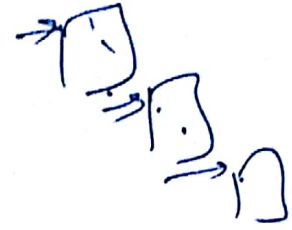
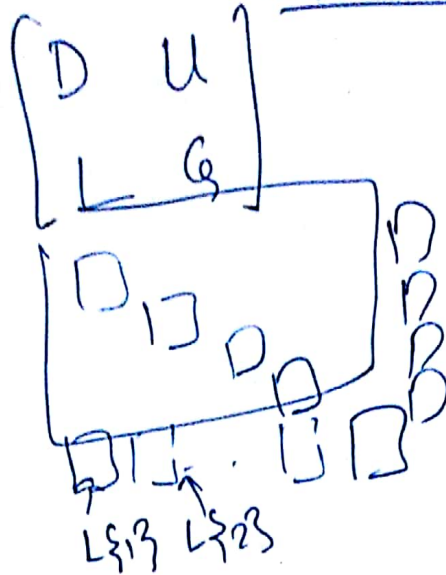


# DDM for BA

(P1)

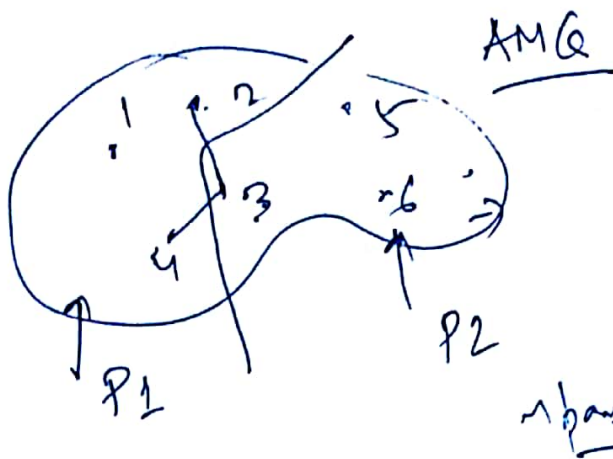


$$Ax = b$$

$$(A + \underbrace{10I}_{\text{size part}})x = b$$

## Steps

- ① Read Matrix
- ② Do domain decn, using dom... decn. m.
- ③ Identify D, E, F, G, using size part
- ④ Consider block of G + D
- ⑤ Compute ~~local~~ min Schur compl.
- ⑥ Use PCG.



(9)

$n_{\text{path}} = 2$

$$\begin{matrix} 1 & - & 1 \\ 2 & - & 1 \\ 3 & - & 2 \\ 4 & - & 1 \\ 5 & - & 2 \\ 6 & - & 2 \end{matrix}$$

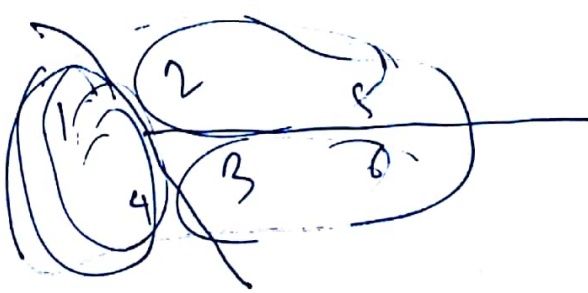
$$\begin{cases} G_1 = \{1, 2, 4\} \\ G_2 = \{3, 5, 6\} \end{cases}$$

$P =$

$$\begin{bmatrix} 1 & 2 \\ 1 & 0 \\ 0 & 1 \\ 1 & 0 \\ 0 & 1 \\ 0 & 1 \end{bmatrix}$$

$P = \begin{bmatrix} 1 & 1 \\ 1 & 1 \end{bmatrix}$

$P^T A P$   
(2x2)



$P^T A P$

$$\begin{bmatrix} 1 & 1/2 & 0 & 1/3 & 0 & 0 \\ 0 & 0 & 1 & 0 & 1 & 1 \end{bmatrix}$$

$$\begin{bmatrix} 1 & 2 & 3 & 4 & 5 & 6 \\ 0 & 1 & 0 & 1 & 0 & 1 \\ 1 & 0 & 1 & 0 & 1 & 0 \\ 0 & 1 & 0 & 1 & 0 & 1 \\ 1 & 0 & 1 & 0 & 1 & 0 \\ 0 & 1 & 0 & 1 & 0 & 1 \end{bmatrix}$$

$$\begin{bmatrix} 1 & 0 \\ 1 & 0 \\ 0 & 1 \\ 0 & 1 \\ 0 & 1 \\ 0 & 1 \end{bmatrix}$$

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