

$$a[i][k] + a[k][j] < a[i][j]$$

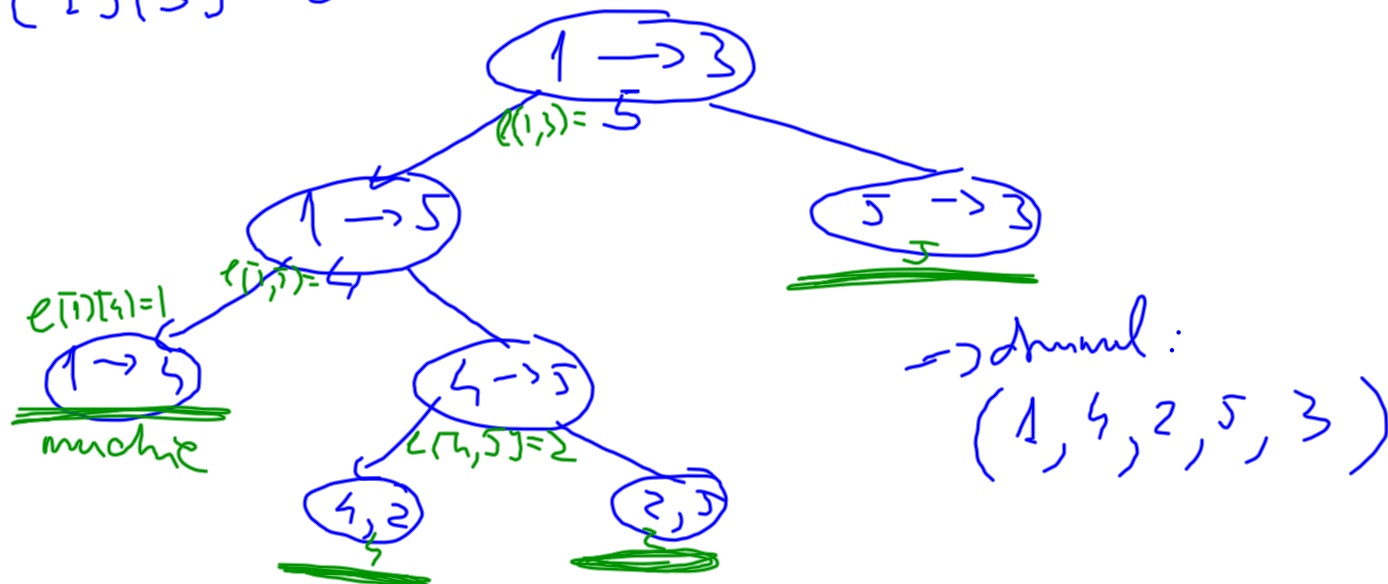
$$k=5$$

$$A = \begin{bmatrix} 0 & 3 & 7 & 1 & 4 \\ 3 & 0 & 6 & 2 & 1 \\ 7 & 6 & 0 & 8 & 3 \\ 1 & 2 & 8 & 0 & 3 \\ 4 & 1 & 3 & 3 & 0 \end{bmatrix}$$

$$L = \begin{bmatrix} 0 & 4 & 5 & 1 & 4 \\ 4 & 0 & 2 & 2 & 2 \\ 5 & 5 & 0 & 2 & 3 \\ 4 & 4 & 2 & 0 & 2 \\ 4 & 5 & 5 & 2 & 0 \end{bmatrix}$$

$$A = \begin{bmatrix} 0 & 3 & 7 & 1 & 4 \\ 3 & 0 & 4 & 2 & 1 \\ 7 & 4 & 0 & 6 & 3 \\ 1 & 2 & 6 & 0 & 3 \\ 4 & 1 & 3 & 3 & 0 \end{bmatrix} \quad L = \begin{bmatrix} 0 & 4 & 5 & 1 & 4 \\ 4 & 0 & 5 & 2 & 2 \\ 5 & 5 & 0 & 5 & 3 \\ 4 & 4 & 5 & 0 & 2 \\ 4 & 5 & 5 & 2 & 0 \end{bmatrix}$$

$$a[1][3] = \text{cost minin } 1 \rightarrow 3 \rightarrow 7$$



Implementare

Obi: în matricea de costuri pe care o avem, punem
- 1 acolo unde nu e nulă.

Atunci când programăm, în loc de ∞ vom

utiliza $\frac{INT_MAX}{2}$

```
for(k=1; k<=n; k++)  
  for(i=1; i<=n; i++)  
    if(i-k)  
      for(j=1; j<=n; j++)  
        if(j-k && j-i && a[i][k]+a[k][j]<a[i][j])  
          a[i][j]=a[i][k]+a[k][j];
```