

Lecture 10

- **Smallest Co-Level First with Estimated Time scheduling algorithm (SCFET)**

How does the SCFET algorithm work?

- Compute the level for each job i , which represents the length of the longest path (in terms of processing time) from the start node to the node n_i .
- Sort jobs so the smallest Co-level ones are processed first.
- Start assigning jobs to the machines as they become free.
- Only schedule a job when all its parents are done (respect dependencies).

Example:

Suppose you have the following jobs:

J_i	p_i
J_1	2
J_2	3
J_3	3
J_4	4
J_5	5
J_6	4
J_7	4
J_8	4
J_9	1

The relations among the jobs are defined in the following set:

$$\prec = \{(J_1, J_2), (J_1, J_3), (J_1, J_4), (J_1, J_5), (J_2, J_6), (J_2, J_7), (J_3, J_8), (J_4, J_8), (J_6, J_9), (J_7, J_9), (J_8, J_9)\}$$

Find the optimal scheduling for the problem $9|3||C_{max}$ above using the SCFET algorithm.

Solution:

