

# Seminar: Search and Optimization

## 6. Software Project

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## Roadmap

- ▶ Phase 1: **Uninformed search**  
Task: Implement some uninformed solver for your domain  
Submission deadline: 29 November 2012
- ▶ Phase 2: **Informed search**  
Task: Implement some heuristic solver for your domain  
Submission deadline: 10 January 2013
- ▶ Phase 3: **Improvements**  
Task: Improve your solver (depending on results after phase 2)  
Submission deadline: 31 January 2013

## Proceeding

### Analysis

- ▶ **Familiarize** yourself with your domain
- ▶ How can you **characterize** it (e. g., size of state space, branching factor, complexity, ...)?
- ▶ **What methods** appear promising?
- ▶ Solve problems **optimally** or allow **suboptimal** plans?
- ▶ Consult your advisor

## Proceeding

### Implementation

- ▶ C++
- ▶ First strive for **clean, readable** code, then optimize it for efficiency
- ▶ Get **feedback** from you advisor frequently and already at an early stage (e. g., discuss your architecture before implementing it)

## Proceeding

### Evaluation

- ▶ Evaluate in each phase
- ▶ Plan your experiments: **What** do you want to find out?  
**How** can you accomplish this?
- ▶ As always, you are welcome to consult your advisor

Submission after each phase: Code and summary of evaluation results

## Next steps

Done: Assignment of projects and advisors

Next steps:

- ▶ Create mercurial repository and grant your advisor write access
- ▶ Schedule kickoff meeting with your advisor
- ▶ Your advisor will put the problem instances into your repository.