

$$esup2 = [0 \ 1 \ 3 \ 3 \ 3 \ 2 \ 2 \ 4 \ 6 \ 6 \ 2 \ 2 \ 3 \ 2]$$

```

for ipoin = 2:npoint+1
    esup2(ipoin) = esup2(ipoin) + esup2(ipoin-1)
end

```

Indices comme Matlab

ex: ipoin = 2
ipoin = 3
..

$$esup2(2) = \overset{1}{esup(2)} + \overset{0}{esup(1)} = 1$$

$$esup2(3) = esup(3) + esup(2) = 4$$

$$[0 \ 1 \ 3 \ 3 \ 3 \ 2 \ 2 \ 4 \ 6 \ 6 \ 2 \ 2 \ 3 \ 2]$$

$$\begin{array}{ccccccc} 0 & 1 & \dots & & & & \\ 0 & 1 & 4 & \dots & & & \\ 0 & 1 & 4 & 7 & \dots & & \\ 0 & 1 & 4 & 7 & 10 & \dots & \end{array}$$

$$esup2 = [0 \ 1 \ 4 \ 7 \ 10 \ 12 \ 14 \ 18 \ 24 \ 30 \ 32 \ 34 \ 37 \ 39]$$

```

for ielem = 1:nelem
    for inode = 1:nnode
        ipoin = inpoel(inode, ielem)
        istor = esup2(ipoin) + 1
        esup2(ipoin) = istor
        esup1(istor) = ielem
    end
end

```

Indices comme Matlab

ex: inode = 1, ielem = 1

$$ipoin = \overset{1}{inpoel(1, 1)} = 1$$

$$istor = esup2(1) + 1 = 0 + 1 = 1$$

$$esup2(1) = istor = 1 \quad [1 \ 4 \ 7 \dots]$$

$$esup1(1) = 1$$

inode = 2, ielem = 1

$$ipoin = inpoel(2, 1) = 2$$

$$istor = esup2(2) + 1 = 1 + 1 = 2$$

$$esup2(2) = istor = 2 \quad [1 \ 2 \ 4 \ 7 \dots]$$

$$esup1(2) = 1$$

inode = 3, ielem = 1

$$ipoin = inpoel(3, 1) = 6$$

$$istor = esup2(6) + 1 = 12 + 1 = 13$$

$$esup2(6) = 13 \quad [1 \ 2 \ 4 \ 7 \ 10 \ 13 \dots]$$

$$esup1(13) = 1$$

node 1 node 2 node 3
 \downarrow \downarrow \downarrow
 $\text{esup1} = [1 | 1 \ 2 \ 3 | 3 \ 4 \ 5 | 5 \ 6 \ 7 | 7 \ 8 | 1 \ 2 | 2 \ 3 \ 4 \ 9 | 4 \ 5 \ 6 \ 9 \ 10 \ 11 |$
 $6 \ 7 \ 8 \ 11 \ 12 \ 13 | 8 \ 13 | 12 \ 13 | 10 \ 11 \ 12 | 9 \ 10]$
 \uparrow \nwarrow
 élément connecté au Noeud

suite ex: $\text{inode} = 1, \text{ielem} = 2$

$\text{inode} = 2, \text{ielem} = 2$

$\text{inode} = 3, \text{ielem} = 2$

etc. jusqu'à esup fini

for $\text{ipoin} = \text{npoin} + 1; 2, -1$
 $\text{esup2}(\text{ipoin}) = \text{esup2}(\text{ipoin} - 1)$
 end
 $\text{esup2}(1) = 0$

$\text{ipoin} = \text{ipoe} / (1, 2) = 2$
 $\text{istor} = \text{esup2}(2) + 1 = 2 + 1 = 3$
 $\text{esup2}(2) = \text{istor} = 3 \quad [1 \ 3 \ 4 \ 7 \dots]$
 $\text{esup1}(3) = 2$
 $\text{ipoin} = 7$
 $\text{istor} = \text{esup2}(7) + 1 = 14 + 1 = 15$
 $\text{esup2}(7) = 15 \quad [1 \ 3 \ 4 \ 7 \ 10 \ 13 \ 15 \dots]$
 $\text{esup1}(15) = 2$
 $\text{ipoin} = 6$
 $\text{istor} = \text{esup2}(6) + 1 = 13 + 1 = 14$
 $\text{esup2}(6) = 14 \quad [1 \ 3 \ 4 \ 7 \ 10 \ 14 \dots]$
 $\text{esup1}(14) = 2$

$\text{esup2}(14) = \text{esup2}(13)$
 $\text{esup2}(13) = \text{esup2}(12)$
 \dots
 $\text{esup2}(2) = \text{esup2}(1)$

$\text{esup2}(1) = 0$

prochain: Points surrounding points

retour
 à
 $\text{esup2} =$
 $[0, 1, 4, 7, \dots, 37]$