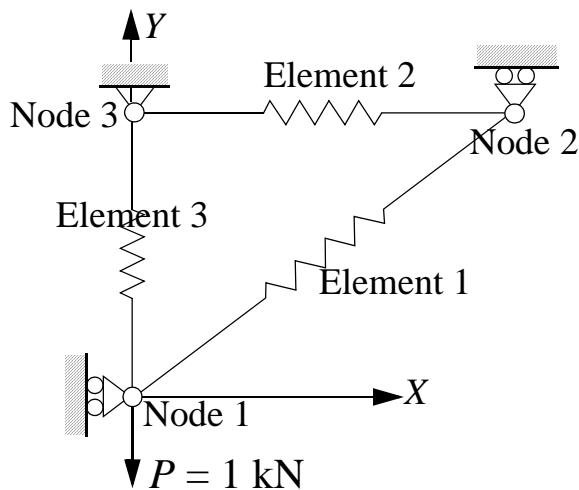


Matlab program: spring2D

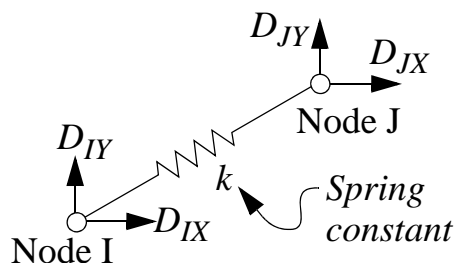
The input to the program must be written in a file named *spring2D.inp*. The structure of the input data is illustrated by the example below. Only prescribed point forces can be applied as external load. Results from an analysis is stored in the file: *spring2D.out*, which is generated during an analysis.



Node coordinates		
Node	X / m	Y / m
1	0	0
2	4	3
3	0	3

Spring constants	
Element	k N / m
1	50000
2	10000
3	20000

2 node spring element with
2 D.O.F. (degrees of freedom) /node



“Zero” displacement boundary conditions: $D_{1X}=D_{2Y}=D_{3X}=D_{3Y}=0$

Applied force boundary conditions: $F_{1Y} = -1000$ N

Input data to the Matlab program is written to the file: *spring2D.inp*, as shown below!

```
*NODE [Node number, X-coordinate, Y-coordinate]
1, 0.0, 0.0
2, 4.0, 3.0
3, 0.0, 3.0
*ELEMENT [Element no., Node 1, Node 2, Spring constant k]
1, 1, 2, 50000
2, 2, 3, 10000
3, 1, 3, 20000
*ZeroDisplacement [Node number, D.O.F.]
1,1
2,2
3,1
3,2
*PointForce [Node number, D.O.F., force value]
1,2, -1000
*END
```