

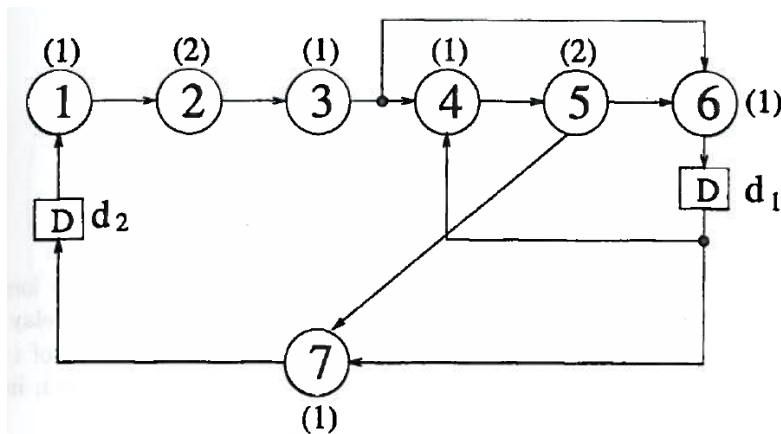
Chapter 5

Activity

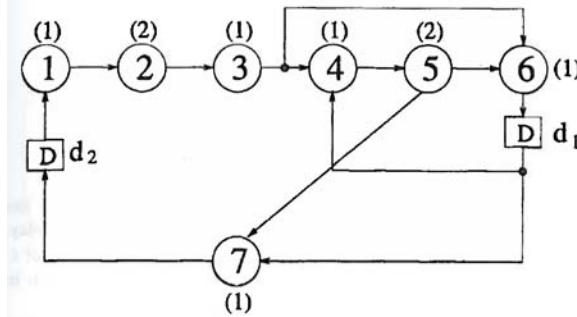
Instructor: Prof. Peter Lian
Department of Electrical
Engineering & Computer Science
Lassonde School of Engineering
York University

Activity 1

- Compute the iterative bound of the DFG below.

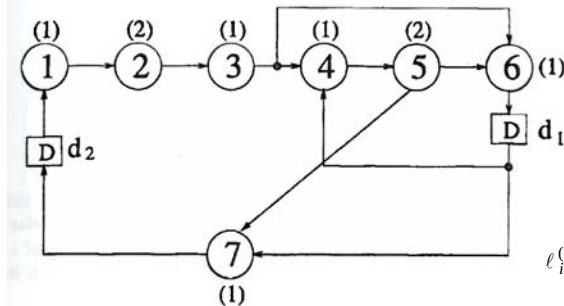


Activity 1 Solution



$$L^{(1)} = \begin{bmatrix} 4 & 4 \\ 8 & 8 \end{bmatrix}$$

Activity 1 Solution



$$L^{(1)} = \begin{bmatrix} 4 & 4 \\ 8 & 8 \end{bmatrix}$$

$$L^{(2)} = \begin{bmatrix} 12 & 12 \\ 16 & 16 \end{bmatrix}$$

$$\ell_{i,j}^{(m+1)} = \max_{k \in K} (-1, \ell_{i,k}^{(1)} + \ell_{k,j}^{(m)})$$

$$\ell_{1,1}^{(1+1)} = \max_{k \in 2} (-1, \ell_{1,1}^{(1)} + \ell_{1,1}^{(1)}, \ell_{1,2}^{(1)} + \ell_{2,1}^{(1)}) = \max(-1, 8, 12) = 12$$

$$\ell_{1,2}^{(1+1)} = \max_{k \in 2} (-1, \ell_{1,1}^{(1)} + \ell_{1,2}^{(1)}, \ell_{1,2}^{(1)} + \ell_{2,2}^{(1)}) = \max(-1, 12, 12) = 12$$

$$\ell_{2,1}^{(1+1)} = \max_{k \in 2} (-1, \ell_{2,1}^{(1)} + \ell_{1,1}^{(1)}, \ell_{2,2}^{(1)} + \ell_{2,1}^{(1)}) = \max(-1, 12, 16) = 16$$

$$\ell_{2,2}^{(1+1)} = \max_{k \in 2} (-1, \ell_{2,1}^{(1)} + \ell_{1,2}^{(1)}, \ell_{2,2}^{(1)} + \ell_{2,2}^{(1)}) = \max(-1, 12, 16) = 16$$