

## Code Usage

Requirements: `numpy` and `matplotlib` are required for executing the python script.

```
python3 main.py
```

## problem definition

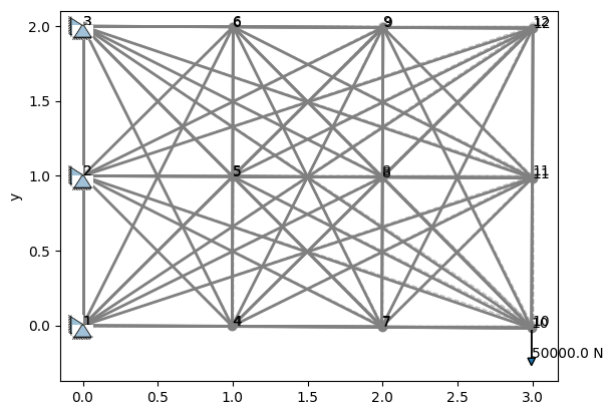
a full connected truss structure (**3 meter \* 2 meter**): left side of the structure are fixed, its right side is loaded by **50kN**.

material properties		unit
cross section	200	$mm^2$
module of elasticity	29000	$E$

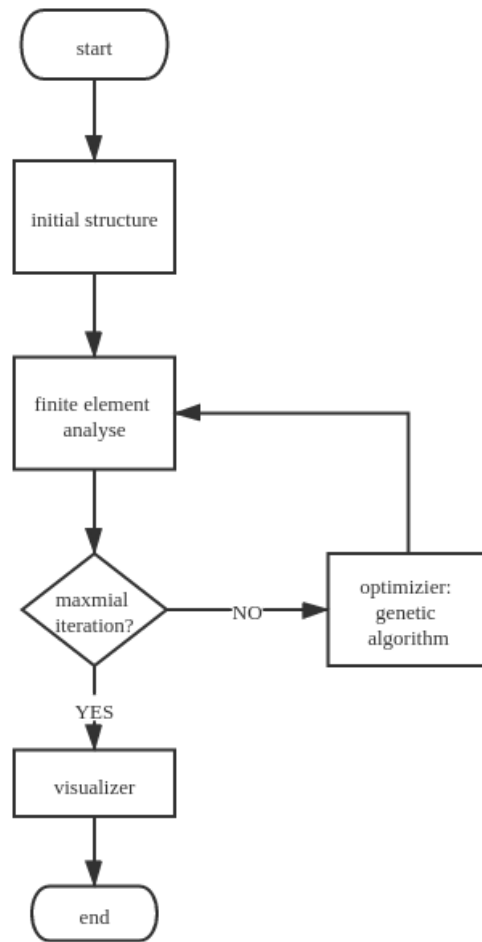
**object:** minimize the material usage of the structure

**constraints:**

1. maximal nodal displacement no bigger than 0.1m
2. maximal stress of each linkage don't exceed 300 MPa



## methods



## results

- green means linkage with tension
- red means linkage with compression

