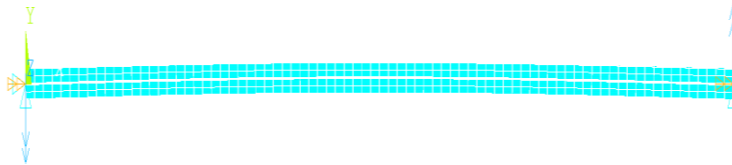
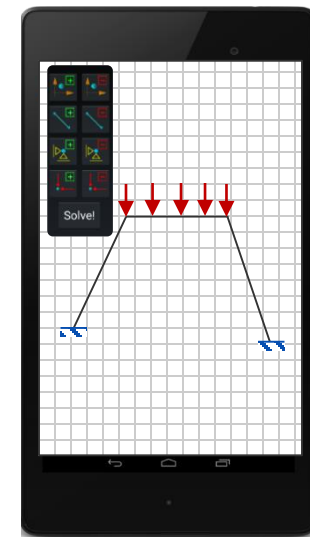


Android Application for Second Order Analysis

- The finite element method is a powerful tool for static and dynamic analysis and usually used in desktop computers or laptops.
- The theory of second order permits to understand the behavior of structures by considering the effect of moderate small displacement maintaining the prerequisite of small strains.



- Android has the largest installed base of all operating systems and applications for android operative system (open source) are written in Java programming language.



Android Application for Second Order Analysis

Project Characteristics

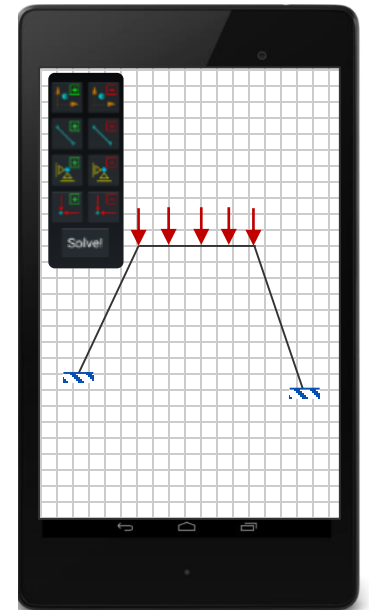
Mathematics: ★★★★★
 Mechanics: ★★★★★
 Programming: ★★★★★

Your Tasks:

- Create a GUI for preprocessing and postprocessing of 2D structures.
 - Users should be able to create the geometry, apply boundary conditions and forces in an user-friendly interface.
- Programming a finite element code for 2D problems.
 - Users should be able to do first and second order analysis and visualized the result.
- Validate the results with a FE software.

Programming language:

- Java



What you will learn in this project:

- Object-oriented programming with Java
- Programming finite elements in Java
- Design Patterns
- Android App development