IMAS

First Activity 2013-2014

Topic: First analysis of the practical exercise: environment, agent architecture, agent properties.

In this activity, the groups must study the theoretical concepts described in the first lectures and relate them to the practical exercise of the MAS course.

First, each group has to analyze the ***characteristics of the environment*** that the practical exercise presents:

- Accessible or inaccessible.
- Deterministic or non-deterministic.
- Episodic or non-episodic.
- Static or dynamic.
- Discrete or continuous.

Then, it has to be analyzed how these characteristics may influence on the design and implementation of each of the agents in the system, e.g. the type of ***architecture*** of each kind of agent. For example, in a dynamic environment a reactive architecture may be more appropriate than a deliberative one. Based on the environment characteristics, sustain the architecture type to implement on your practical exercise for each kind of agent (reactive, deliberative or hybrid). Remember that a particular architecture proposes a particular methodology for building agents.

Finally, each group has to analyze also the ***properties*** that each type of agents in the practical exercise must incorporate in order to fulfill all their objectives, based on their architecture and the environment characteristics. For example, you can indicate if an agent requires learning or pro-activeness capabilities to achieve certain goal.

In summary, the following aspects will be evaluated in this activity:

- Written report detailing the study and analysis of:
  - Characteristics of the environment.
  - Best kind of architecture to apply to each type of agents.
  - Properties that should be exhibited by each type of agents.
- Oral presentation (preferably in English, 15-20 minutes)

Remember that each group will consist of 4 to 5 members. The deadline to send the written report to the lab assistant is October 15 (Tuesday) via Moodle. On October 16 (Wednesday) each group has to present orally the developed work (the lab assistant will choose a person of each group to make the presentation).