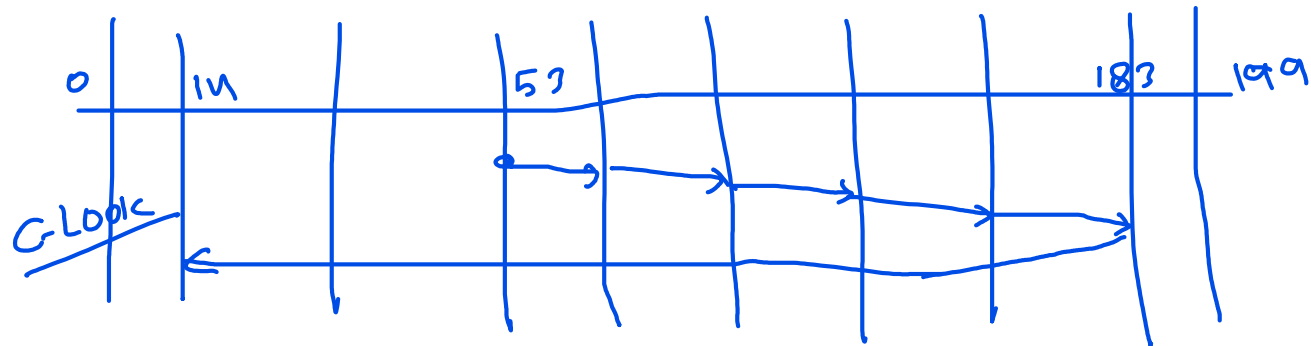




Deadlock

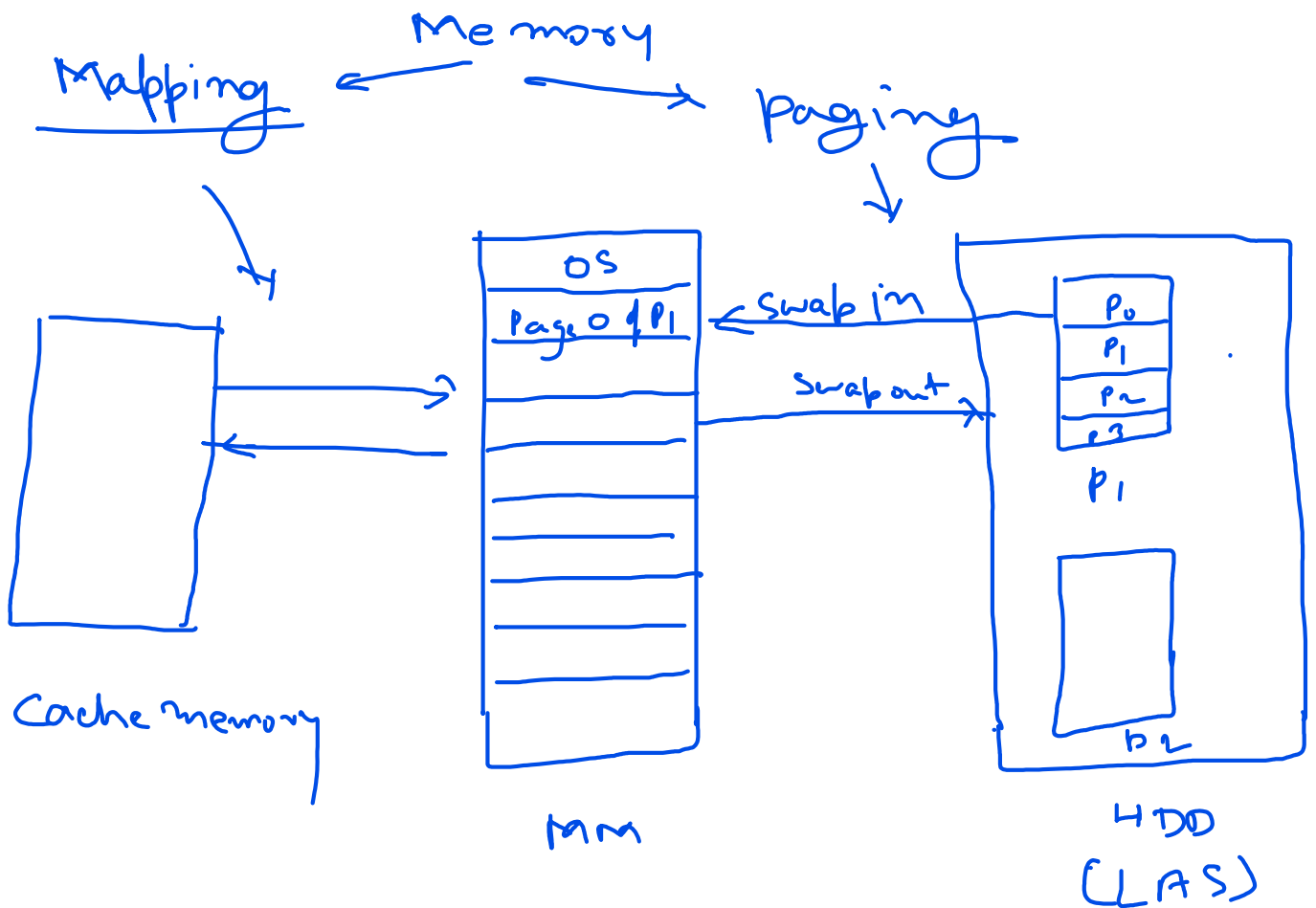
P	Allocation	max	Avail	Need = max - Al
P ₀	0 1 0	7 5 3	3 3 2	7 4 3
P ₁	2 0 0	3 2 2		1 2 2
P ₂	3 0 2	9 0 2		6 0 0
P ₃	2 1 1	2 2 2		0 1 1
P ₄	0 0 2	4 3 3		4 3 1

Safe Seq $\Rightarrow \langle P_1, P_3, P_4, P_2, P_0 \rangle$

$$\begin{array}{r}
 332 \quad \text{Avail - Need} \\
 - 122 \\
 \hline
 210 \\
 + 322 \quad \text{max} \\
 \hline
 532 \quad \text{Avail} \\
 - 011 \\
 \hline
 521 \\
 + 222 \\
 \hline
 743
 \end{array}
 \quad \left. \begin{array}{l} P_1 \\ P_3 \end{array} \right\}$$

$$\begin{array}{r}
 743 \\
 - 431 \\
 \hline
 312 \\
 + 433 \\
 \hline
 745 \\
 - 600 \\
 \hline
 145 \\
 + 902 \\
 \hline
 1047
 \end{array}
 \quad \left. \begin{array}{l} P_4 \\ P_2 \end{array} \right\}$$

$$\begin{array}{r}
 1047 \\
 - 743 \\
 \hline
 304 \\
 + 753 \\
 \hline
 1057
 \end{array}
 \left. \vphantom{\begin{array}{r} 1047 \\ - 743 \\ \hline 304 \\ + 753 \\ \hline 1057 \end{array}} \right\} \begin{array}{l} P_0 \\ \checkmark \end{array}$$



- Direct mapping