**Group Scheduling (GS)**

- **Tasks assigned to Group 1:**
  - Jobs:
    - Parts assigned to C1
    - MIs assigned to C1

- **Part Family 2 → Groups**:
  - G1
  - G2

**G1:** J1, J2, J3, \ldots, Jn

- Setup time for G1 on M1 = 30 min.
- Sequence-independent setup.

**Another part family is assigned to C1**

**G2:** J1, J2, \ldots, J2n

- Setup time for G2 on M1 = 55 min.
- Will require new setup, taking 55 min.
- Sequence-dependent setup.

**Due Date:** Thursday, Feb. 28th

**CP3 Report due tomorrow by 11:30 am (outside of Rogers 416)**
Sequence independent

\[ \text{Av.} = \frac{\sum}{3} = \frac{76}{3} = 25.33 \]

The groups themselves

Jobs within each group:

\[ G_1, G_2, G_3 \Rightarrow 3! \]
\[ = 1 \times 2 \times 3 = 6 \]

Sequence independent
- Assump. 1 OK
- Assump. 2 OK
- Assump. 3 OK
- Assump. 4 OK
- Assump. 5

\[ M_1 \rightarrow G_3 \rightarrow G_1 \rightarrow G_2 \]

\[ M_2 \rightarrow G_3 \rightarrow G_1 \rightarrow G_2 \]

flow-line arrangement

\[ G_1 : J_{11}, J_{12} \]
\[ G_2 : J_{21}, J_{22}, J_{23} \]

\[ G_2 \rightarrow G_1 \]
\[ J_{21}, J_{23}, J_{22} \rightarrow J_{12}, J_{11} \]

\[ S_{ij} \rightarrow S_{32} = S_{ij} \]
\[ i = 3 \]
\[ j = 2 \]
\[ V_{ij} \]
(J_{ik}) \quad J_{32} \Rightarrow \text{The second job in group 3}

(t_{ikj}) \quad t_{332} = 5

(T_{ij}) \quad T_{32} = 5 + 7 + 3 = 15

F_{(1)(2)} = F_{23} \rightarrow 3\text{rd job}

1\text{st group} \quad 2\text{nd job} \quad 2\text{nd group}

They are ranked in order.
\[ G_1 = (J_{11}, J_{12}) \]
\[ G_2 = (J_{21}, J_{22}, J_{23}) \]
\[ G_3 = (J_{31}, J_{32}, J_{33}) \]

\[ G_2 - G_1 - G_3 \]
\[ G_2 (J_{22} - J_{23} - J_{21}) - G_1 (J_{11} + J_{12}) - G_3 (J_{33} + J_{31} - J_{32}) \]

\[ \Rightarrow \text{Job 3 in group 2 (or G2)} \]

\[ 72 - \frac{6}{6} \]
\[ \frac{432}{432} \]

\[ = 432 \]