



# Da Capo a Proposal for BDI-Based Tutorial for Teaching Music

Alberto Nieto Rocha    2163071736@cua.uam.mx  
albertonr7@gmail.com

Wulfrano Arturo Luna Ramírez    wluna@correo.cua.uam.mx



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# Technology and Education

Technology has helped to solve some problems generated by social distance. Schools around the world have opted to carry out their activities in a virtual way, thanks to the use of internet and digital platforms that allow teachers to teach content, assign tasks, review homework, among other educational activities.



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## Benefits of learning music

It has been demonstrated that learning music can be beneficial to health and even can help combat depression and promote a better mood.





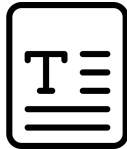
## Preliminaries

- During a summer music school in 2020, the activities performed by the students were conducted on videos and audio recordings. With these, teachers could grade and provide feedback
- Difficult to serve so many students
- Tools that are capable of acting as tutors

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## First version of Da capo

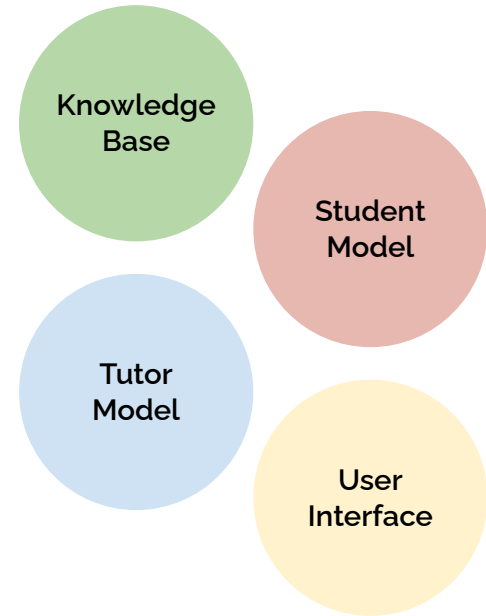
As a first version of Da Capo, we consider showing different types of content such as texts, audios, images, and videos. With these, users will be able to perform various exercises such as identifying concepts, improving their musical ear and learning about music history.



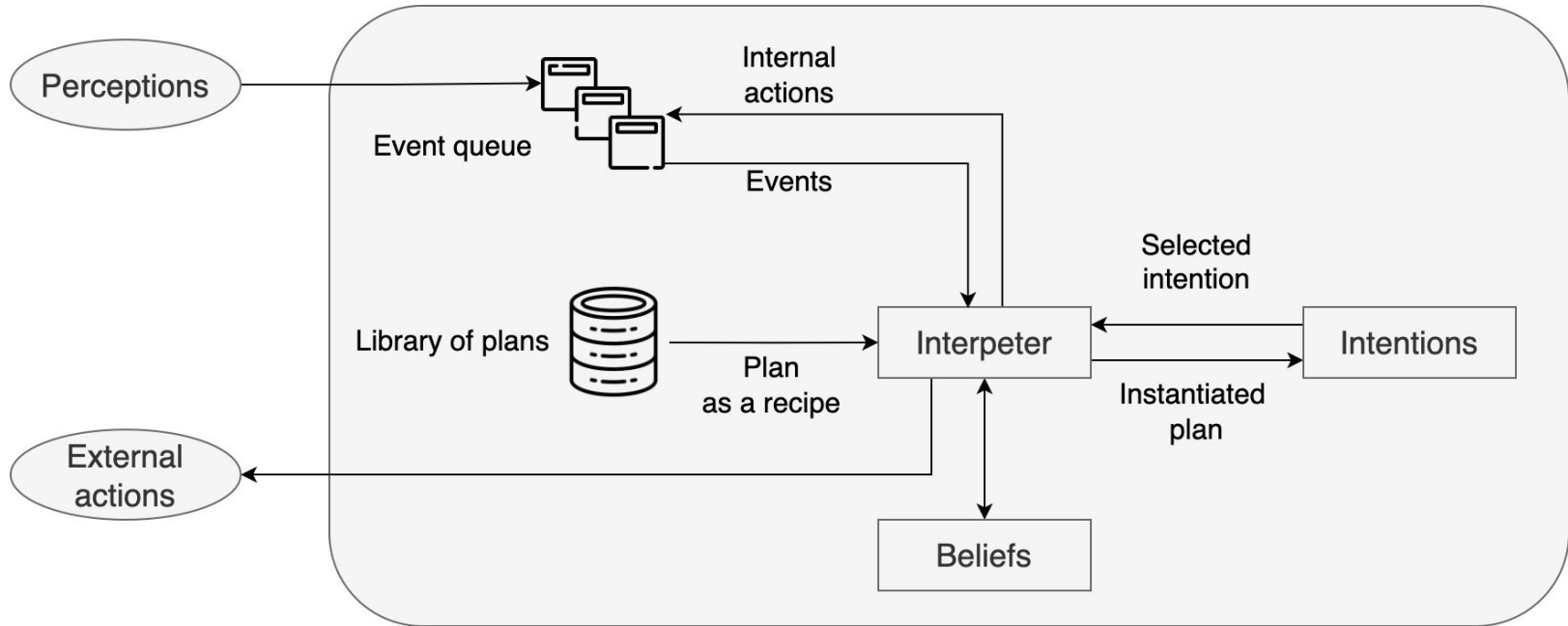
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# Tutor Agents

- **Knowledge base:** stores the material that are taught in the agent.
- **Student model:** manages the information about students.
- **Tutor model:** it is responsible for deciding, based on the information in the student's model, the topics that will be presented to the students.
- **User interface:** it is the connection between the tutor system and the student.



# BDI Agents





# Da Capo Technologies



HTML



CSS



Javascript



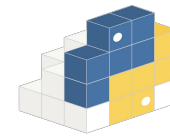
Flask



MySQL




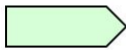

Python

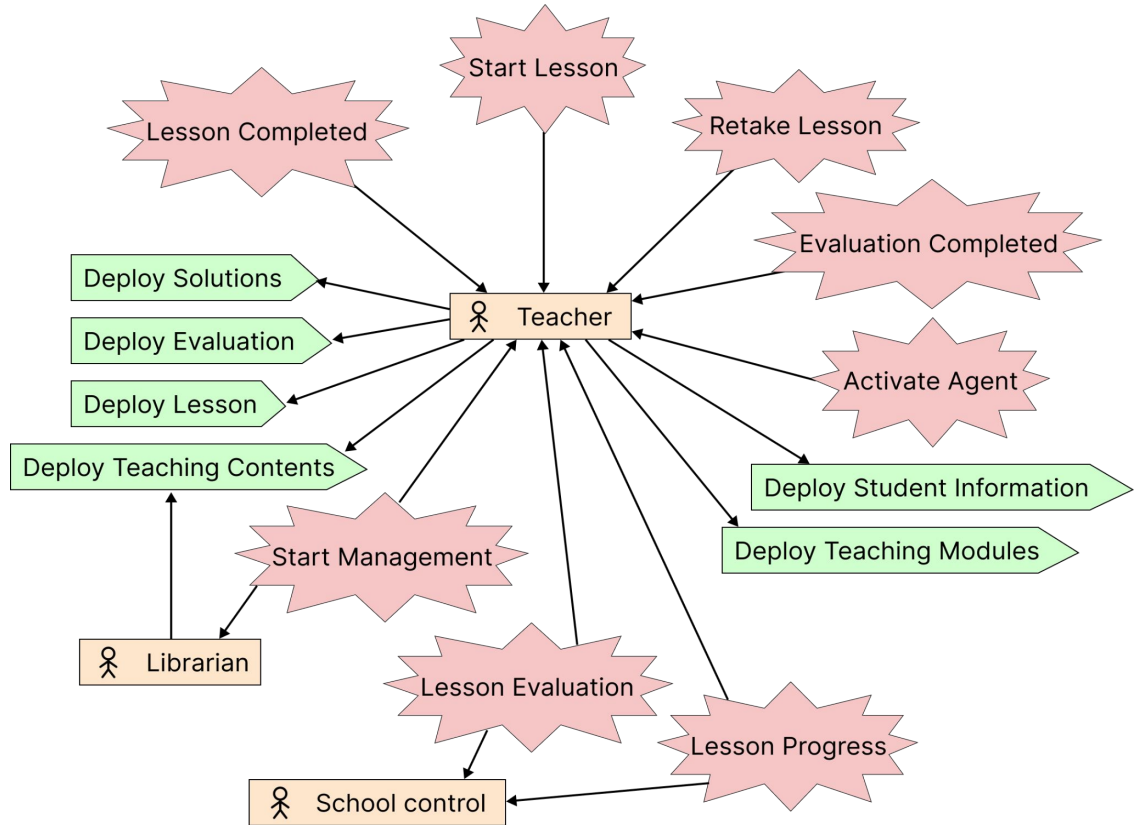


JASON-style AgentSpeak for  
Python

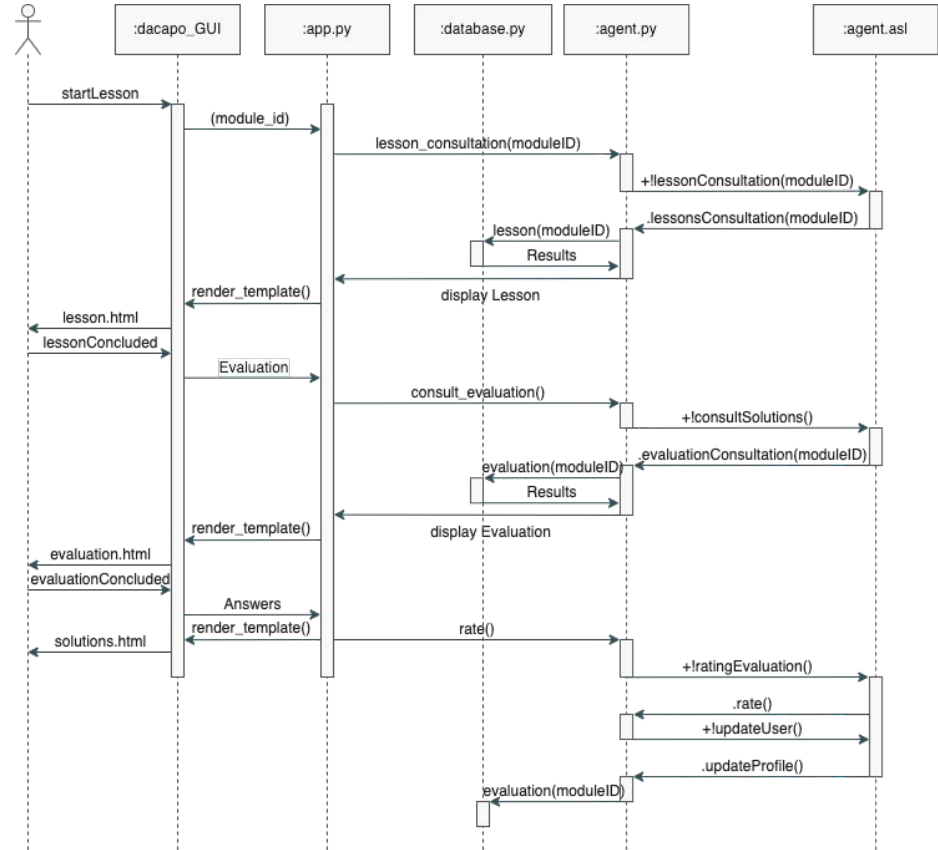


# Da Capo System Overview

Prometheus Entities	
	Perception
	Action
	Agent



# Interaction Diagram for Lesson Consultation



# Da Capo

Da Capo

Inicia Sesión



## Da Capo

Agente Tutor Para Enseñanza Musical

Proyecto para brindar soporte a los estudiantes de música de cualquier edad que deseen reforzar los conocimientos y habilidades básicas que tienen sobre el tema, presentando conceptos y ejercicios prácticos. Tutor inteligente musical llamado Da Capo, capaz de adaptarse a las necesidades de aprendizaje de cada alumno ofreciendo retroalimentación constante.

Main Page

Da Capo

Inicio

Salir

Alberto

Generalidades de la música

Iniciar

Escala diatónica

Iniciar

Pentagrama

Iniciar

Introducción a los intervalos

Iniciar

Student's Profile



# Conclusions and Future Work

- Multi-agent system
- Is not a replacement for music teacher
- Flask and AgentSpeak
- Design a protocol of communication
- More predicates in the agent