**Project Title:** Design and Implementation of a Multi-agent Hotel Reservation System with Jason

**Due:** 11.04.2024

**Project Description:**

A Customer Agent, who wants to reserve hotel rooms on behalf of a user, asks for the appropriate rooms to the Hotel Agents representing real hotels in this scenario. You should implement all agents using Jason. At first, the Customer Agent searches for Hotel Agents by asking the Mediator Agent according to the location (Izmir, Istanbul, etc.). Upon receiving the names of the hotel agents, the Customer Agent immediately sends query messages to all hotel agents indicating the hotel rank (e.g. five-star) and the room price. The hotel agents may or may not answer to this query within a predefined deadline (e.g. 30 seconds). Hotel agents can decide whether to reply or not in order to query conditions asking by the customer agent. Customer agent receives the replies and chooses one of the replying agents to make the reservation. If just one hotel agent replies positively, the reservation will automatically be made on this hotel. If more than one proposals are received, then the Customer Agent’s decision should be based on the lowest-price or first come first served basis when more than one lowest prices exist. Your application can be console-based and the initial beliefs of the agents can be perceived from environment while the related Jason agents are initialized. For example, location, rank and price information for each Hotel Agent can be determined during the initialization of these agents.

***Bonus:*** If a negotiation mechanism is also implemented between the Customer and Hotel Agents (e.g. after getting the bids, the Customer Agent starts negotiation with the Hotel Agent having the lowest-price when the price is still over the Customer Agent’s desired price. Mutually, the Hotel Agent tries to keep the room price as close as possible to the initial value), such projects will receive extra 50% bonus of the original project point.

**Notes:**

**1)** In addition to the source codes of your project, do not forget to send a project report briefly discussing the MAS you designed and implemented.

**2)** You should add sufficient number of screenshots into your report demonstrating the execution of your MAS.

**3)** All source codes and related homework reports should be submitted via [Ege Ders](https://egeders.ege.edu.tr/) platform: Derslerim 🡪 2023 - 2024 Bahar Dönemi 🡪 Enstitüler 🡪 Fen Bilimleri Enstitüsü 🡪 Uluslararası Bilgisayar 🡪 Bilgi Teknolojileri 🡪 Çok Etmenli Sistemler - 540464 - 2324B 🡪 Hafta 5: JaCaMo Framework 🡪 Project 2. Please also send a copy of your files to geylani@gmail.com and baristezel@gmail.com in the format of ogrenci\_no\_odev\_no.zip.