HW5 posted → Due: Friday, Feb 15th by 11:30 am in the bin outside Rogers 416

Ex:

**EDD sequence:**

1 - 4 - 3 - 7 - 2 - 5 - 6

<table>
<thead>
<tr>
<th>Job (i)</th>
<th>Com. Time (c_i)</th>
<th>DD(d_i)</th>
<th>Lateness (l_i)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>15</td>
<td>5</td>
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<tr>
<td>3</td>
<td>16</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>25</td>
<td>20</td>
<td>10</td>
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<tr>
<td>2</td>
<td>30</td>
<td>40</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>32</td>
<td>45</td>
<td>-9</td>
</tr>
<tr>
<td>6</td>
<td>36</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Min of max lateness = 10 hrs.

\( (s_1, s_2, \ldots, s_{18}) \)
\( (15, 12, 10, 17, \ldots) \)

4 - 1 - 3 - 7 - 2 - 5 - 6
1 - 4 - 7 - 3 - 2 - 5 - 6
4 - 1 - 7 - 3 - 2 - 5 - 6
Parallel-M/c Scheduling problem

\[ n \]
\[ njota \]

\[ M_1 \]
\[ M_2 \]
\[ : \]
\[ M_m \]

\[ m \text{-parallel M/c}\]

Identical M/c's.

- Low capability \( \rightarrow 5 \) units of time
- Medium capability \( \rightarrow 4 \) units of time
- High capability \( \rightarrow 3 \) units of time
The SPT sequence is:

3-5-6-2-4-1-7

MFT = \frac{1+6+15+2+9+4+12}{7} = 7 \text{ hrs.}
Example:
LPT sequence is: step 1
7 - 1 - 4 - 2 - 6 - 5 - 3

step 2
LPT

step 3
SPT

Makespan = 12
MFT₁ = \frac{1 + 3 + 12 + 4 + 12 + 5 + 12}{7}
= 7 \text{ hrs.}

MFT₂ = \frac{9 + 11 + 12 + 8 + 12 + 7 + 12}{7}
= \frac{71}{7} = 10.14 \text{ hrs.}
MFT₁ < MFT₂