**Description of the used framework**

For the first project I will be using JADE. It is an acronym for Jave Agent Development Framework and as the name suggests, it is a software framework fully implemented in Java that can help developers create agent-based applications that are compliant with FIPA (Foundation for Intelligent Physical Agents).

The framework takes care of several software engineering related tasks that are needed in the development of agent-based systems. For instance, it implements a message passing mechanism between agents that can use one of several protocols defined by FIPA, the needed encoding and parsing or the agent life cycle. Also, the application can be distributed among several machines that do not need to have the same OS. Additionally, JADE includes a set of APIs and development tools that make it easy to create, test and debug agent-based applications.

In short, JADE helps in the abstraction of the agents, provides a task execution and composition model, peer to peer agent communication based on asynchronous message passing, and a yellow pages service that supports publish and subscribe discovery mechanism. As such, it provides a good starting point for developing agent-based systems, by hiding a lot of complexity unrelated necessary to the core ideas of agents.