

Seminar: Lean

Meeting 2

progress

- finished the Natural Number Game
- started to look into the lean4game (needs a docker container on the server to run lean)
- started/ finished with the second tutorial game
- started with "lean theorem prover" tutorial

more possible ideas

- use a nontrivial proof to show how lean works in the mathematics section
- game possibly about propositional logic, see euredeka.com -> launch application(login) -> logic

topics for next few weeks

we decided to split up and work on different topics

name	topic
Sebastian	lean history
Nikita	lean in type theory
Frederick	setting up lean4game

Meeting 1

possible topics

- applications in mathmatics
- applications in computer science
- history

possible structure

1. Introduction
2. History of Theorem Provers
3. Current State of Lean
4. Applications:
 1. Mathematics
 2. Computer Science
 3. Teaching
5. Outro

other ideas

- short interactive example of using lean for program correctness with the js library

possible todos for next week

- finish/ continue with the Natural Number Game
- look into the js library
- look at use cases of lean
- setup lean on own pc (lean 3 prob)
- brainstorm more ideas
- whatever else comes to mind