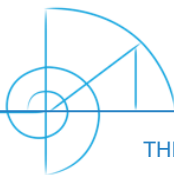
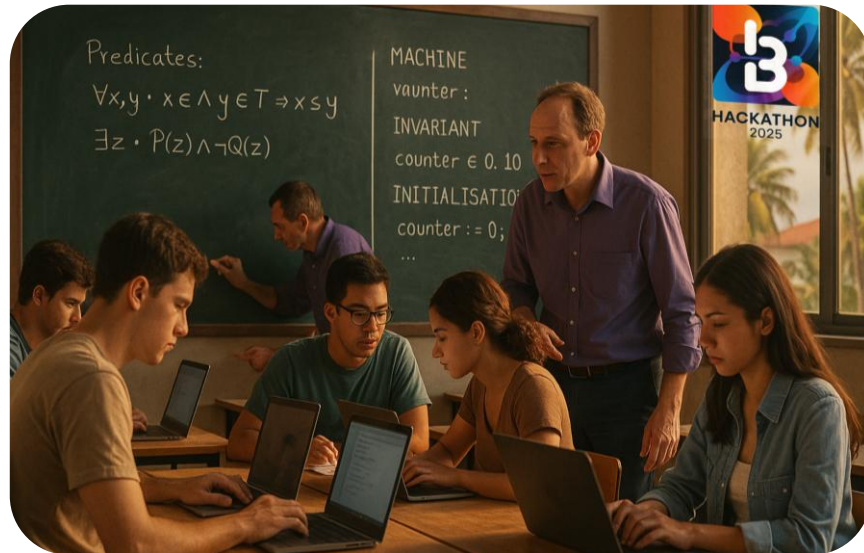


Hackathon

Introduction

Thierry Lecomte
R&D Director



Hackathon

- ▶ Spend one week together (5x 1.5h) on one subject
 - ▷ 2023: traffic lights
 - ▷ 2024: railways signalling
 - ▷ 2025: to be disclosed, mainly safety, a bit of security
- ▶ The goal is to show
 - ▷ your modelling skills and
 - ▷ the way you reason

Hackathon

► Programme:

▷ Every day a new topic related to the subject (Part 1 to 5)

► What do you need

▷ A brain

▷ Modelling skills

▷ Atelier B Community edition 24.04

<https://www.atelierb.eu/en/atelier-b-support-maintenance/download-atelier-b/>

▷ ProB2-UI (recent)

[https://prob.hhu.de/w/index.php?title=Download#ProB2-UI_\(based_on_JavaFX\)](https://prob.hhu.de/w/index.php?title=Download#ProB2-UI_(based_on_JavaFX))

▷ ChatGPT is not going to help you much

Hackathon

► Elements presented at <https://github.com/CLEARSY/hackathon-2025>

► Agenda

▷ Yesterday's subject (except day 1)

- Presentation of one solution (mine) (pushed on github just before the session)
- Feedback/discussion about the elements produced by the students
- Current status of the participants

▷ Today's subject

- Presentation of the topic: specification, technical details, elements of B modelling
- I am available to solve any problem with the tools, with the language (syntax)
- but **the modelling is your thing**
- Subject has some constraints, but you are absolutely free to model as you wish

Evaluation

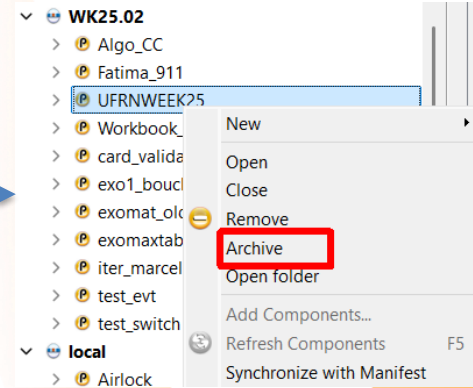
► Report (daily)

► Files (project archive (“whole project”) or zip file (.mch, .imp))

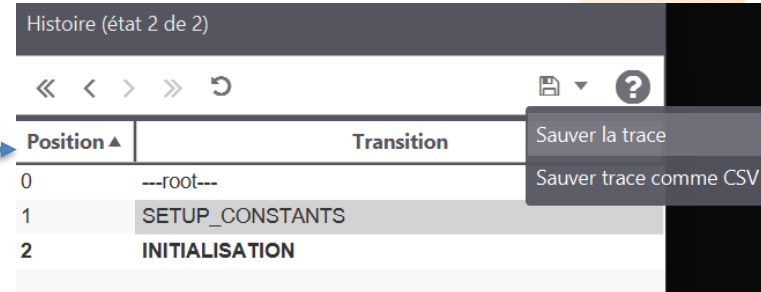
► Project status screenshot

► ProB trace file

► Answers to optional questions



Component /	TypeChecked	POs Generated	Proof Obligations	Proved	Unproved
Iter_base	OK	OK	2	2	0
Iter_main	OK	OK	1	0	1
Iter_main_i	OK	OK	24	12	12
Iter_services	OK	OK	8	7	1
Iter_services_i	OK	OK	8	7	1



Evaluation

► Report (daily)

- ▷ Email: thierry.lecomte@clearsy.com
- ▷ Subject: HACKATHON – P<#> - <your name>
- ▷ Body: elements from the previous slide

- ▷ Sent before D+1 noon
- ▷ Except for the last day where it needs to be sent 30' before the end of the session, to correct, elect the best ones, and offers prizes

Evaluation

► Report

▷ Valuation: 10 pts per part (maximum 50 pts)

- 8 pts for the technicalities (syntax, type, proof obligation, scenario played as expected)
- 2 pts for the “modelling style” (readable, elegant) **[Ctrl-A Ctrl-I to auto indent]**

▷ Optional questions: pts accumulated independently, to discriminate students with same valuation

▷ #1 gets a portable PC (15.6", Ryzen 7 5700U (8C/16T, 4,3GHz) 16Go RAM DDR4x2 + 512Go M.2 SSD)

▷ #2 gets a SDD (1 To)

▷ #3 gets a smaller SDD (0.5 To)

▷ #1 could be invited for a 6-month internship in France in case of excellence and if interested

CLEARSY

Safety Solutions Designer

AIX
LYON
PARIS
STRASBOURG

WWW.CLEARSY.COM

JUL 2025

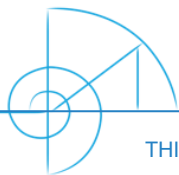
Let's start !

<https://mooc.imd.ufrn.br/>



MOOC

massive open
online course



THIERRY.LECOMTE@CLEARSY.COM



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