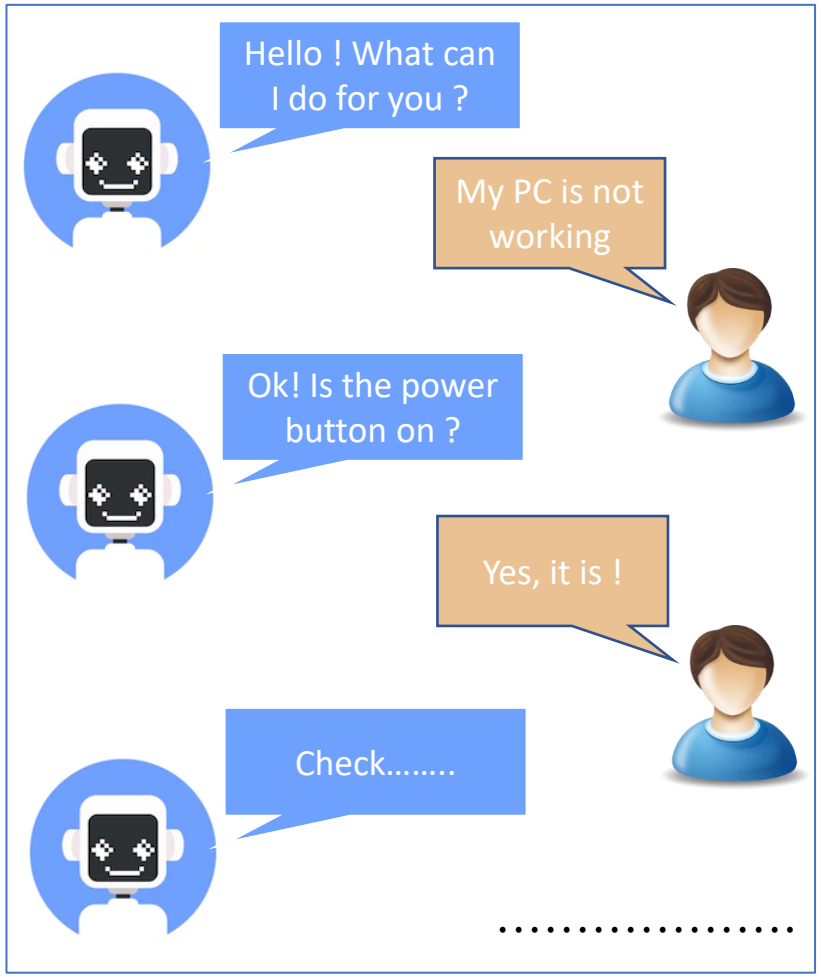
Mini-Project N° 1
Mini-Helpdesk chatbot

- ## Description :

The job of a helpdesk typically involves providing technical support and assistance to users or customers who encounter issues with software, hardware, or other IT-related products or services.

The aim is to develop a dialogue system that imitates the ELIZA program (Psychotherapist) but in Computer Maintenance



- ## Language to use:

The students have the choice between developing a new chat system (using Python) or customizing the ELIZA code

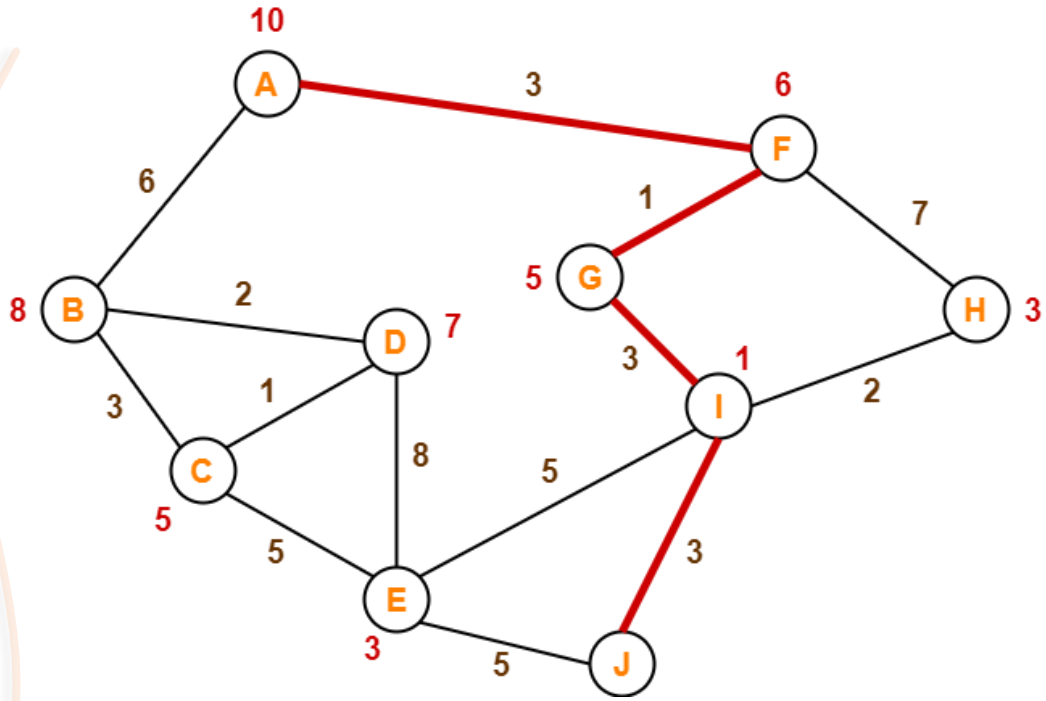
Demo: April 24, 2025

Mini-Project N° 2
A graph pathfinding app

- ## Description :

Given an acyclic graph composed of nodes and edges. The nodes are labeled by estimative values (heuristics) and the edges are labeled by costs between nodes pairs. The graph contains two particular nodes which are the starting and the goal nodes. The app aim is to give to the user the opportunity to :

- Select the starting and the goal nodes,
- Enter the heuristics and the costs,
- Visualize the graph
- Find and draw the solution path according to the following strategies :
  - Uniform-cost
  - Greedy-Best-first search
  - A*



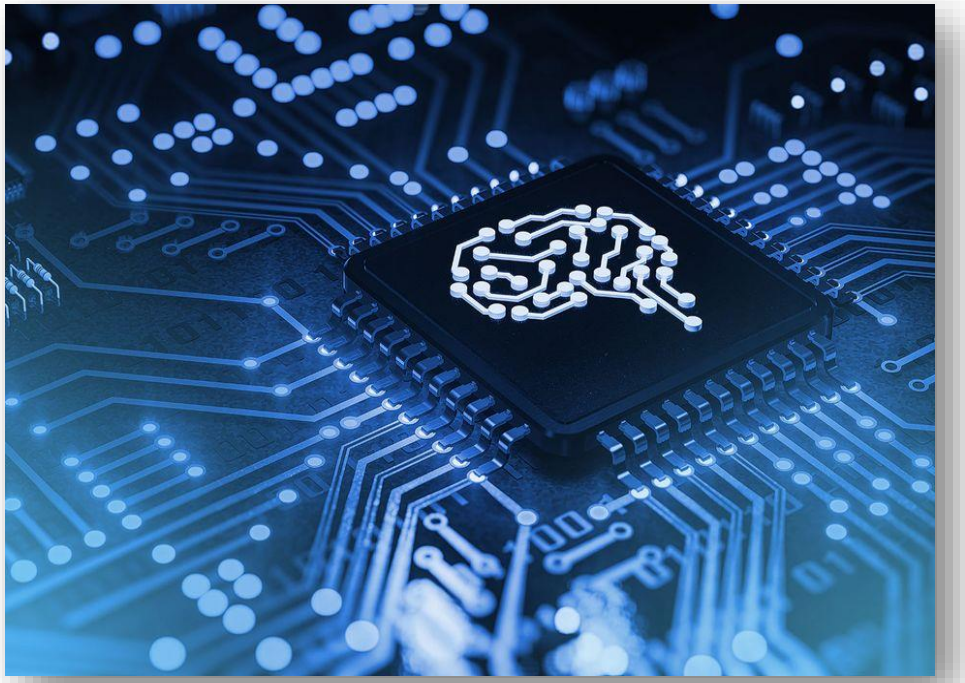
Language : Python

Demo: April 24, 2025

Mini-Project N° 3
Embedded machine learning app

- ## Description :

The aim is to develop an embedded machine learning application. The project involves collecting and processing sensor data (such as temperature, motion, or audio), training a lightweight machine learning model, and deploying it on an embedded device (Mobile phone, Arduino Nano, …).



The students **should** follow the Coursera course:

- Introduction to Embedded Machine Learning
- Get course certificate
- Develop a simple embedded ML app

https://www.coursera.org

Demo: April 24, 2025