

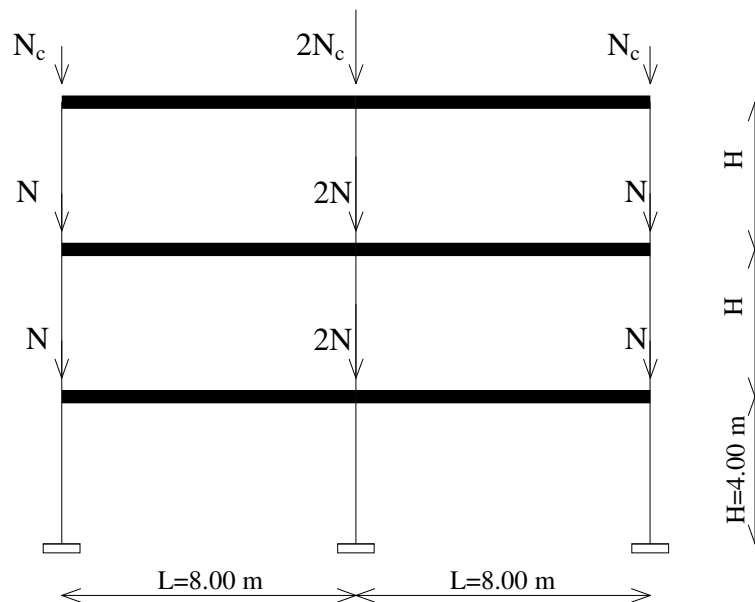
Module B

Stability of Steel Structures

Week 5 – Topic: Stability analysis of frames

Homework 1: Design the columns of the following plane frame assuming shear-type behaviour and adopting HE B profiles. The design value of the point loads reported in the following figure are listed below:

- $N_c = 150 \text{ kN}$;
- $N = 200 \text{ kN}$.



After designing the beam-columns in pure compression:

- evaluate the critical multiplier according to the Horne Method;
- perform stability check of the columns considering the effect of imperfections on the structure.