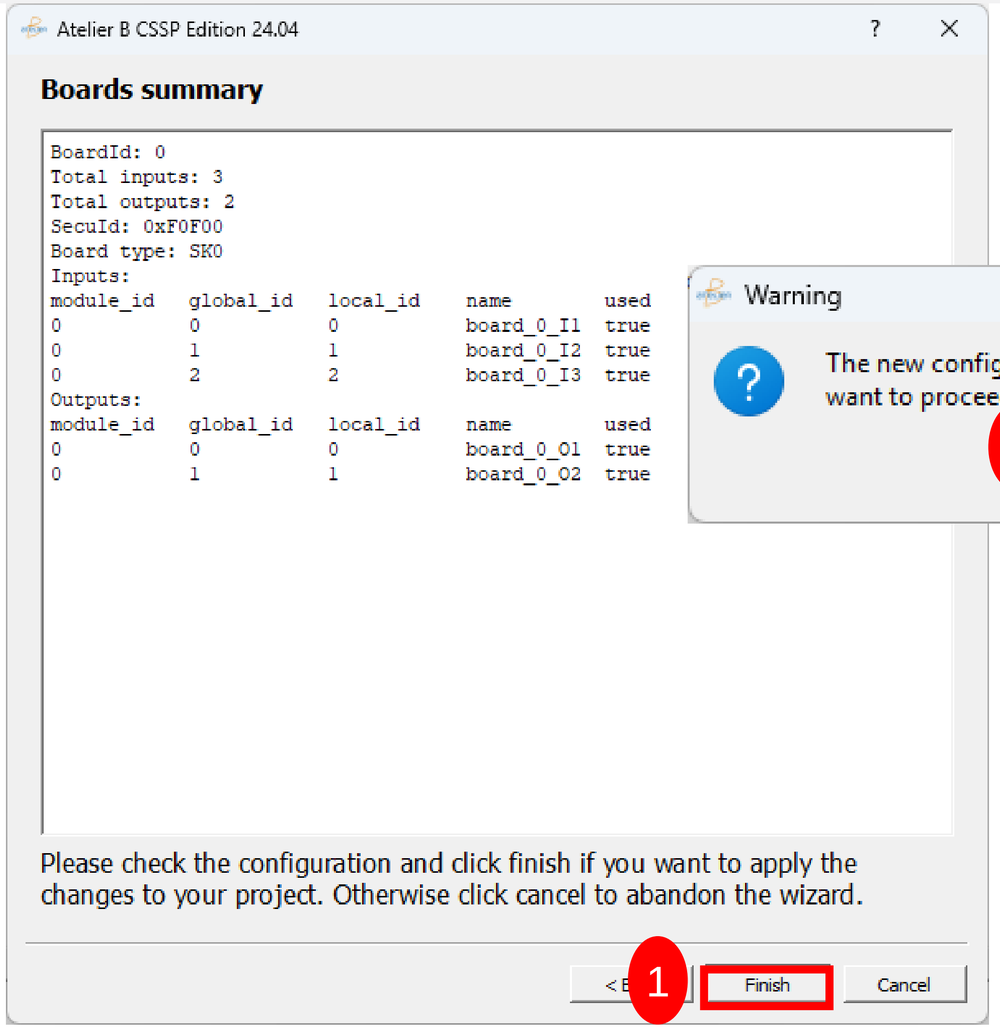


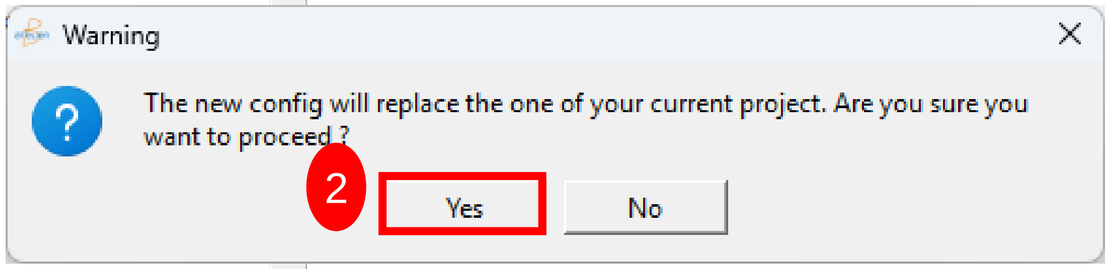


ROBOSTAR

Project Creation 3/3

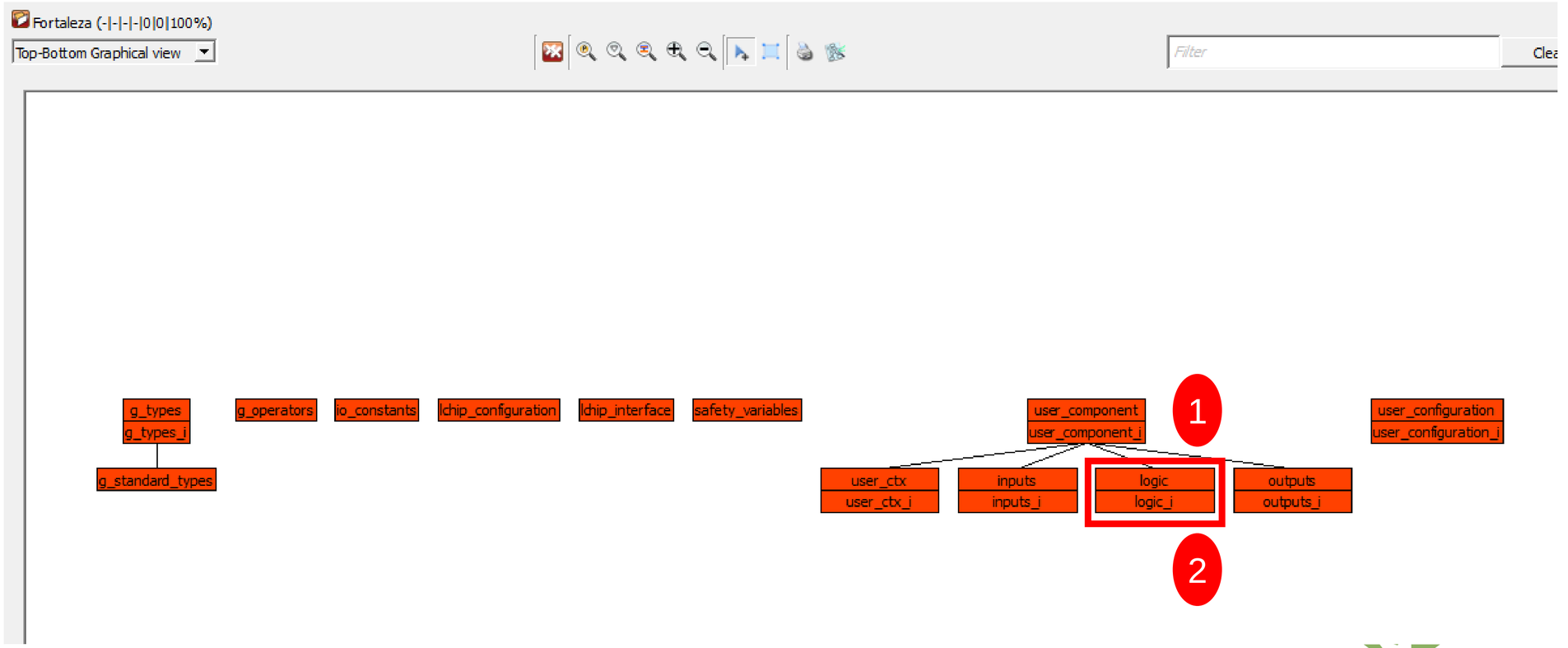
- Finish the creation





Project Created

- The view
- 2 components to modify



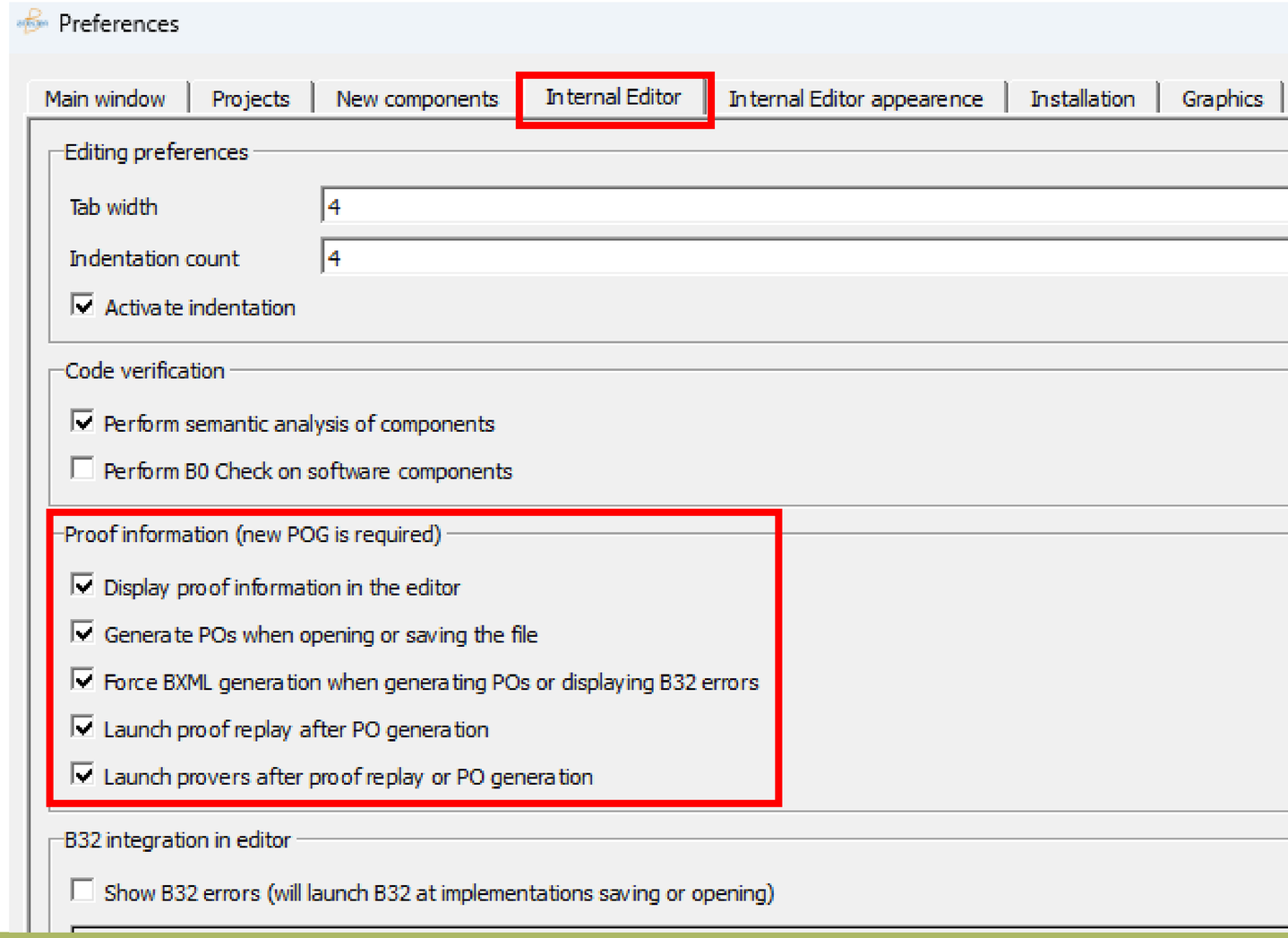
ROBOSTAR

Atelier B and Project Setup

Let us verify
that we are going to see
the same User Interface

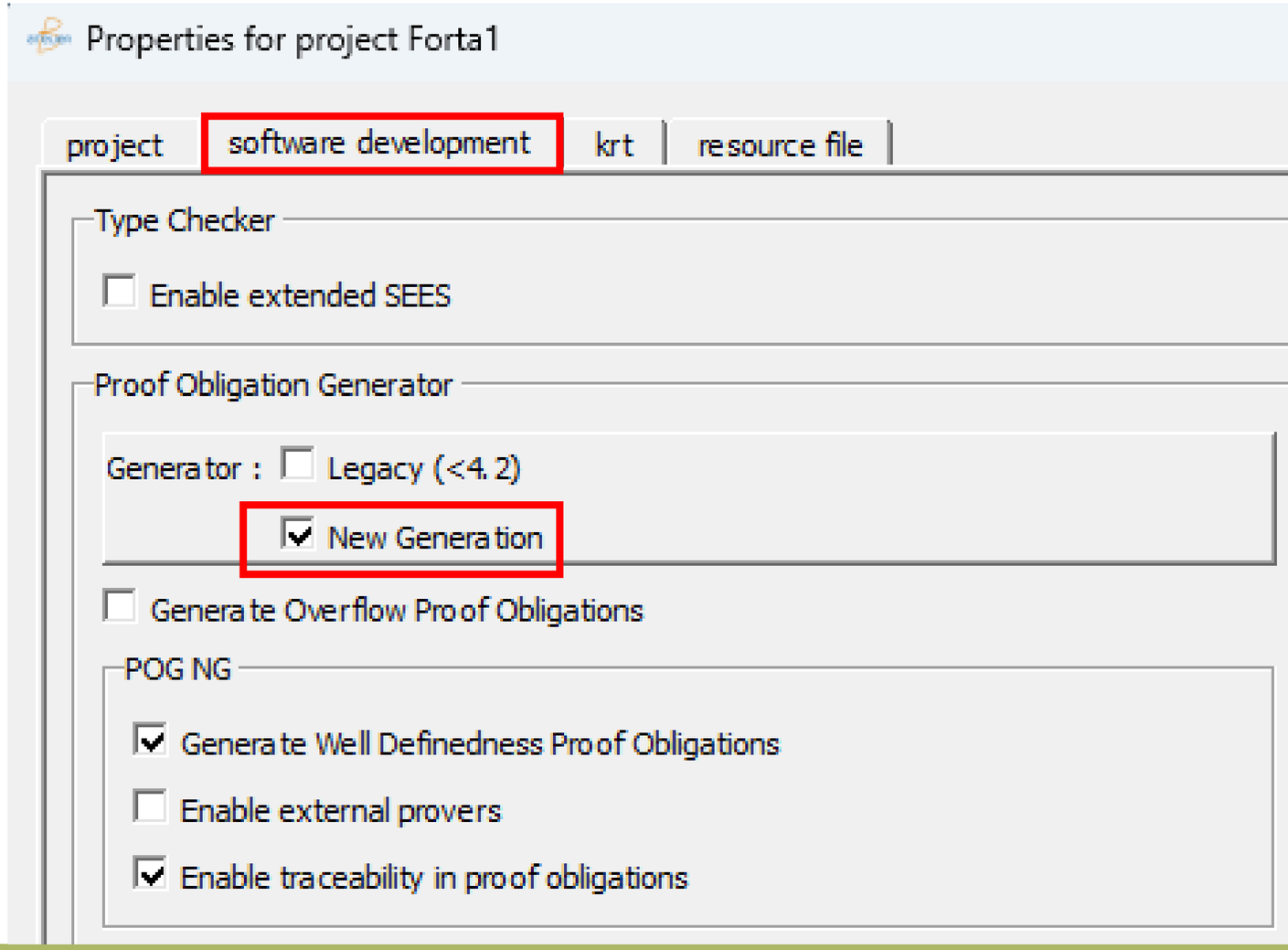
Checking Setup 1/2

- Open menu Atelier B / Preferences
- Select Internal Editor
- Ensure that Proof Information is fully checked



Checking Setup 2/2

- Open your project
- Open menu Project / Properties
- Select Software Development
- Ensure that New Generation is checked in Proof Obligation Generator

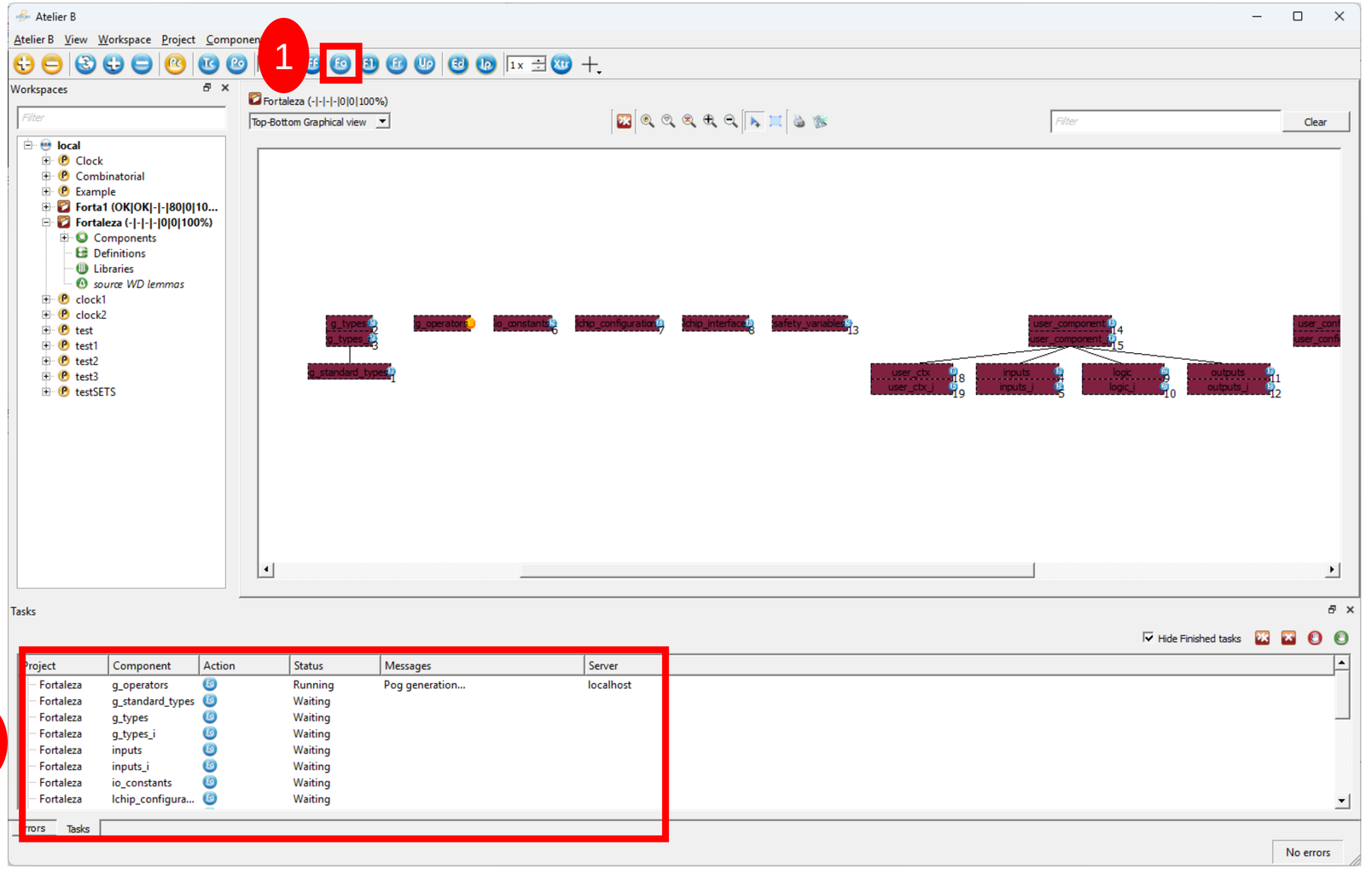


Atelier B CSSP Configuration

Let us verify
that we all can activate the simulator

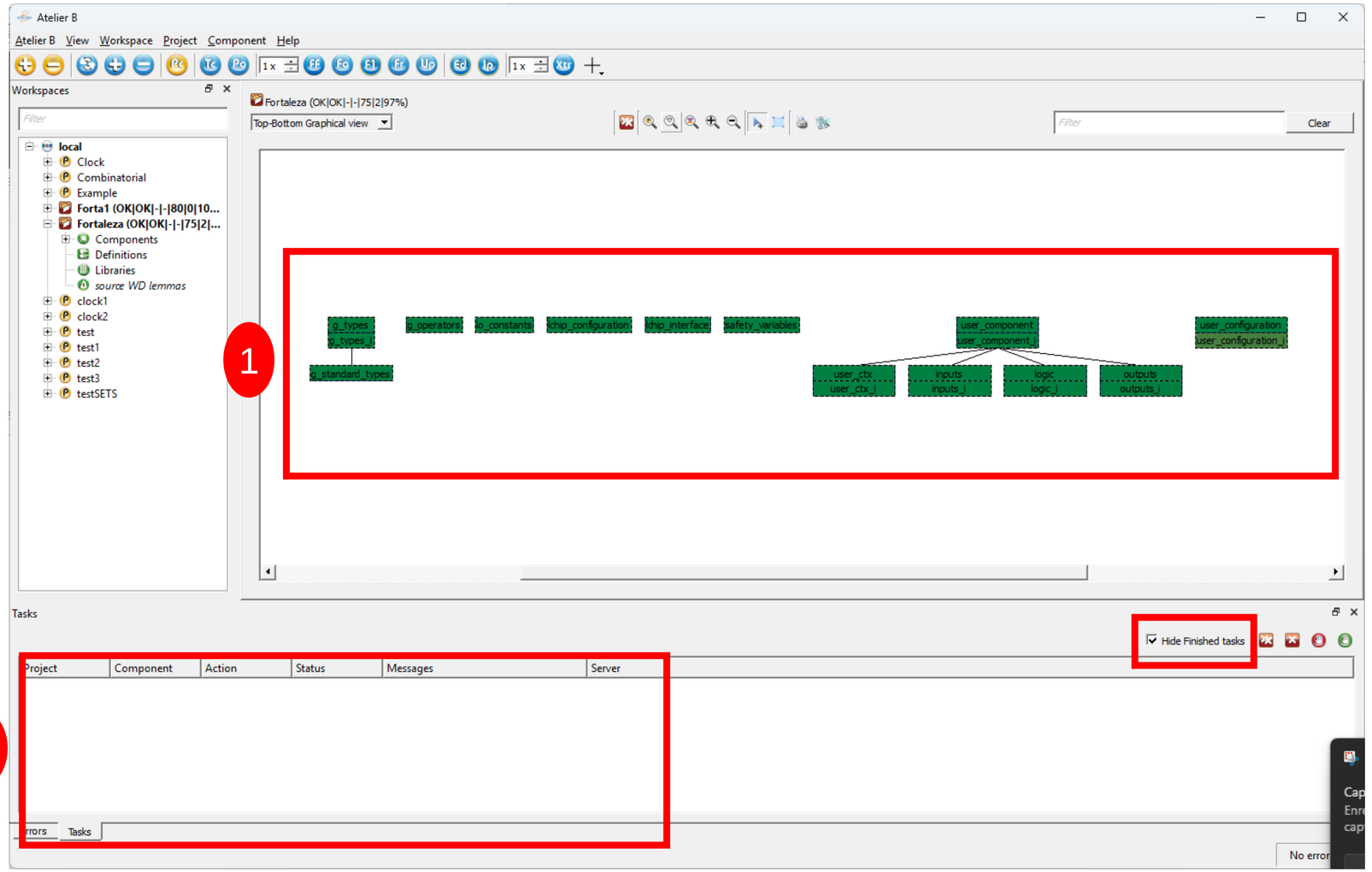
To be sure Your Environment is Operational …1/5

- Select all the components with Ctrl+A
- Start Proof Force 0 (or Ctrl-0)
- Wait for proof to complete



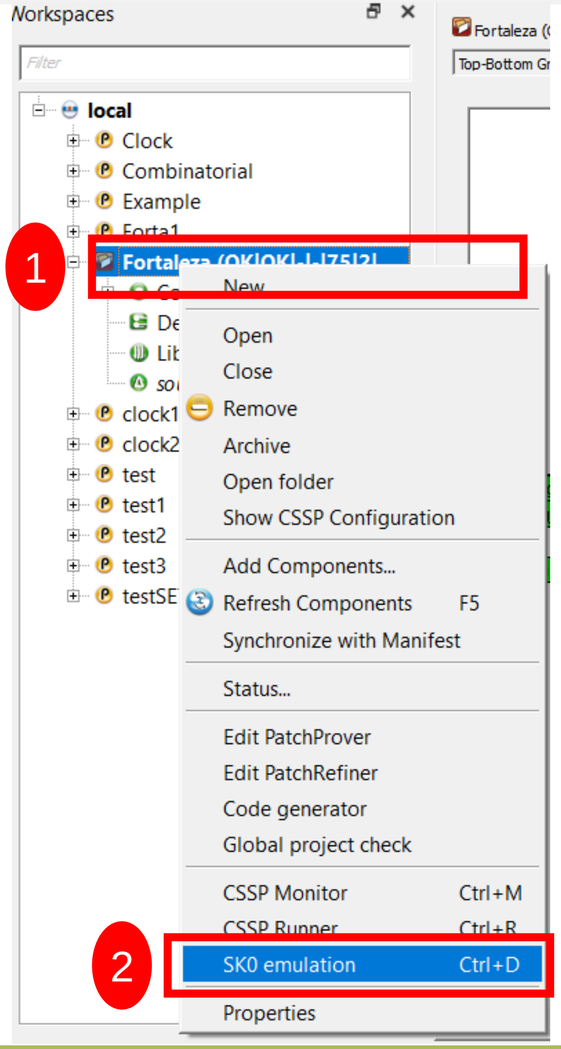
To be sure Your Environment is Operational … 2/5

- All components green
- All tasks completed (select “Hide finished tasks”)



To be sure Your Environment is Operational … 3/5

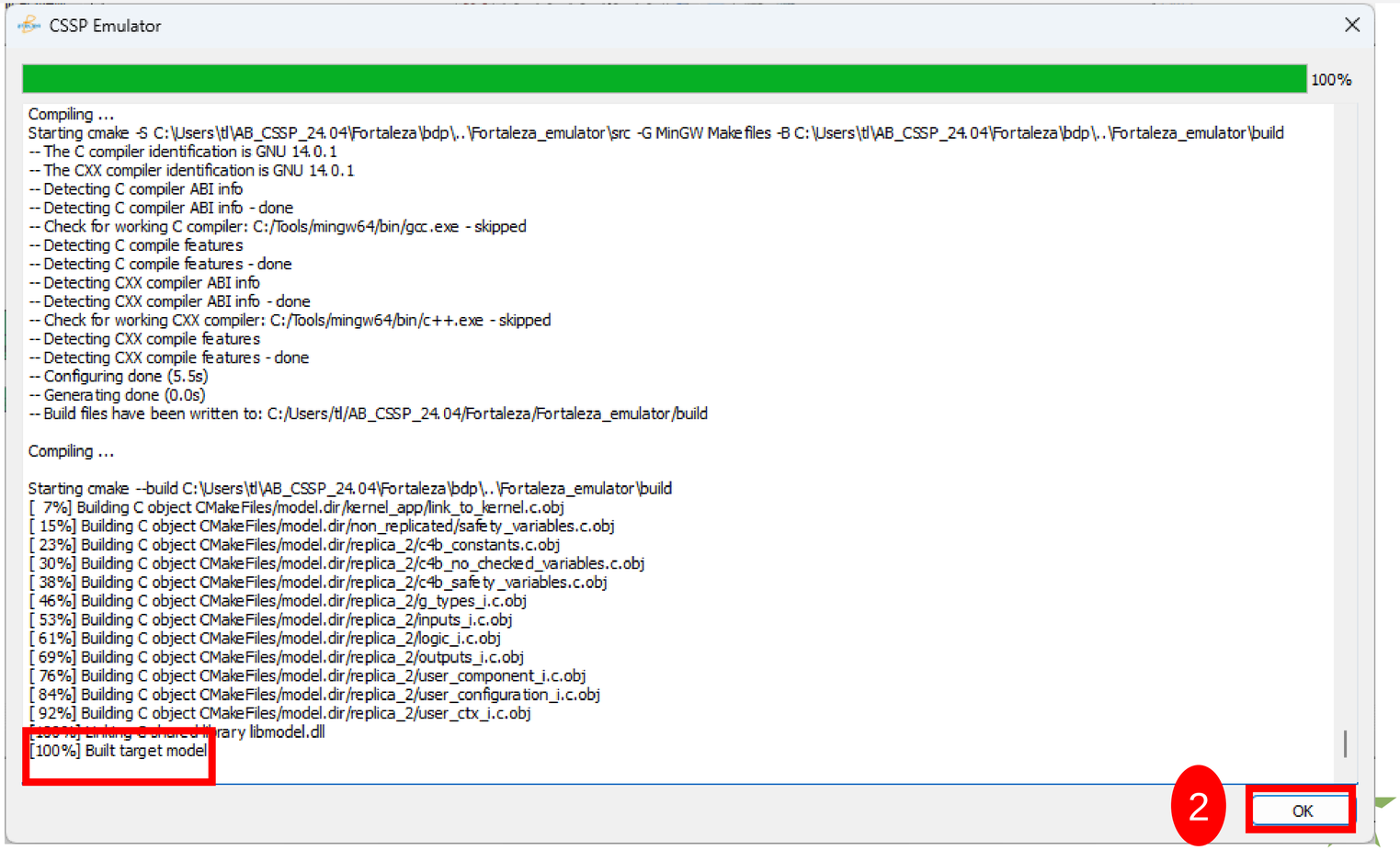
- Right click on the project
- Select “SK0 emulation” or Ctrl-D



ROBOSTAR

To be sure Your Environment is Operational … 4/5

- After several seconds and verbose messages …
- The process terminates with [100%] Built target model
- Click on OK

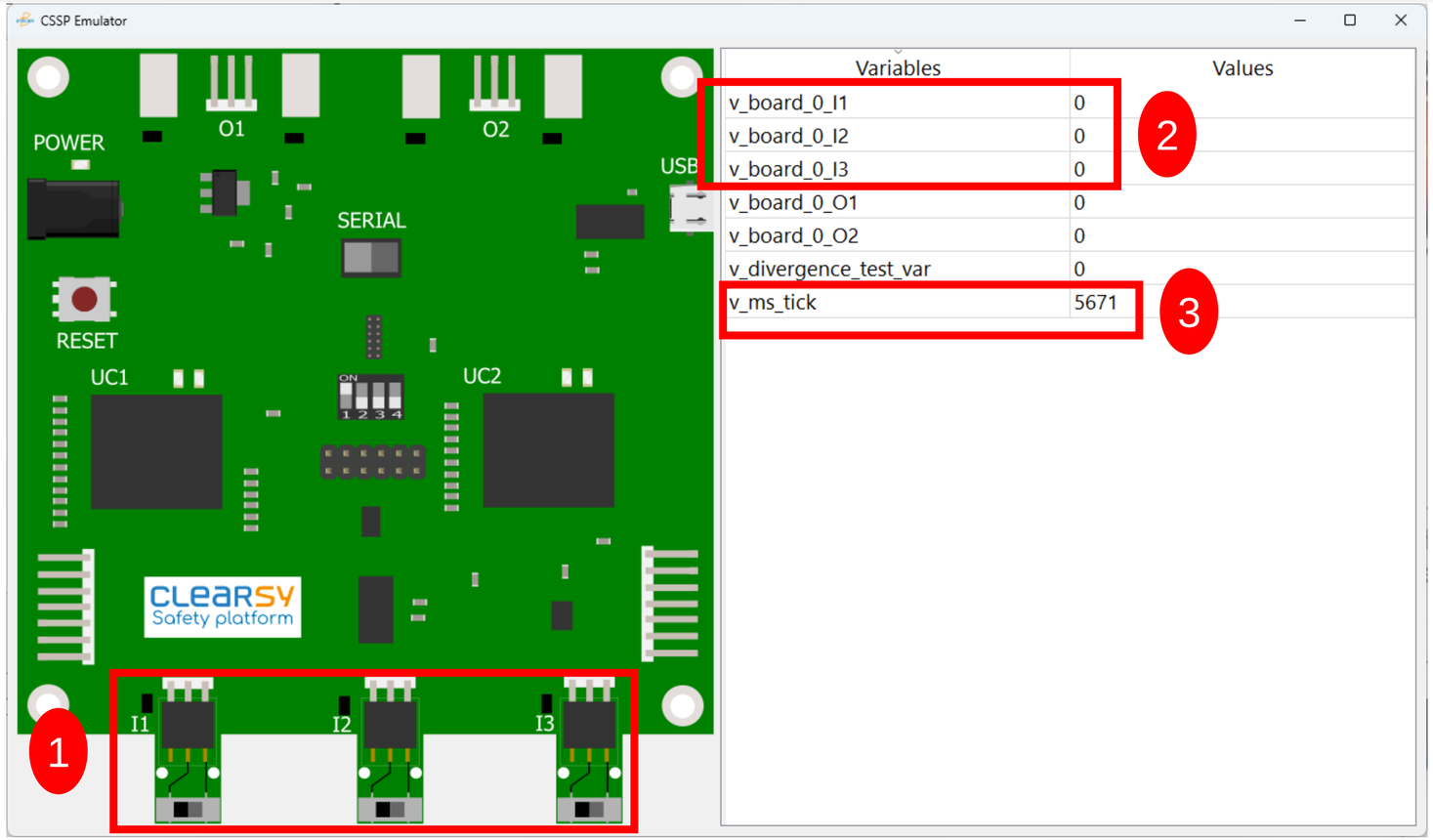


If stops before 100%, cmake / gcc installation is probably incomplete

ROBOSTAR

To be sure Your Environment is Operational … 5/5

- The simulator starts
- If you click on I1, I2 or I3, the v_board_0_Ix variables change
- The time flies



ROBOSTAR