

# Installing and Checking the Installation of the CLEARSY Safety Platform

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# Installation Windows 11

## ▶ Install **ATELIER B 24.04 CSP EDUCATIONAL VERSION** Windows

- 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

### ATELIER B 24.04 CSP EDUCATIONAL VERSION

- > **Atelier B 24.04 CSP** – Windows 11 (also works with 10) ↓
- > **Atelier B 24.04 CSP** – Linux Debian 11 ↓
- > **Atelier B 24.04 CSP** – Linux Debian 12 ↓
- > **Atelier B 24.04 CSP** – Linux Ubuntu 22.04 ↓
- > **Atelier B 24.04 CSP** – Linux Ubuntu 23.10 ↓
- > **Atelier B 24.04 CSP** – Linux Ubuntu 24.04 ↓
- > **Script cssp\_install.sh** ↓
- > **Installation Guide** ↓
- > **Programming Handbook (Feb 2020)** ↓

# Troubleshooting Windows 11 (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

# Installation Ubuntu

## ► Install **ATELIER B 24.04 CSP EDUCATIONAL VERSION** Ubuntu

- Download page: <https://www.atelierb.eu/en/atelier-b-support-maintenance/download-atelier-b/>
- Download the cssp\_install.sh script: [https://www.atelierb.eu/wp-content/uploads/2024/09/cssp\\_install.sh](https://www.atelierb.eu/wp-content/uploads/2024/09/cssp_install.sh)
- Edit the last line of this script to match your distribution
- Run the script: `sudo ./cssp_install.sh`
- To start the tool, execute: `/opt/atelierb-cssp-24.04/bin/startAB &`

### ATELIER B 24.04 CSP EDUCATIONAL VERSION

- > **Atelier B 24.04 CSP** – Windows 11 (also works with 10) 
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- > **Atelier B 24.04 CSP** – Linux Ubuntu 24.04 
- > **Script cssp\_install.sh** 
- > **Installation Guide** 
- > **Programming Handbook (Feb 2020)** 



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# Troubleshooting Ubuntu

- ▶ Do not forget to update / upgrade apt
- ▶ Be sure that pip3 is installed
- ▶ Be sure that the cssp\_install.sh script last line is related to your distribution

```
20  echo "Installing Atelier B"  
21  apt install --yes ./atelierb-cssp-24.04-ubuntu-24.04.deb  
22
```

# Project Creation

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

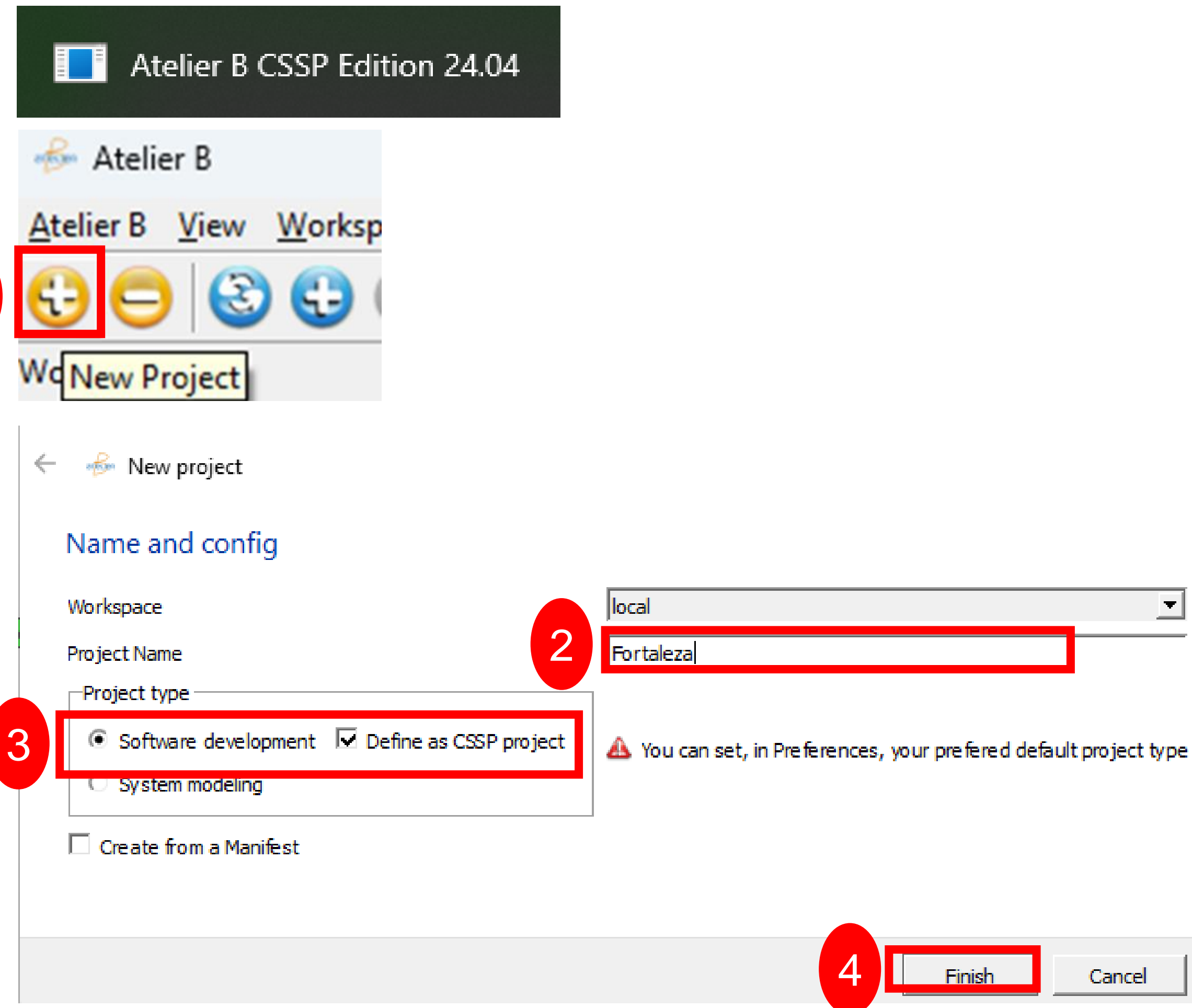


# Project Creation 1/3

► Start Atelier B

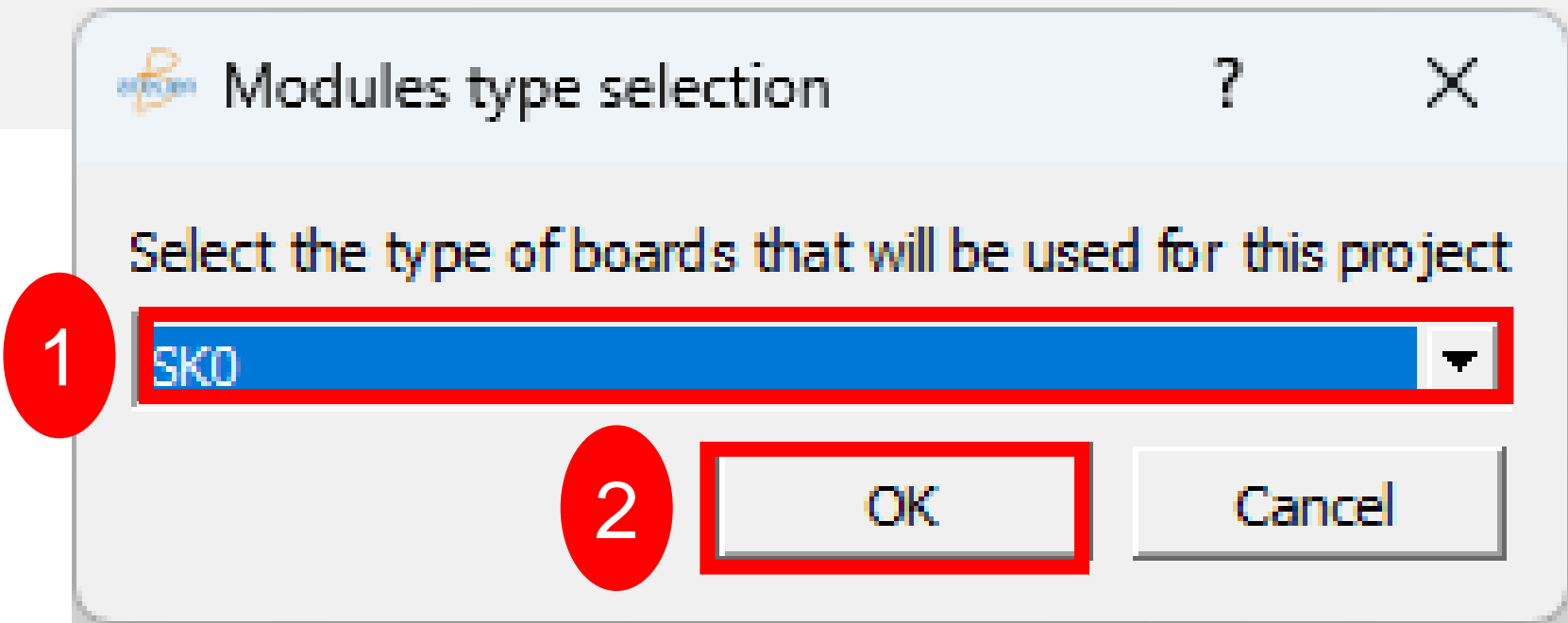
► Create a new project

► Give a name and a type

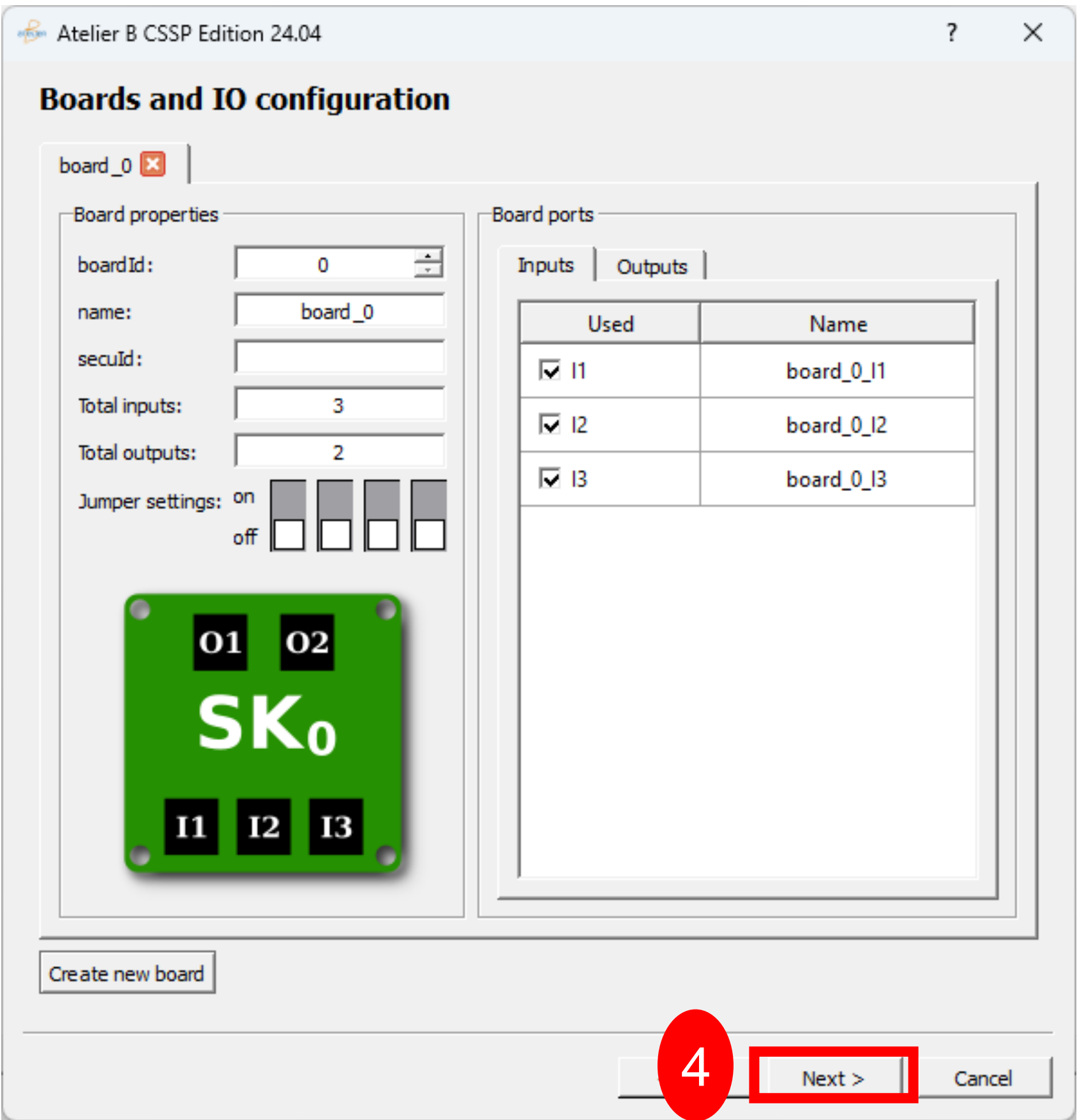
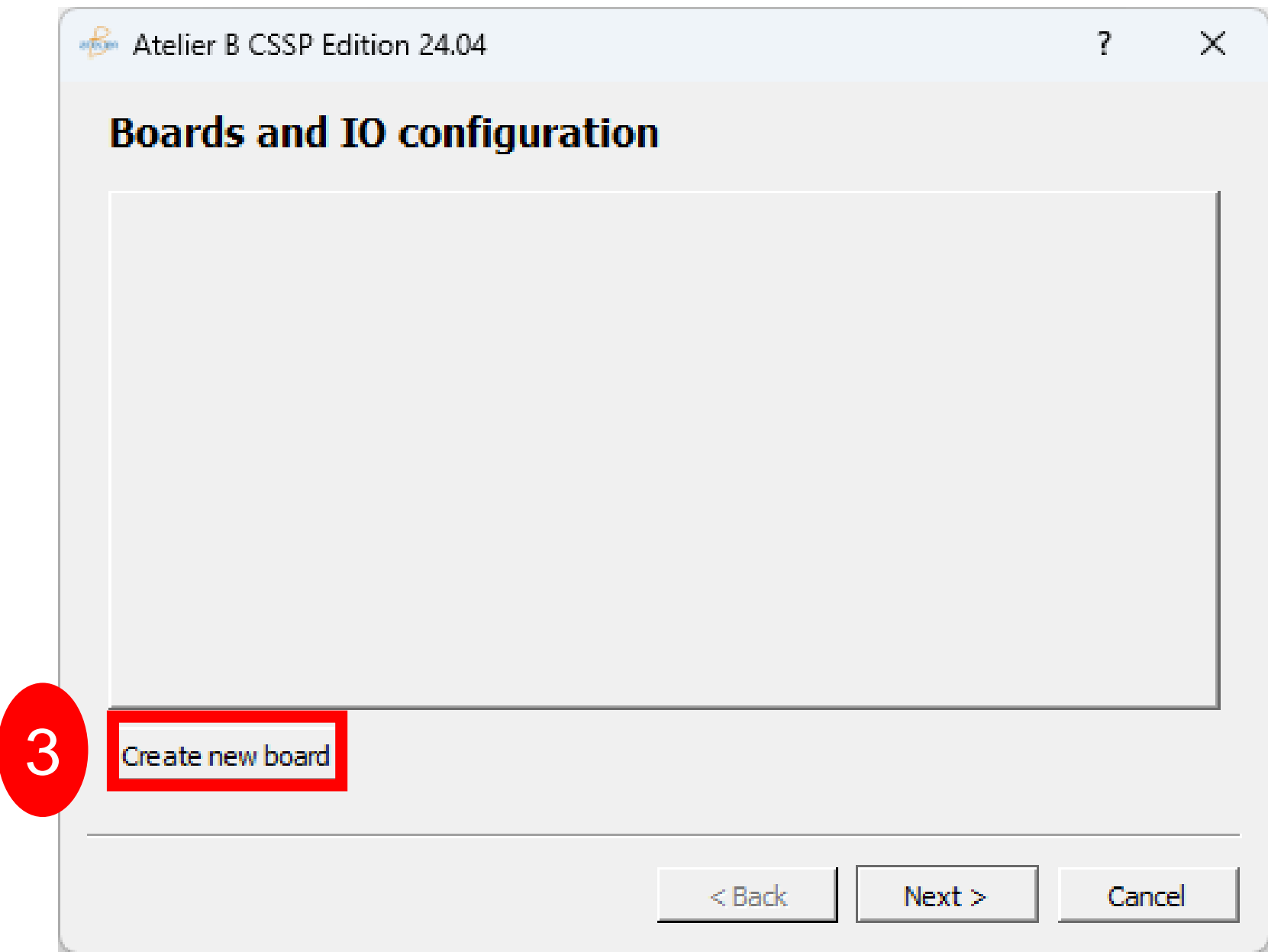


# Project Creation 2/3

► Select SK0



► Create a new board





# Project Creation 3/3

► Finish the creation

Atelier B CSSP Edition 24.04

**Boards summary**

BoardId: 0  
Total inputs: 3  
Total outputs: 2  
SecuId: 0xF0F00  
Board type: SK0

Inputs:

module_id	global_id	local_id	name	used
0	0	0	board_0_I1	true
0	1	1	board_0_I2	true
0	2	2	board_0_I3	true

Outputs:

module_id	global_id	local_id	name	used
0	0	0	board_0_O1	true
0	1	1	board_0_O2	true

Please check the configuration and click finish if you want to apply the changes to your project. Otherwise click cancel to abandon the wizard.

< Back

**1** Finish

Cancel

Warning

?

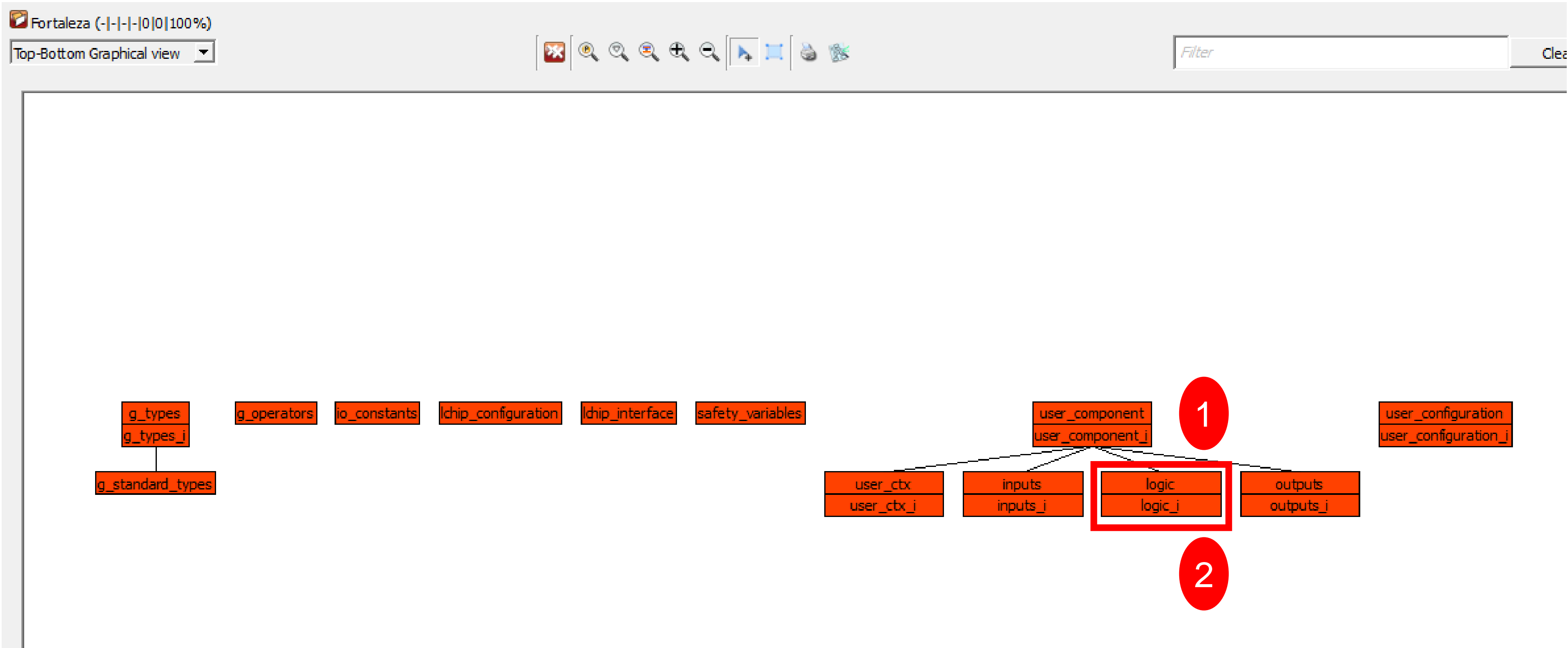
The new config will replace the one of your current project. Are you sure you want to proceed?

**2** Yes

No

# Project Created

- ▶ The view
- ▶ 2 components to modify

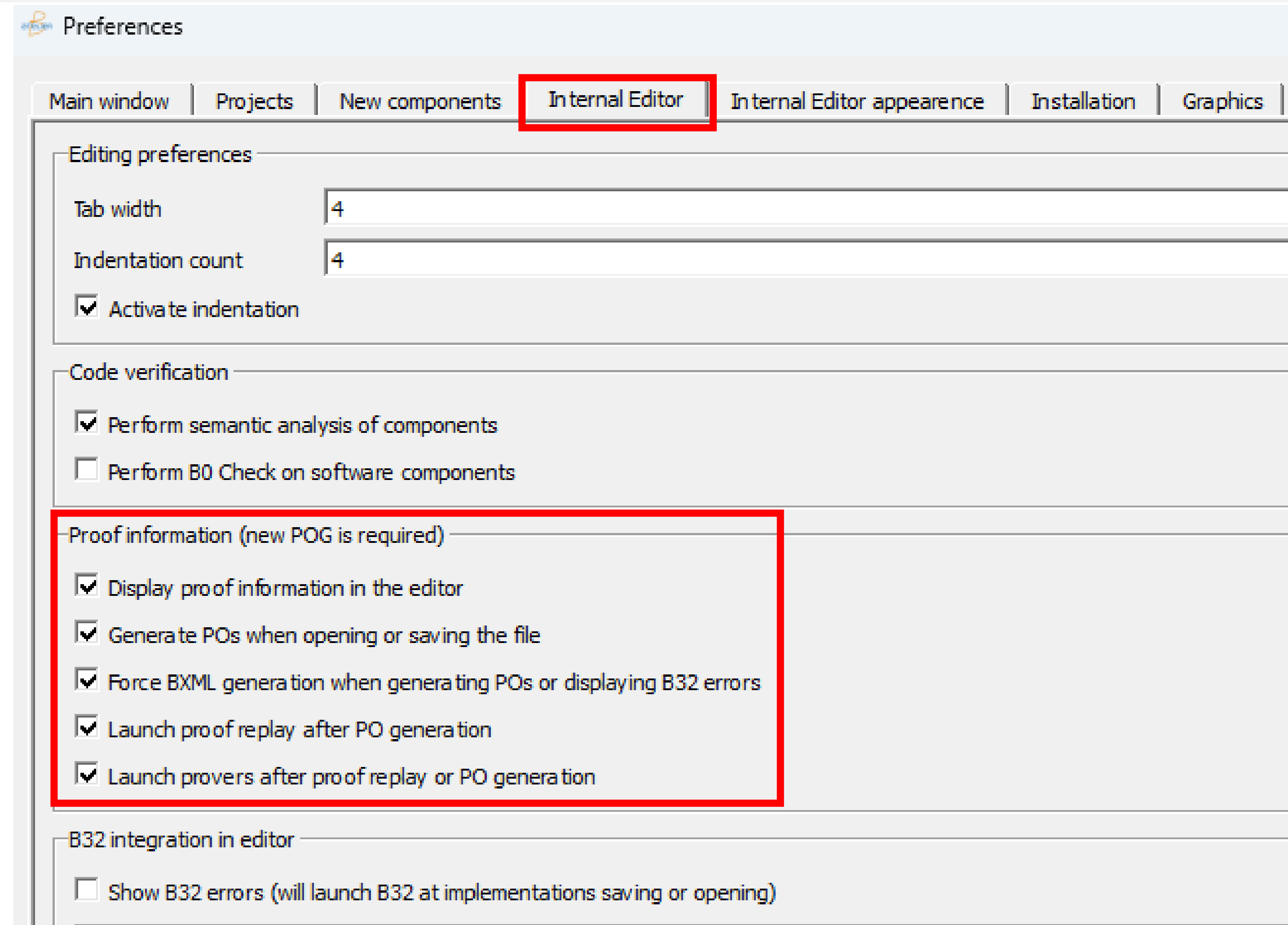


# Atelier B and Project Setup

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

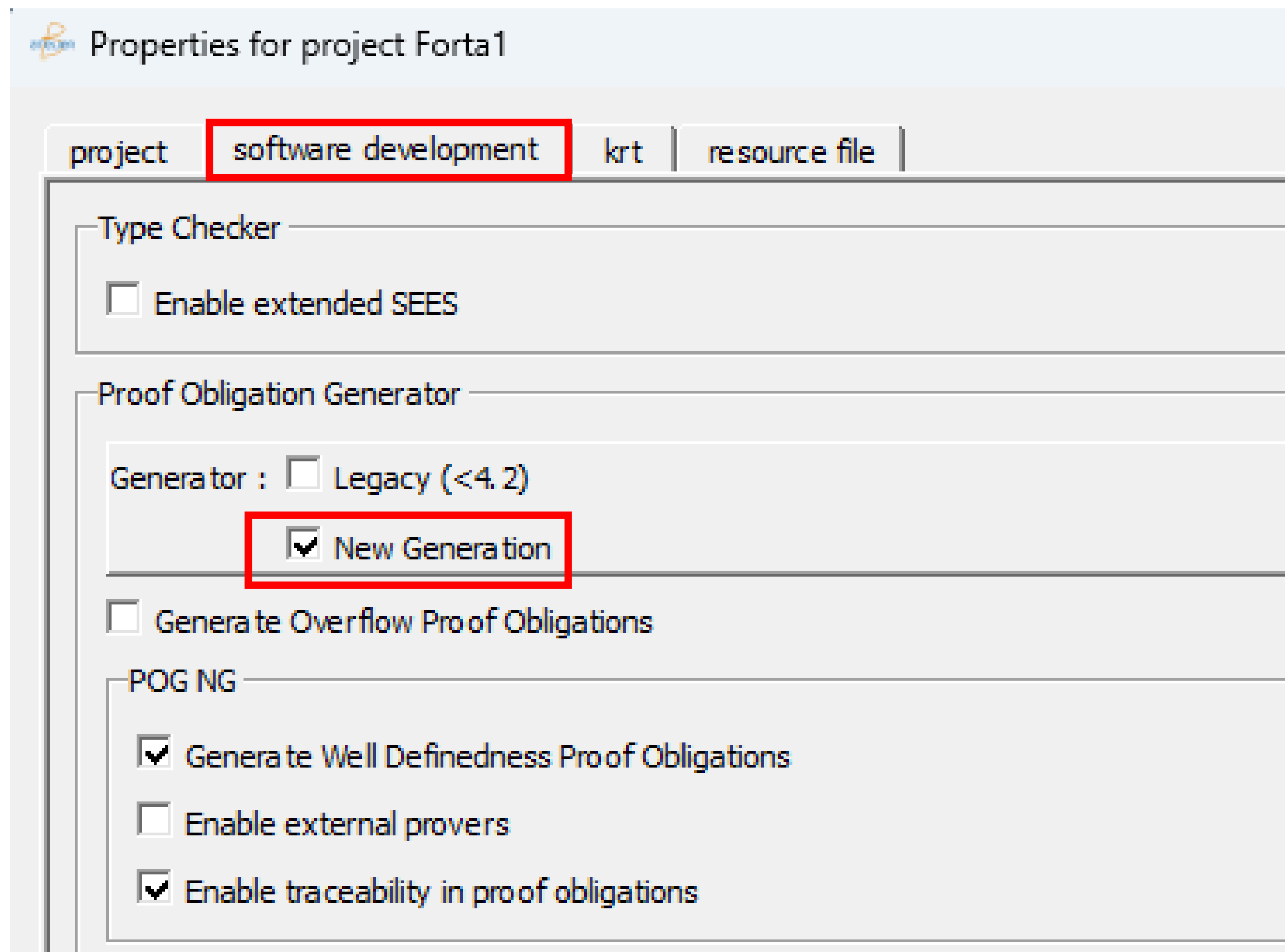
# Checking Setup 1/2

- ▶ 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

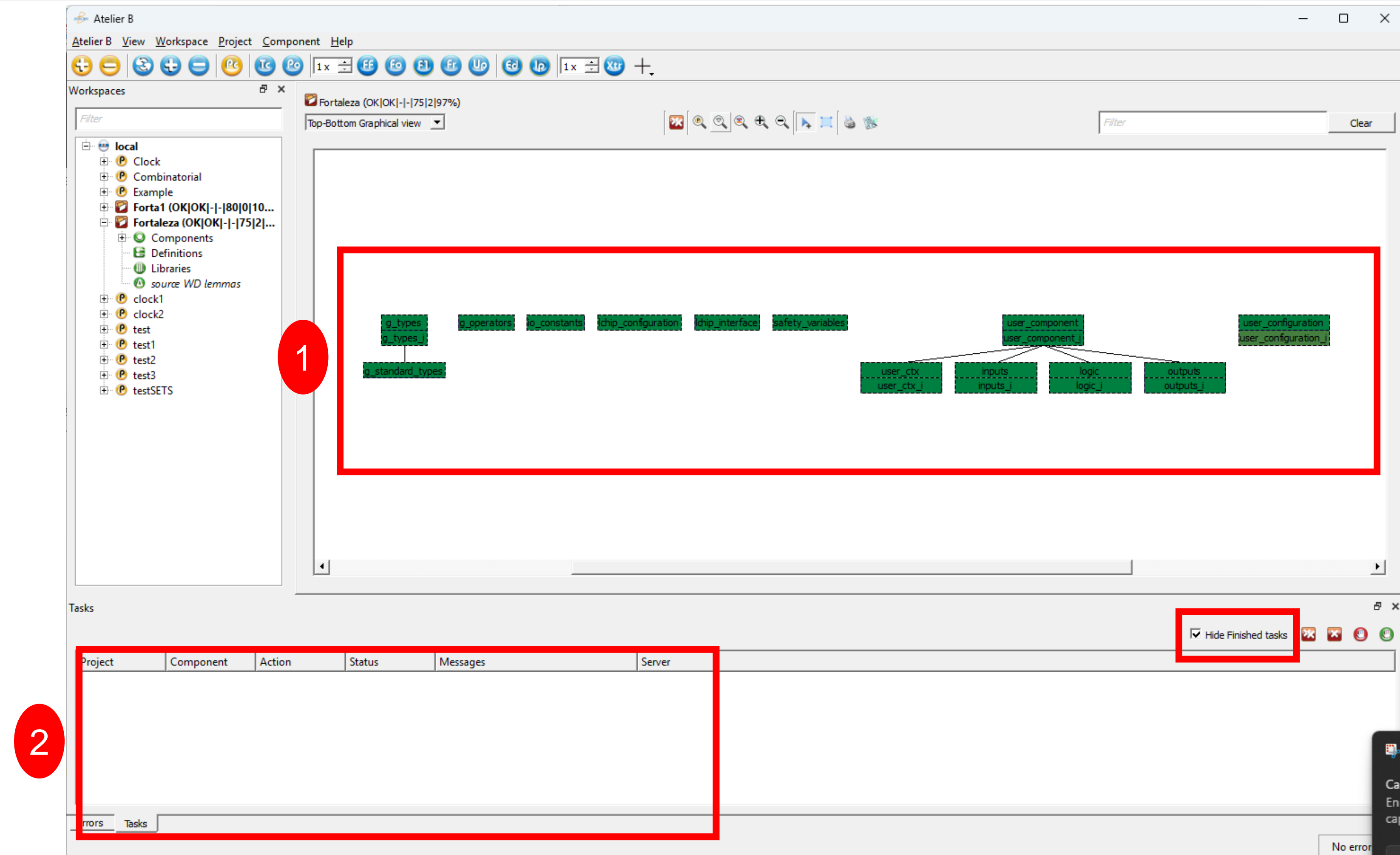
- ▶ Select all the components with Ctrl+A
- ▶ Start Proof Force 0 (or Ctrl-0)
- ▶ Wait for proof to complete

The screenshot shows the Atelier B IDE interface. The top toolbar contains various icons, with a red circle labeled '1' highlighting the 'Fo' (Proof Force) button. The main workspace displays a hierarchical diagram of the Fortaleza project components. The bottom panel, labeled 'Tasks', is highlighted with a red circle labeled '2' and contains the following table:

Project	Component	Action	Status	Messages	Server
Fortaleza	g_operators		Running	Pog generation...	localhost
Fortaleza	g_standard_types		Waiting		
Fortaleza	g_types		Waiting		
Fortaleza	g_types_i		Waiting		
Fortaleza	inputs		Waiting		
Fortaleza	inputs_i		Waiting		
Fortaleza	io_constants		Waiting		
Fortaleza	lchip_configura...		Waiting		

# To be sure Your Environment is Operational ... 2/5

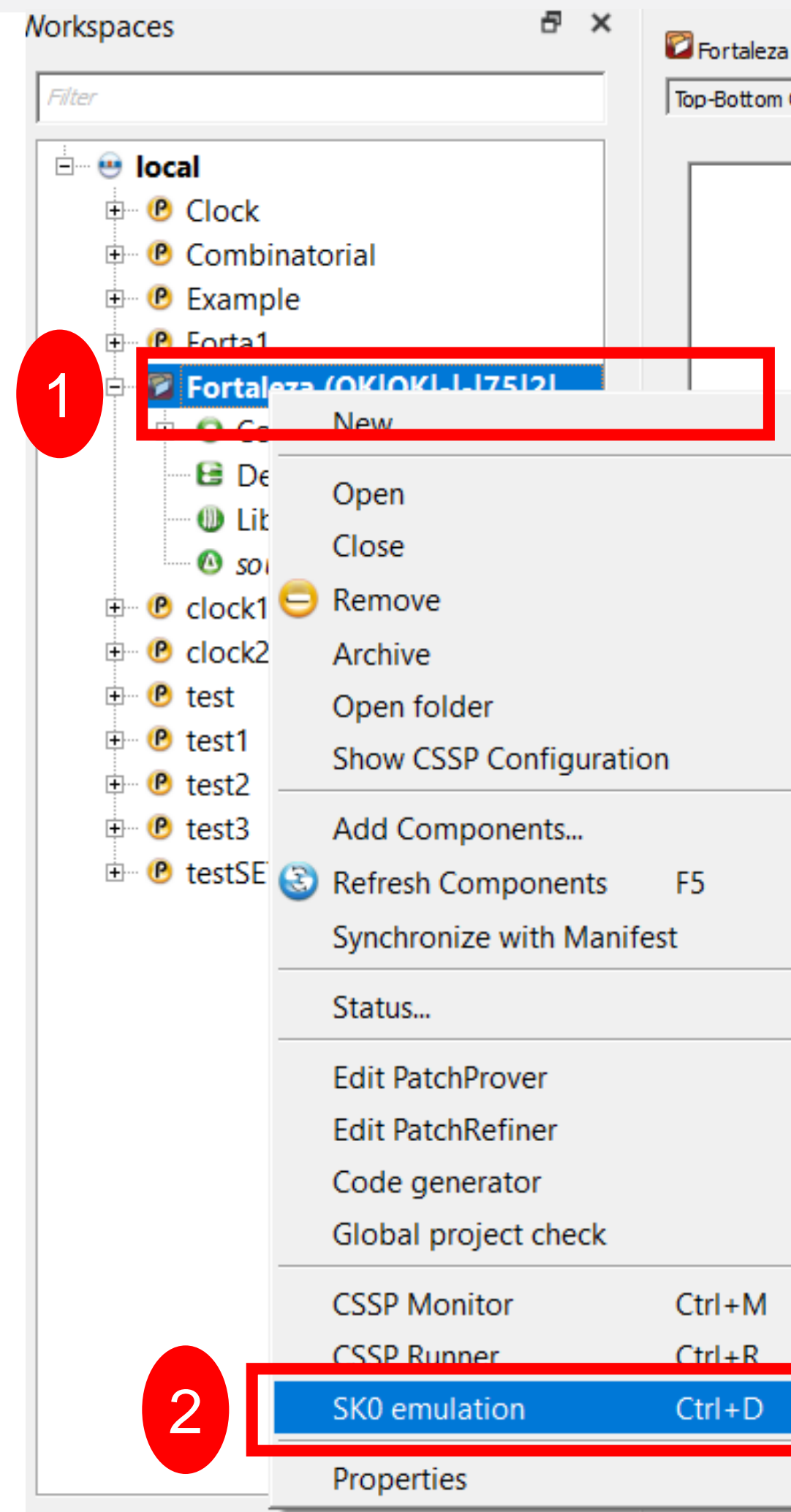
- ▶ All components green
- ▶ All tasks completed (select “Hide finished tasks”)



# To be sure Your Environment is Operational ... 3/5

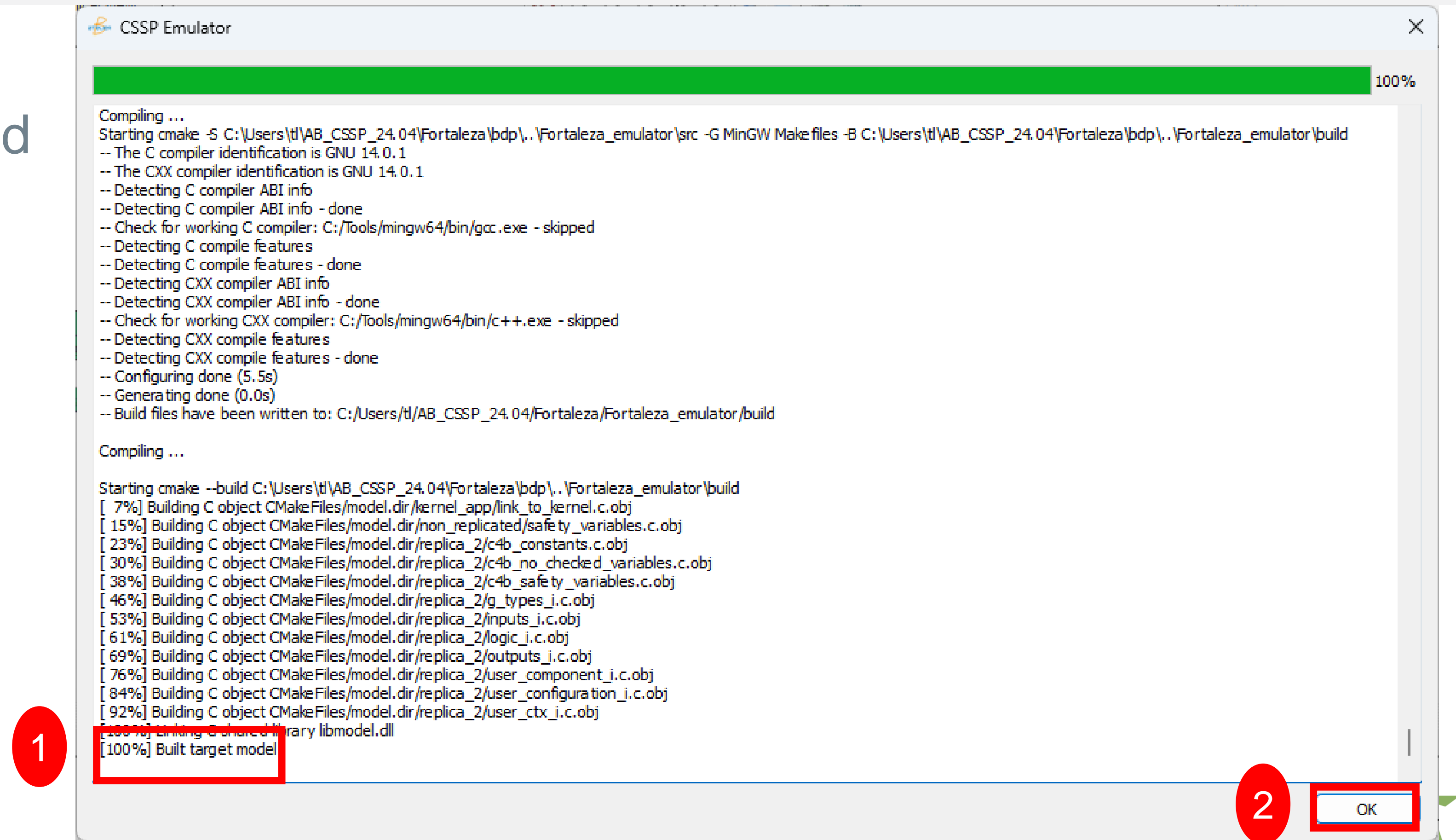
► Right click on the project

► Select “SK0 emulation” or  
Ctrl-D



# 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

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# 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

The screenshot displays the CSSP Emulator interface. On the left, a green circuit board is shown with various components labeled: POWER, O1, O2, SERIAL, USB, RESET, UC1, UC2, and a 'clearsy Safety platform' logo. At the bottom of the board, three input modules labeled I1, I2, and I3 are highlighted with a red box and a red circle containing the number 1. On the right, a 'Variables' table is visible, with two rows highlighted by red boxes and red circles containing the numbers 2 and 3.

Variables	Values
v_board_0_I1	0
v_board_0_I2	0
v_board_0_I3	0
v_board_0_O1	0
v_board_0_O2	0
v_divergence_test_var	0
v_ms_tick	5671



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