# **Prototyping**



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## Systems Engineering

#### Task 1



- Develop a first requirements specification based on the Systems Engineering lecture
  - ▶ Deadline: April 15, eob, input for lab on April 16
  - ► Apply the steps from the lecture
    - Requirement Elicitation
    - ▶ Requirement Analysis
    - ▶ Requirement Specification
    - ▶ Requirement Validation
- Outcome are a SysML requirements diagram and appropriate UML Diagrams if required for the specific steps
- Divide the overall task into separate parts for each teammember in the following way

			Name1		Name2		Name
#	Task	Short summary		Done (incl. Finishing date	Todo	Done	
1	Task1						
2	Task2						
	Task						

### Output of Task 1



- ▶ Rescue robot use case!
  - ▶ The concrete scenario the team like to consider
- ► Analyse of the system context
  - ► All Stakeholders
  - ► Relevant regulations
  - ▶ Interface to the environment
    - ► Concrete boundary is clear
  - Relevant environmental entities including the considered environment
  - Relevant constraints are defined
- ► The documentation is done with SysML / UML
- ► First version till Friday 16
- ► Final version April 23

### Relevant criteria



- Quality of solution
  - Originality
  - ► Completeness
  - ► Integrity
- ► Usage of methods and techniques
  - ▶ Usage of process specific tools like github, trello, ...
  - ▶ SysML/UML Diagrams like
    - ▶ Requirements, Use Cases, Scenarios, Constraints, Block-Diagrams,