Logic and Constraint Programming

Second assignment - Drools

A.Y. 2021/2022

Think about a smart environment where several IoT devices are present, e.g., a smart-industry, a smart-farm, a smart-hospital. Such devices can perceive the environment and act on it in order to achieve a goal. For instance, in a smart-home we can imagine a system that manages air conditioned depending on the external temperature.

The student has to figure out a *smart-scenario* where IoT devices react to environmental conditions in a smart way. As a result, she/he has to provide a software solution, using Drools, that models the scenario.

The student is left free to choose the scenario and the logic of the system, the only mandatory requirements are:

- to provide a scenario with at least 5 IoT devices;

- to have at least 10 rules acting on environment changes;

- to have at least 3 out of the 10 rules joining different types of facts.

The student will have to provide as the final result a compressed folder containing the project sources, an executable of the project, a short document describing the scenario and the behavior of the specified rules, and instructions on how to run the executable. Notably, the only requirement about programming language regards the use of Drools, while the student can choose the language and frameworks she/he prefers for the rest of the project code. The evaluation will focus mainly on the complexity of the defined rules and on the logic of the solution. Other aspects, e.g., the presence of a user interface, have less impact on the final mark.