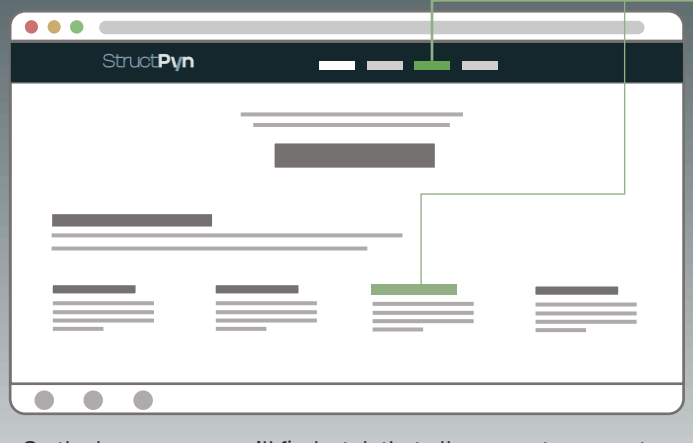
StructPyn

USER FLOWCHART
GENERATE CAPACITY CURVES

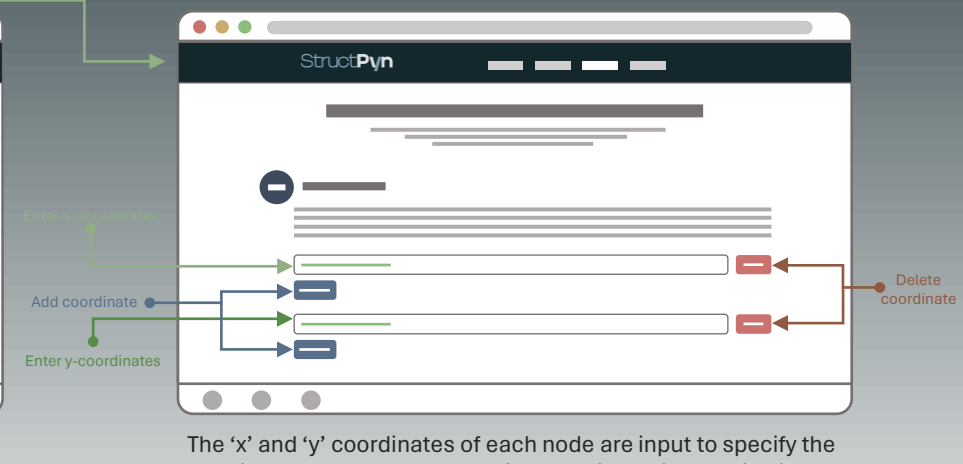
Welcome to our user manual, where we've outlined the steps you need to follow to navigate through our platform and generate capacity curves for regular RCMRF buildings.

Step 1. Home page

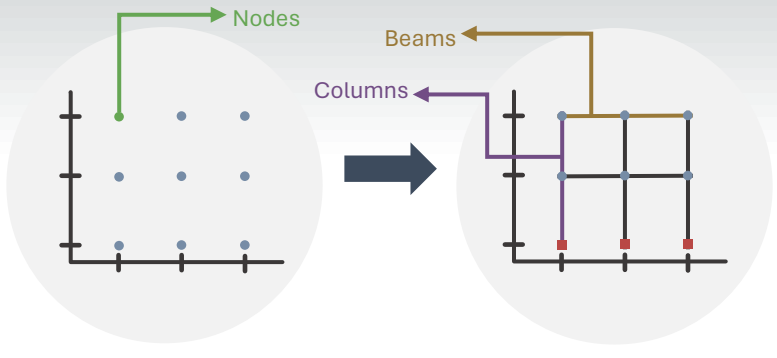


On the homepage, you'll find a tab that allows you to generate capacity curves for reinforced concrete moment-resisting frames.

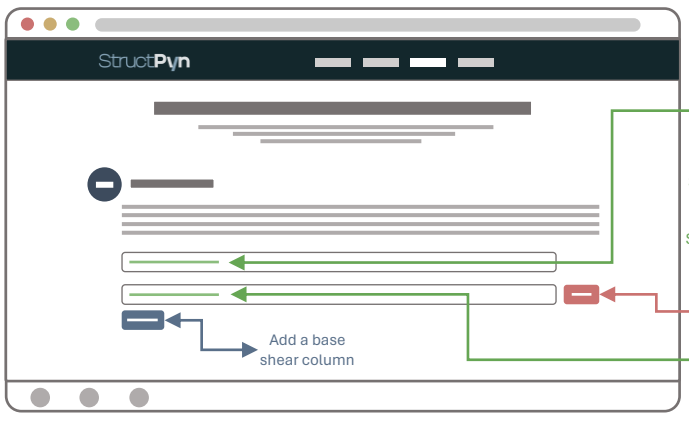
Step 2. Generate nodes



The 'x' and 'y' coordinates of each node are input to specify the locations of the column-beam intersection points, which in turn generate the 2D model of the studied portal frame within the structure:



Step 3. Assign mass to nodes

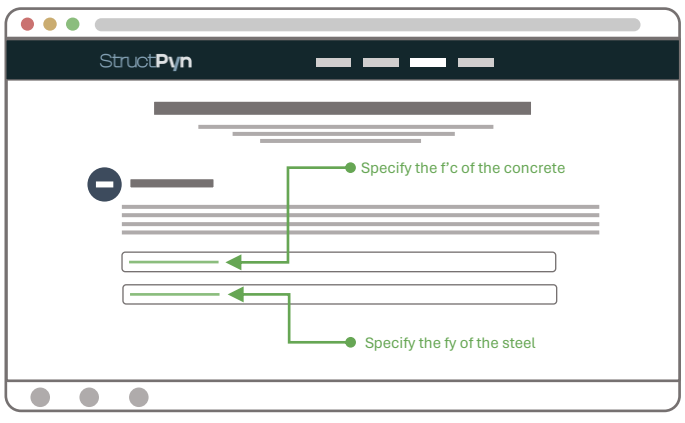


Each node is allocated its corresponding mass, calculated as the ratio of the base shear of the column to the spectral acceleration, divided by the number of floors in the structure.

Step 4. Assign distributed load on beams

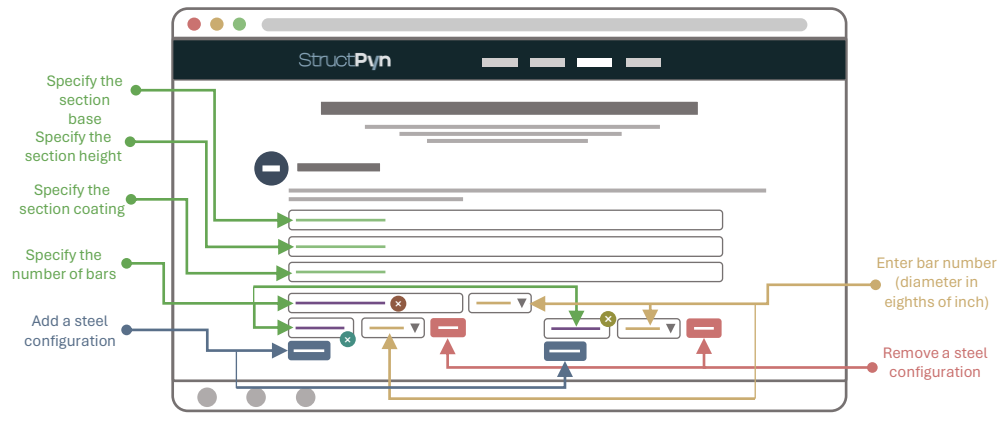
The distributed load on the beams is applied using the combination 1.05D + 0.25L. The load from slab afferent to the beam is included in the distributed load.

Step 5. Define material properties



The properties of concrete and reinforcing steel are defined.

Step 6. Define column/beam section



Characteristics are provided to specify the fiber section for both columns and beams: