

# Grundlagen der künstlichen Intelligenz

## Programming Exercise CSP

Gerald Würsching

Technical University of Munich

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# General Information - CSP

## Start and Deadline

- **Start: 25.11.2021, 18:30**
- **Deadline: 24.12.2021, 23:59**

## Framework:

- Publication and Submission of the exercise on **ARTEMIS**  
(<https://artemis.ase.in.tum.de/>)
- CSP Exercise description and guidelines on **Moodle**
- Implementation of your solution in provided **Jupyter Notebook**
- Successful submission → **1 Bonus Point**






# Programming Framework - General

- Programming Language: **Python**
- Work through **AIMA Installation Instructions** on Moodle and install
  - Anaconda
  - AIMA python code
  - Jupyter Notebook

# ARTEMIS - Set up the exercise

In order to get started with the exercise do the following steps:

- Log into ARTEMIS with TUM Credentials → Find Course "Grundlagen der Künstlichen Intelligenz"
- Find Exercise "Constraint Satisfaction Problems" → click on "Start Exercise"
- Click on "Clone Repository" → Copy URL for personal repository
- Open Terminal and enter `git clone <personal_URL>`
- Exercise folder will be created

 csp.ipynb	Exercise notebook: implement here	19,7 kB	14:34
 csp_demo.ipynb	Demo notebook: don't modify	9,0 kB	14:30
 csp_programming_exercise.py	} provided dependencies: don't modify	29,3 kB	14:30
 search.py		55,3 kB	14:30
 utils.py		26,8 kB	14:30

# ARTEMIS - Implement and Submit Solution

- ① Copy **all provided files** into rootfolder of AIMA repository (to avoid path issues)
- ② Run **demo notebook** `csp_demo.ipynb` to understand the framework
- ③ **Implement your solution** in `csp.ipynb`
- ④ **Copy** `csp.ipynb` **back** to cloned repository
- ⑤ **Submit** to ARTEMIS in your Terminal via git:
  - `git add csp.ipynb`
  - `git commit -m "Custom message"`
  - `git push`
- ⑥ **Check evaluation** in ARTEMIS

# ARTEMIS - Successful Submission

If **all 7 tests have passed** in ARTEMIS your submitted solution is correct.

[Clone Repository](#)

✓ Score 100%, 7 of 7 passed (17 minutes ago) GRADED

## Task description:

The course **Techniques in Artificial Intelligence** plans to invite 8 students to give presentations of 4 different topics to help others better understand the AI Problem (CSP), Logic and Hidden Markov Model (HMM). 8 volunteers will participate in this event: Alice, Bill, Carol, Daniel, Edith, Frank, Grace, Harry. Every volunteer will give a presentation according to different topic:

- CR: 15min/presenter
- CSP: 8min/presenter
- Logic: 12min/presenter
- HMM: 10min/presenter

Note that these are merely 4 topics planned, which don't necessarily have to take place all. Which topic(s) is/are actually going to be presented depend(s) on the number of volunteers available for each topic.

1. The topic CR is complex so that it requires at least 3 presenters, if it is to be presented
2. The topic CSP requires at most 2 presenters, if it is to be presented
3. The topic Logic requires 1-2 presenters, if it is to be presented
4. The topic HMM requires 2-3 presenters, if it is to be presented

# Questions

For questions regarding the exercise and/or ARTEMIS use the corresponding forum on Moodle

## Programming Exercises



General Information: Programming Exercises & Bonus



Forum - Programming Exercises