ISRLAB Virtual Robotics Project HOW-TO

A.Y. 2025/26
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NOTICE:
Design documentation shall be **negotiated and approved** by the professor before the implementation starts.

Design Documentation:

1. A General Project **description**, abstract, all text in English
2. Choise of the simulated **ROBOT** model with technical description:
   - Robot model from the simulator library or own design
     Sensors set
     Actuators set
   - Body shape description with picture
   - Eventual detail analysis, if needed
   - Capabilities, DOF (degree of freedom), movable parts
3. Choice of the **simulator** environment (from the ones described in the IEEE paper)
4. Robot **Goal** definition, (not trivial)
   - What is the main tasks to accomplish?
   - Main goal
   - Sub goals, if any
5. **Diagrams** about the robot agent architecture design according to guidelines from CH2 of the AI-FCA book
   - Hierarchical Layers
   - Each layer internal description
6. **Testing protocol**
7. Experimental **results**:
   - Sensors/actuators calibration data
   - Videos showing the robot accomplishing the expected tasks
   - Acquired data analysis (percept/command trace)
   - Statistics with graphs
8. **UML** diagrams as needed

Non-functional requirements for the implementation:

- All files in the private MS Teams group channel
- Dockerized multi-process deployment
- Message broker system adoption, why?
- Logging system
- GUI to explore sensors data & perceptions in "real"-time (* simulated-time)
- Shared software repository (its ok the code folder in the channel)
- ReadMe.md MarkDown instruction file to **install** and **test**

Final presentation:

- Slides & videos for 15 minutes with Q/A
- Every student in the group describing her/his role and contribution with Q/A