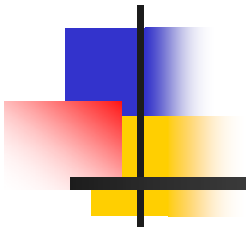
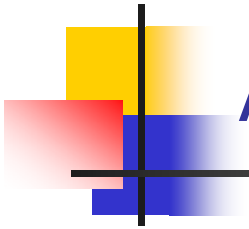


Problem Solving and Search in Artificial Intelligence

SS 2019: Project (Assignment 1)

Nysret Musliu
Database and Artificial Intelligence Group
Institute of Logic and Computation, TU-Wien

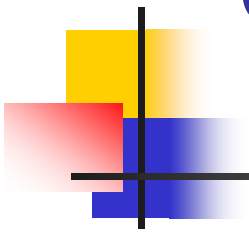


Assignment 1

- Solve one of following problems by constraint programming:
  - University course timetabling
    - https://www.itc2019.org/home
  - Hypertree decomposition
    - https://pacechallenge.org/2019/
  - Vehicle routing and scheduling
    - https://verolog2019.ortec.com/

2-3 students can work together in a group

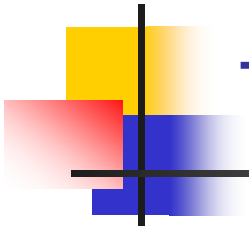
Constraint modeling language



- You are encouraged to use MiniZinc constraint modeling language

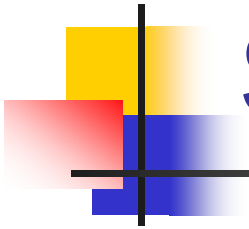
  http://www.minizinc.org/

  - See also Coursera online course: https://www.coursera.org/learn/basic-modeling
- The use of other constraint programming systems (or (Max)SAT solvers) is also possible. Please write me an email if you plan to use other CP languages/(Max)SAT solver



Tasks

- Provide a CP model in MiniZinc
- Use at least two solvers to solve your models
- Experiment with different strategies and parameters of solvers
- Apply your methods and compare them on competition benchmark examples



Schedule

- Submission deadline: 18.05.2019
- You should submit in TUWEL a zip file that includes:
  - Your source code
  - A pdf document that includes
    - A short description of your model
    - Comparison of different solvers/techniques on benchmark examples
- Presentation of projects: 20.05.2019 (10:00 – 12:00)