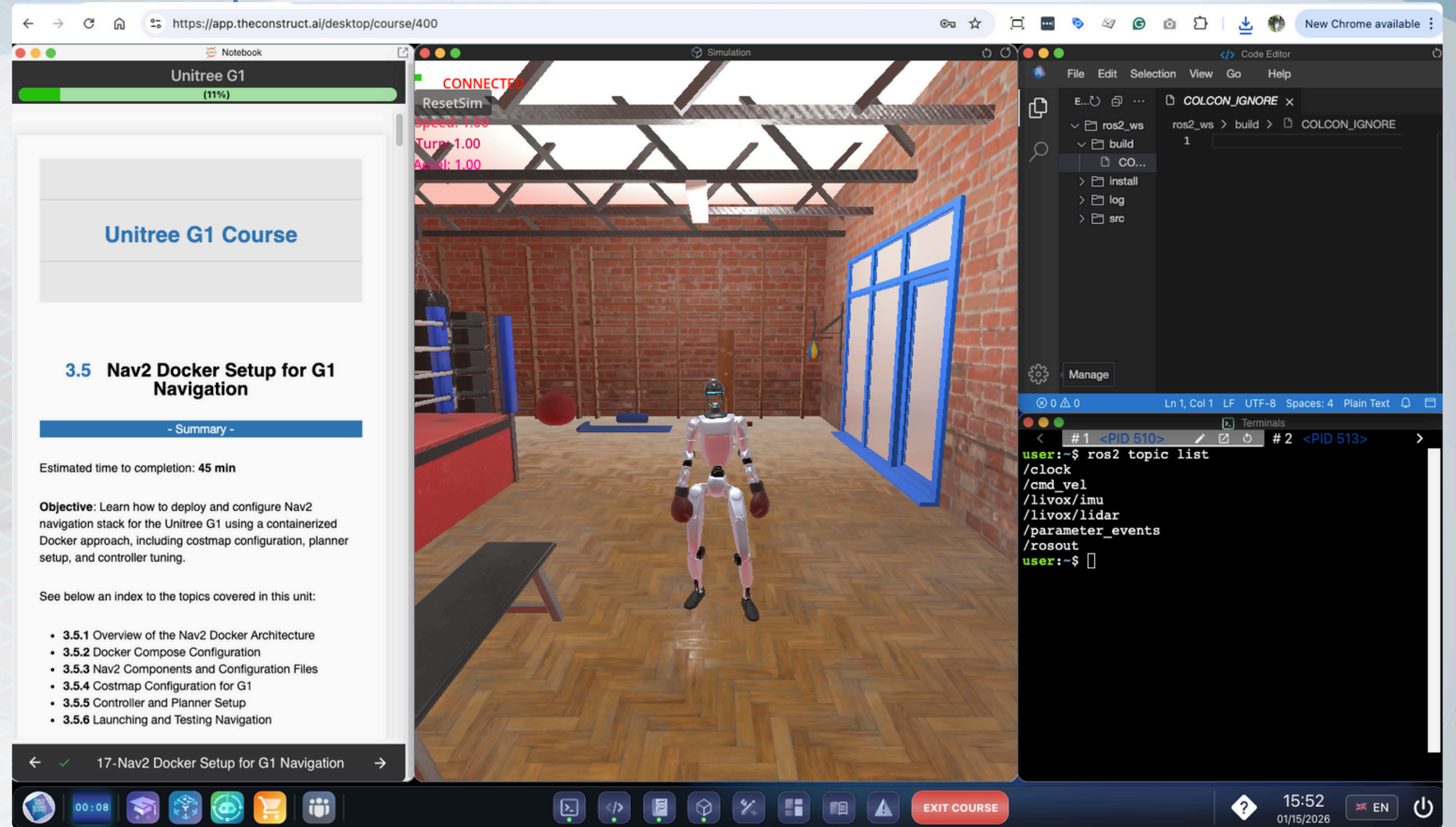




# 机器人编程教育解决方案

全流程实践教学，从仿真到真实机器人

- 100% 在线教学平台
- 浏览器即用 (无需安装)
- 零环境配置
- 跨平台支持 (任意电脑)



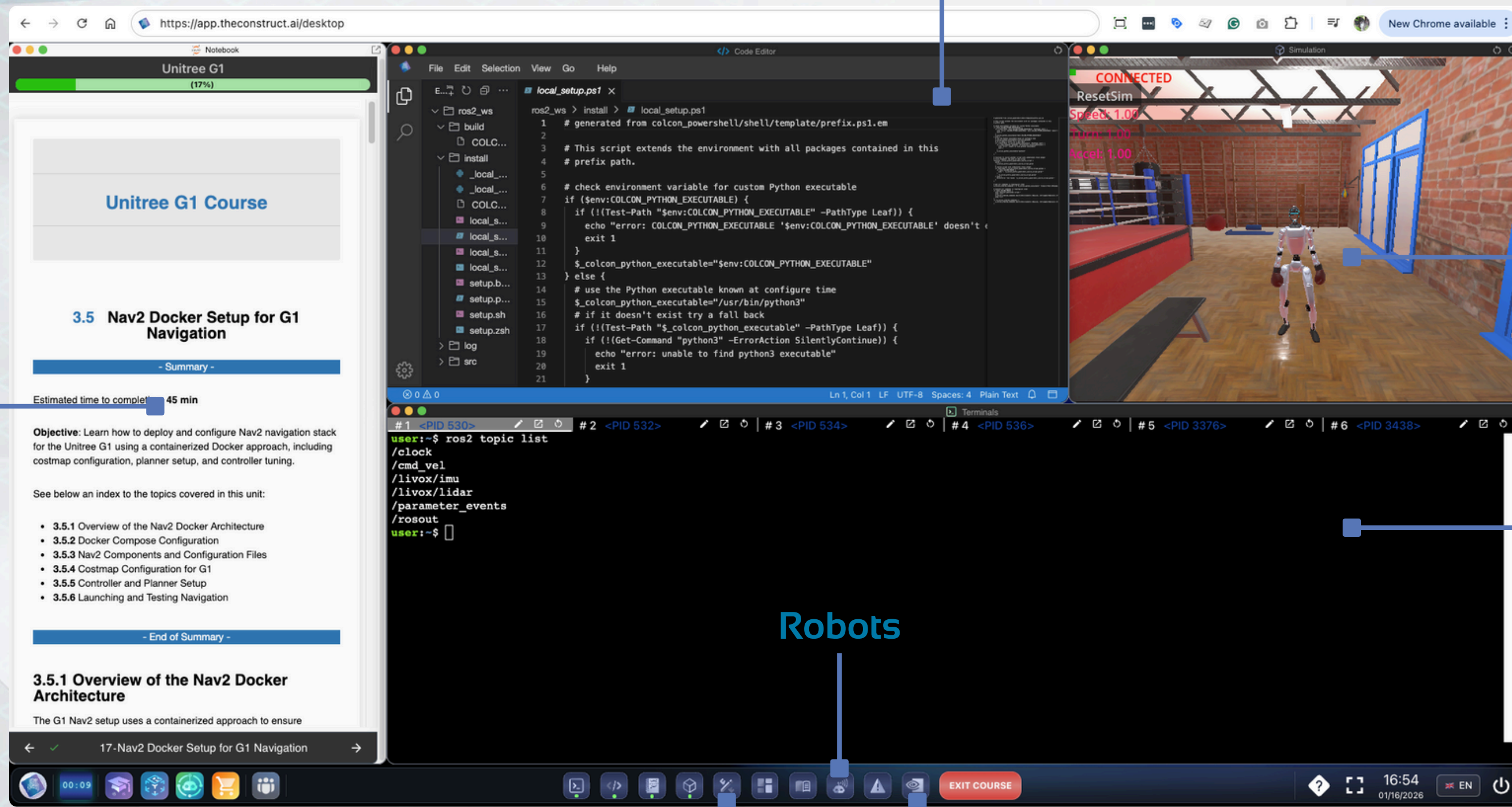
平台形态

学习者无需任何本地安装或环境配置，  
加速机器人学习过程。

Code Editor  
代码编辑器

Simulation  
仿真机器人

Notebook  
概念讲解



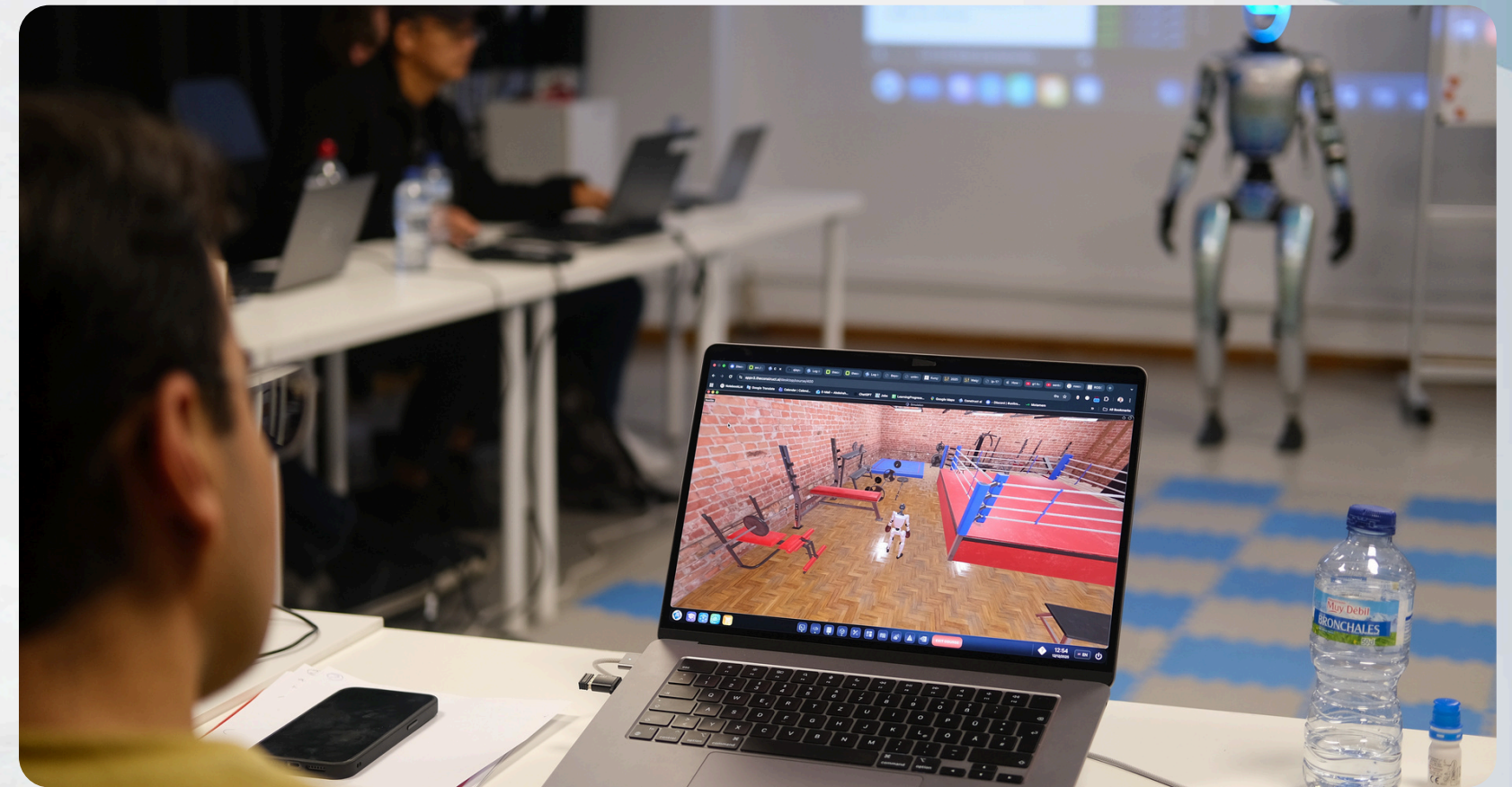
Robots

Terminals  
终端

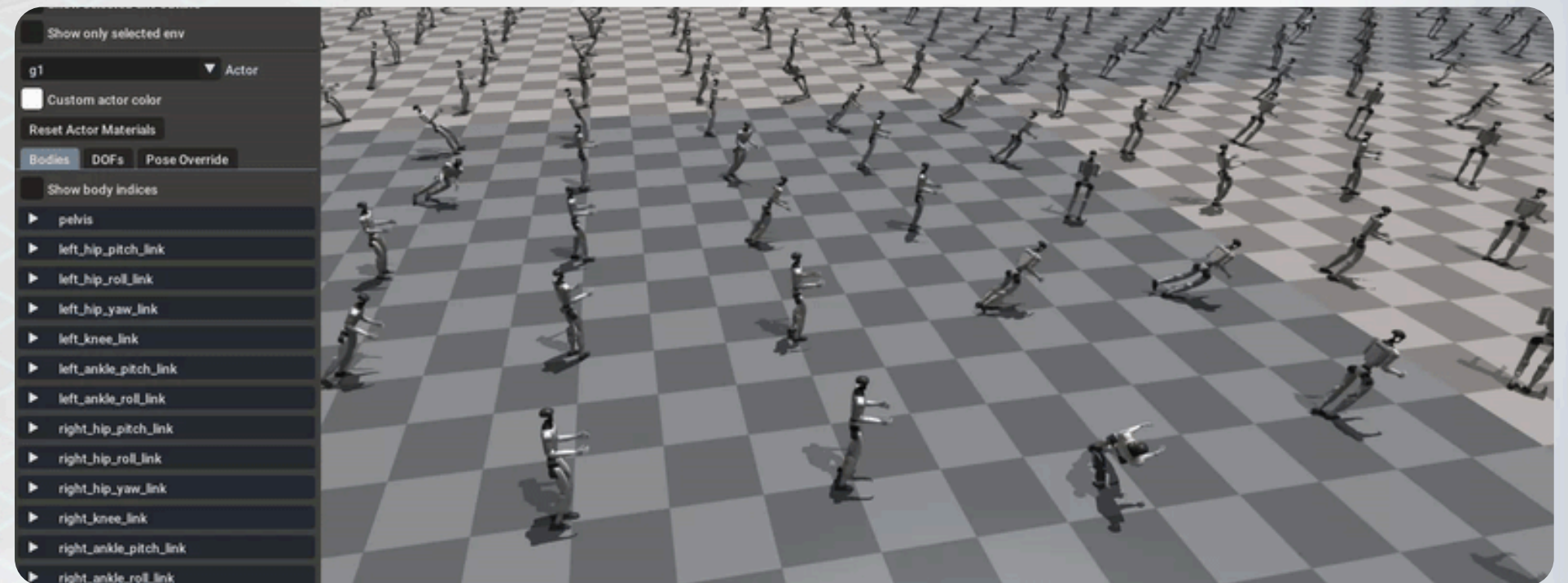
一体化学习环境

Debugging  
Tools

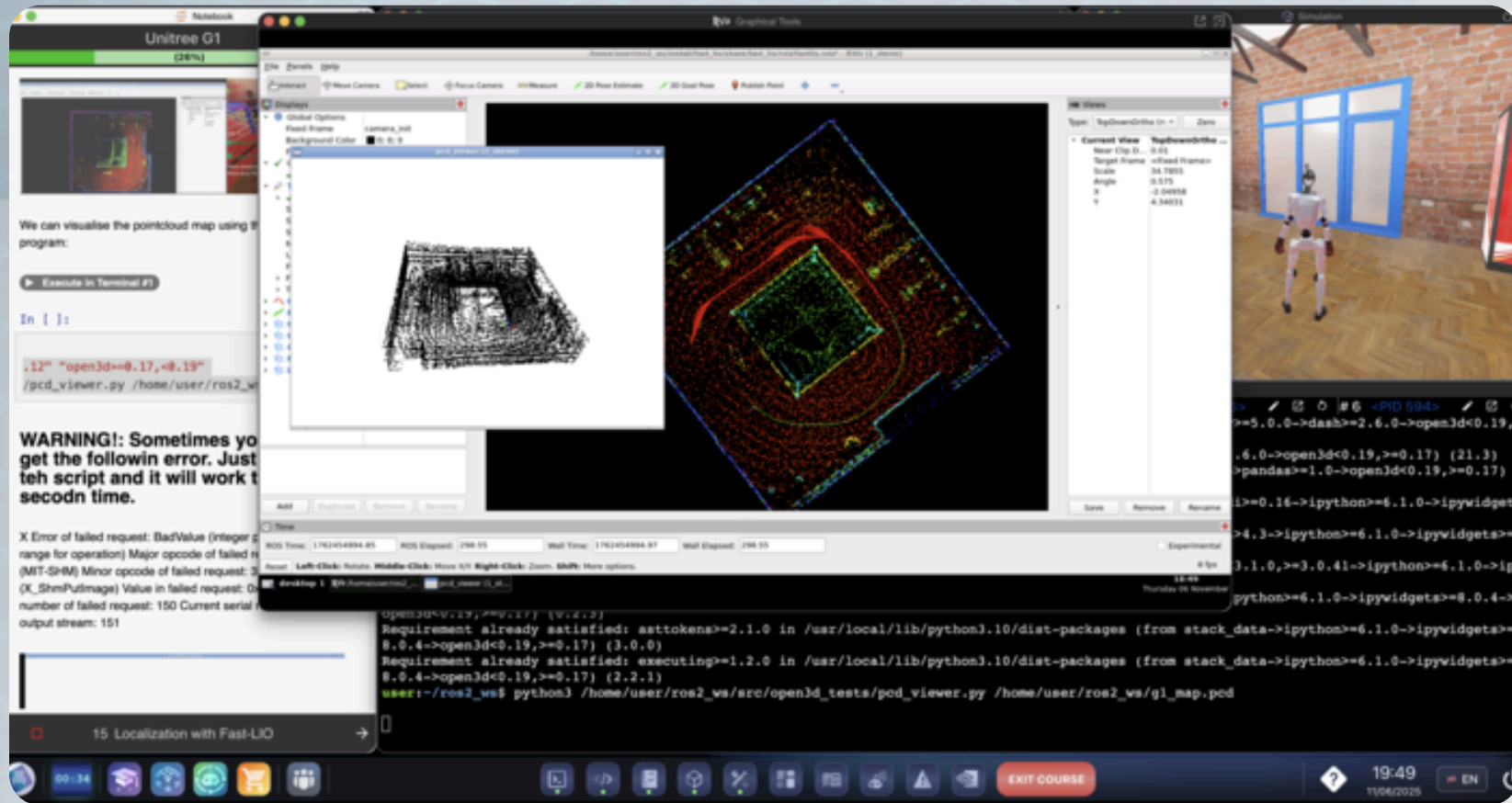
NVIDIA  
Isaac Lab



- 在线 **ROS** 编程环境
- 机器人仿真系统
- 支持 **NVIDIA Isaac Lab** 在线运行
- 云端计算与运行



## 技术环境



平台采用以实践为导向的教学模式，学生在仿真机器人上进行大量动手练习，有效提升学习效率和教学效果。

同时支持远程连接真实机器人，学生可将课程所学直接应用于真实机器人系统，实现从理论到实践的完整教学闭环。

### Understanding ROS 2 Actions

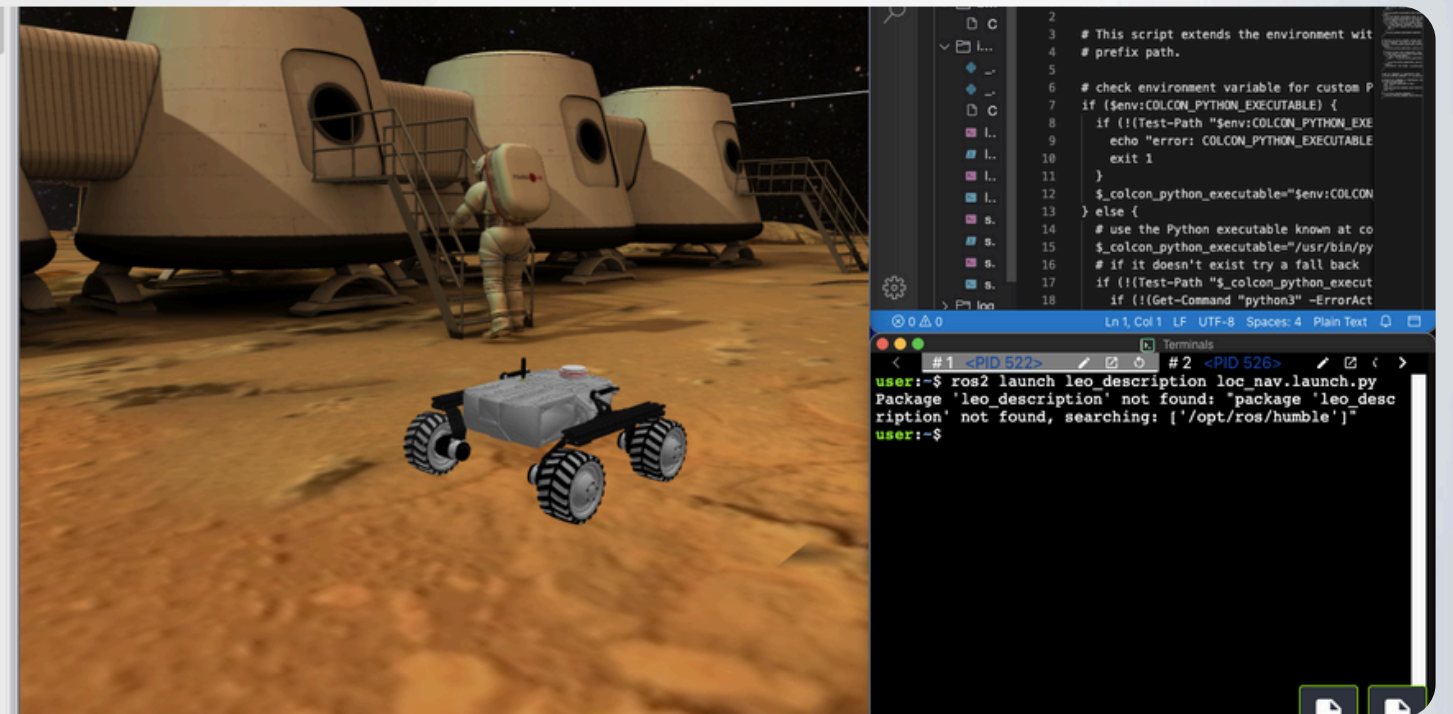
Estimated time to completion: 1.5 hours

#### 7.9 Actions Quiz

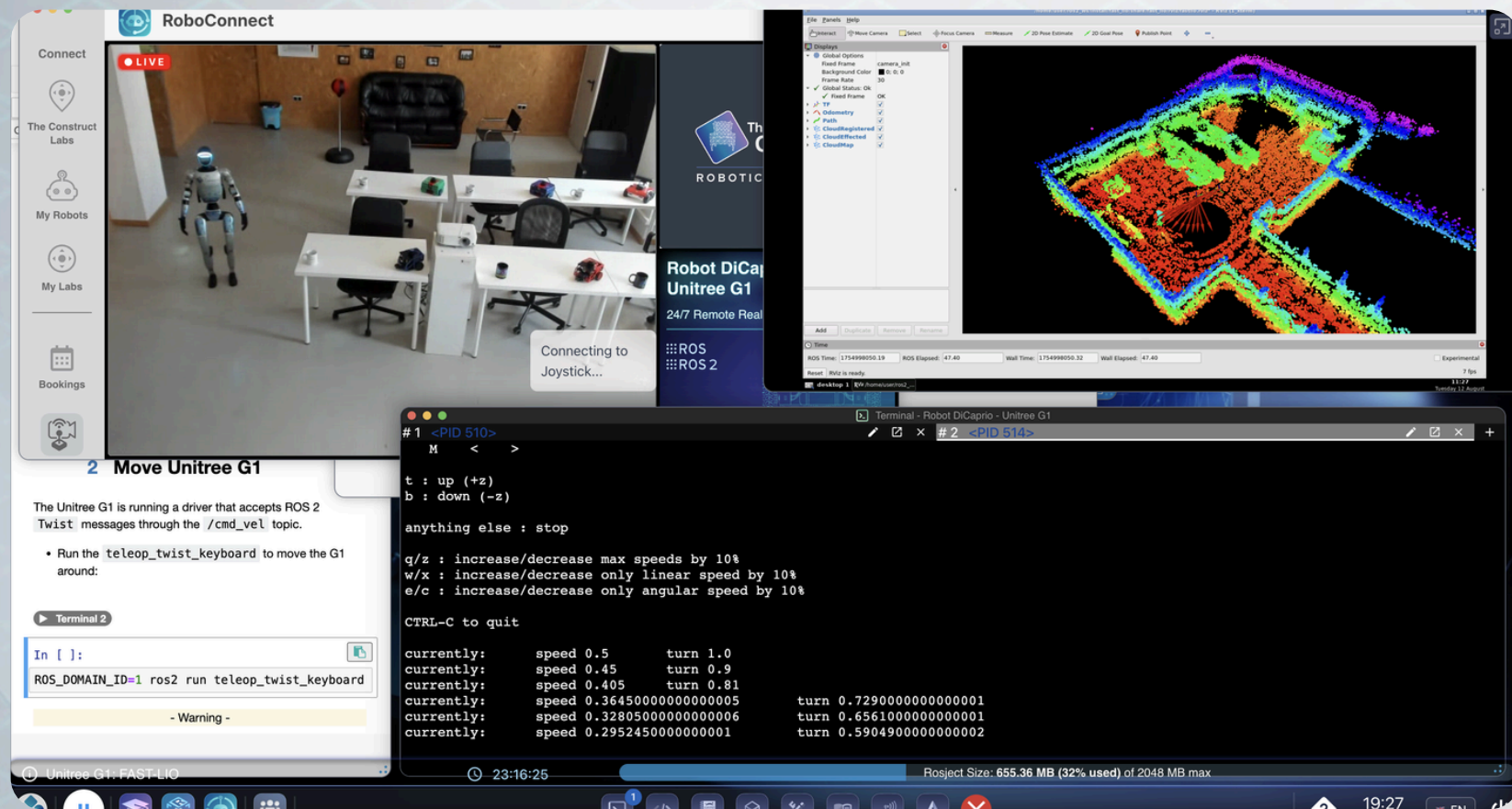


To evaluate this quiz, we will ask you to perform various tasks. For each task, **precise instructions** will be provided, including the name of the package, launch files and Python scripts, topic names to use, etc.

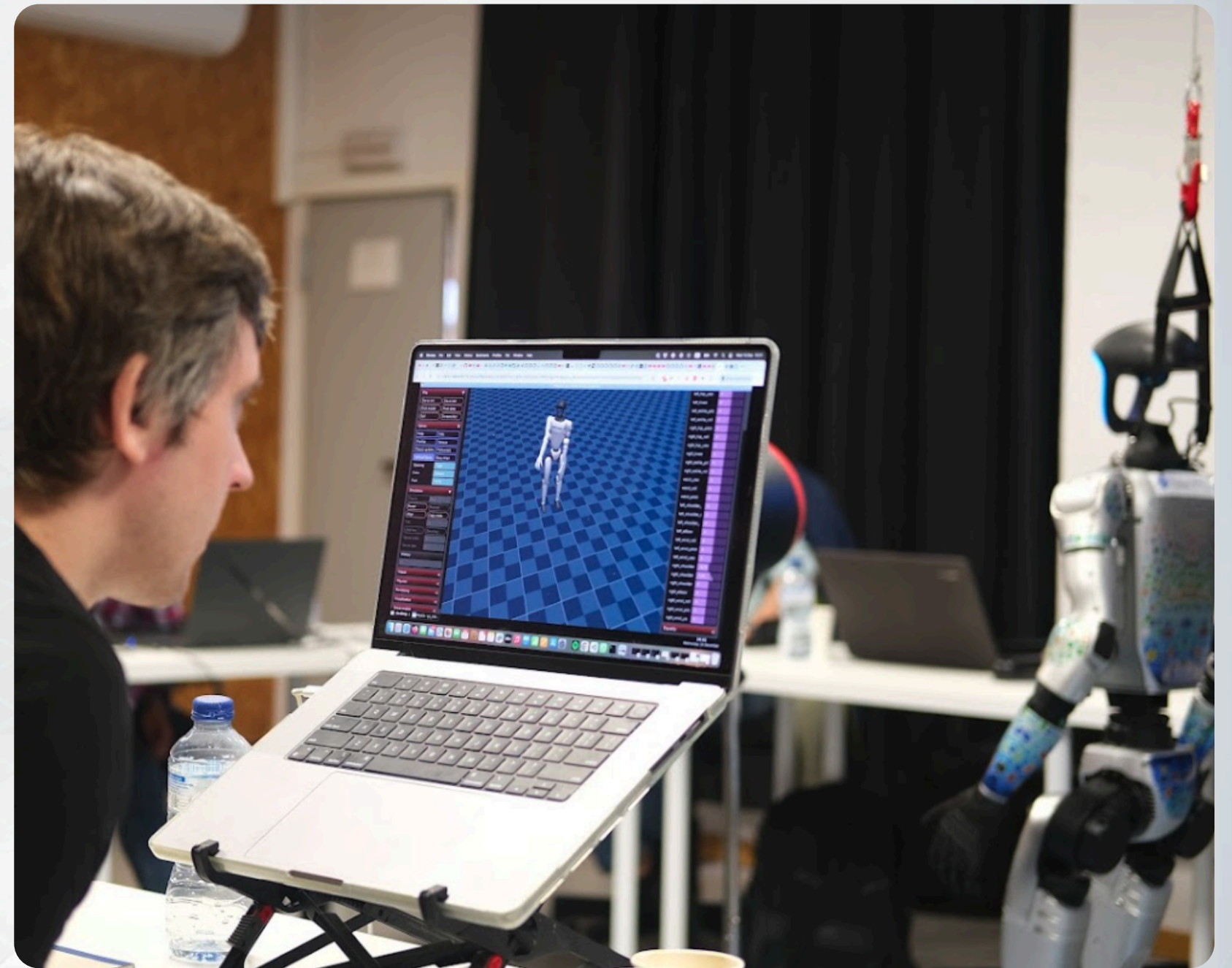
It is **VERY IMPORTANT** that you strictly follow these instructions, as they will enable our automated correction system to score your quiz accurately. If your name differs from the name specified in the exam instructions, your exercise will be marked as **FAILED**, even if it functions correctly.

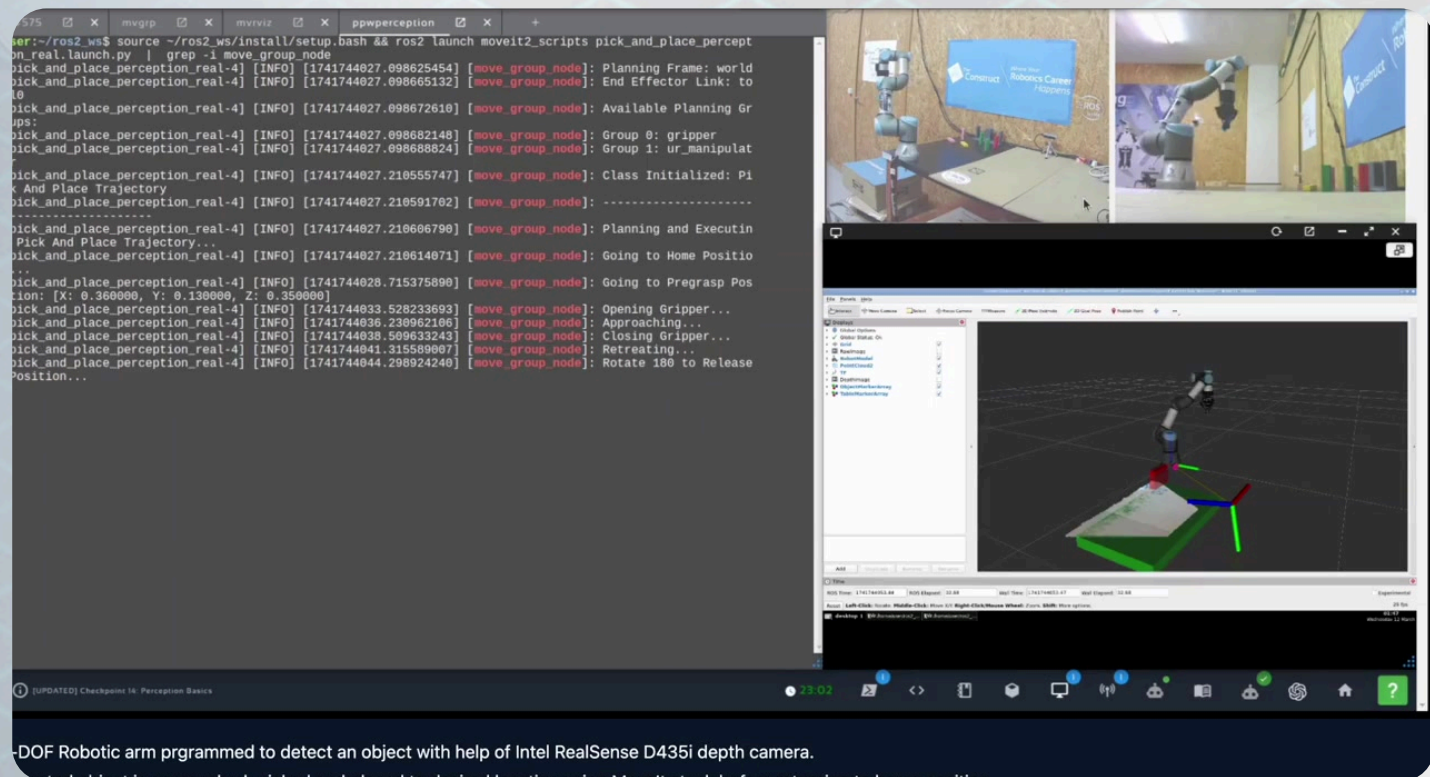
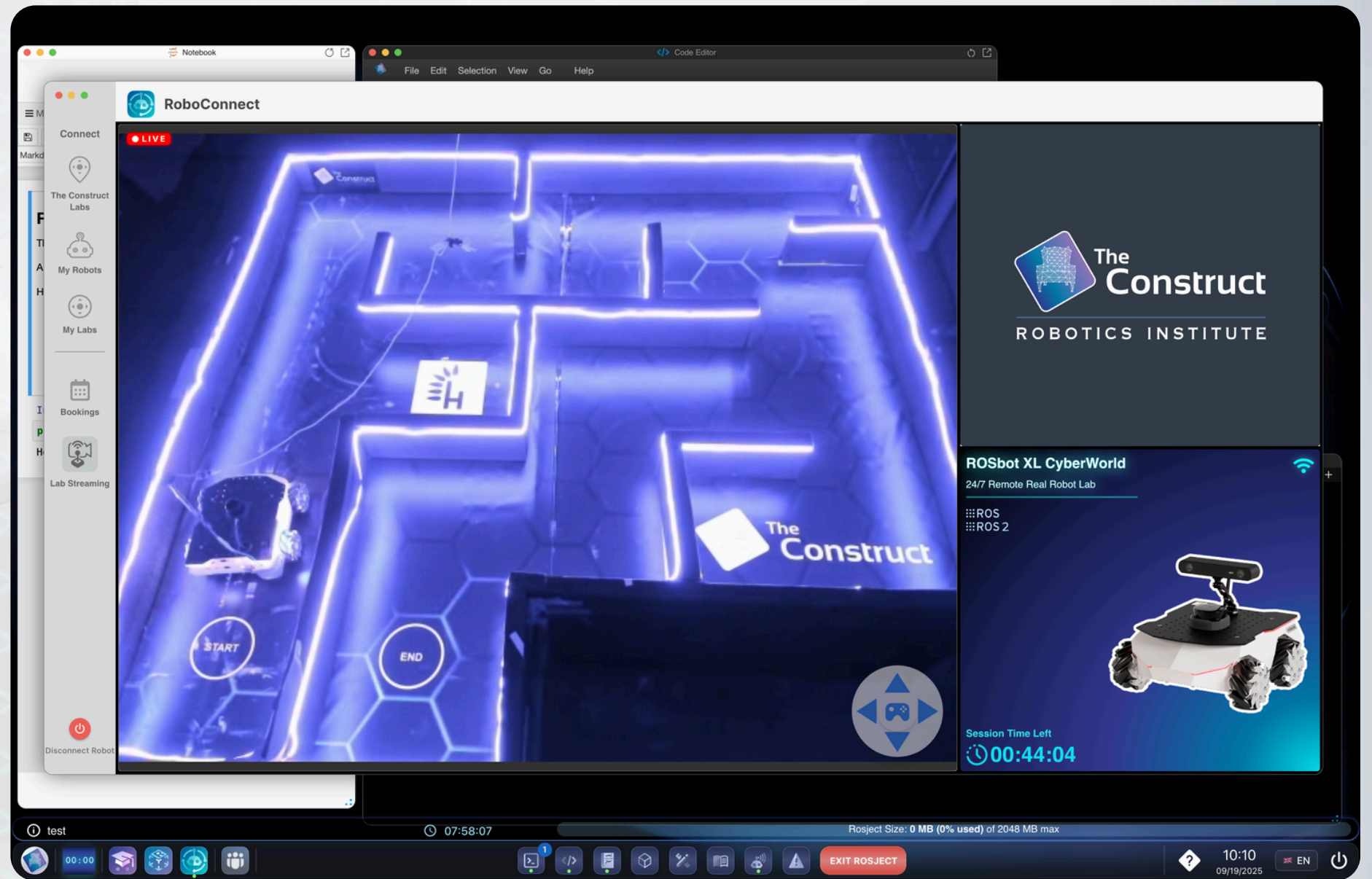
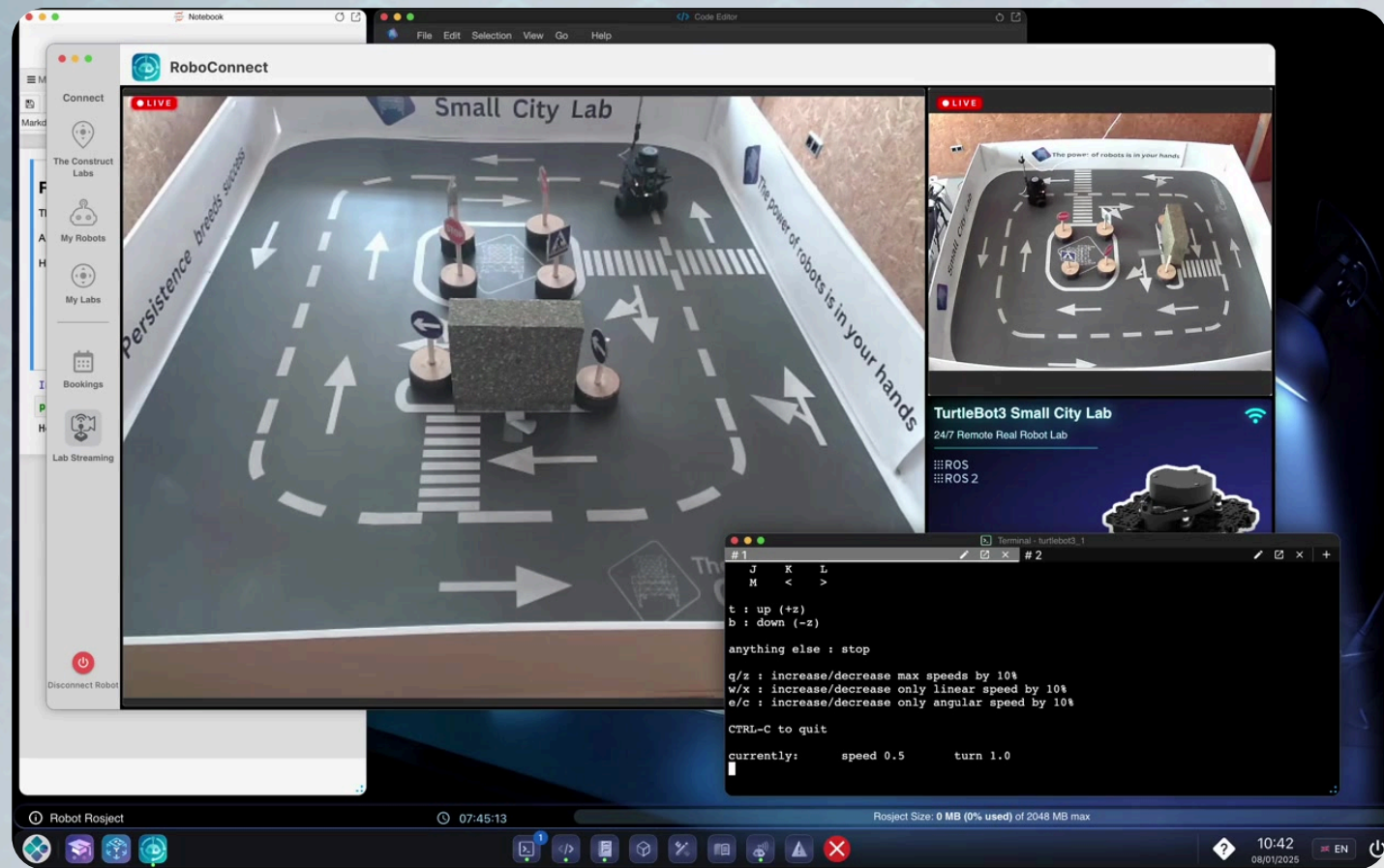


# 教学模式



学生在同一平台中完成  
建图 (Mapping) 与导航 (Navigation) 学习,  
从仿真环境到真实机器人, 实时验证学习效果。





一键连接真实机器人

The screenshot displays a ROS2 workstation interface. On the left, the RoboConnect application shows a live video feed of a humanoid robot in a room, with a sidebar containing navigation options like 'Connect', 'The Construct Labs', 'My Robots', 'My Labs', and 'Bookings'. Below the video, a terminal window is open, showing the command `ros2 run teleop_twist_keyboard` and its output, which includes speed and turn values. To the right, the RViz graphical tool displays a 3D point cloud of the environment, with a sidebar showing various display options like 'Global Options', 'Fixed Frame', 'Frame Rate', 'Global Status', 'TF', 'Path', 'CloudRegistered', 'CloudEffected', and 'CloudMap'. The bottom of the screen shows a system tray with icons for network, volume, and power, along with the date and time: 19:27 on 08/12/2025.

概念 → 代码 → 仿真 → 真机



 **The  
Construct**  
ROBOTICS INSTITUTE

**立即体验**

[www.theconstruct.ai](http://www.theconstruct.ai)