**34\_Assigning loads to lines**

You can apply different types of loads to line elements for example point or distributed loads.

Lets apply a point load at the mid of this beam.

Select this line and then click on assign frame loads from assign menu

Select the appropriate load case and units

These are 4 boxes here to apply points load at relative distance from end i.

0.5 relative distance means half of the total distance from end i of this beam line. Similarly 1.0 means applying loads at end j of this line.

You can also put actual lengths by click on absolute distance from end i.

This way you will put actual distance for example 2m from end i in distance box.

You can apply maximum of four points loads per line. If you want to apply more you can divide the line further and then apply these loads.

In this case we are going to put a point load of 100 kn in gravity direction at mid of this beam.

So put zero in all other boxes except the first one.

Here in distance box you will put 0.5 as relative distance

And in load box you will 100kn.

We are putting gravity load 100 kn with positive sign because direction of load is already towards gravity. This is different than node loads we applied in previous lecture where only global x y and z directions were available.

You can choose any direction from this list.

Gravity direction is equivalent to -z global direction.

If you want to apply loads in local axis you can choose the appropriate local axis from this list.

In beam loading you will apply forces and moment separately one at each time unlike node loads where both moments and point loads can be applied simultaneously as we did in previous lecture.

If you want to apply a point moment with this point load you will first apply one load for example point load and click ok and then come back and put a point moment and click on add to existing loads in same load case.

To apply distributed loads you will select this line and click on frame distributed loads under assign frame load option or click directly on this shortcut

This window is exactly the same we used in previous example of frame point loads.

The only difference is you can have variable load here and if you want to apply a uniform load you can make all these boxes 0 and just apply a uniform load in this box and click ok. Rest of the options are same as were in application of point loads on frame.

Let's apply perimeter wall load of 15 kn/m in SDL load case to perimeter beams of this floor.