

VPŠA, 3.10.2023

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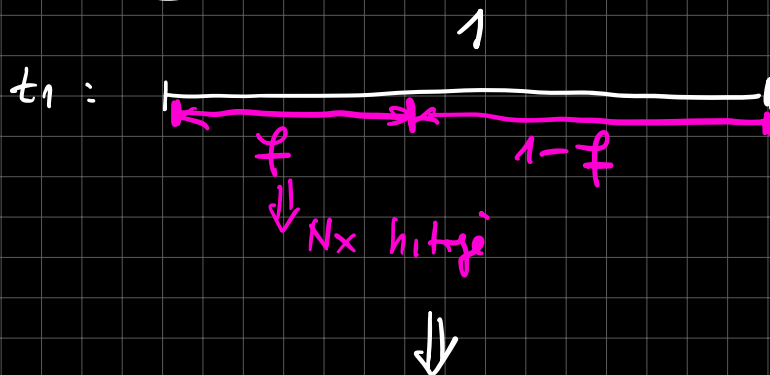
- "C" {
- več-procesorski sistem s <sup>skupnim</sup> homogenim pomnilnikom
  - GPE (mnošojedni sistemi)
  - več-proc. sistem s poračelnim pomnilnikom

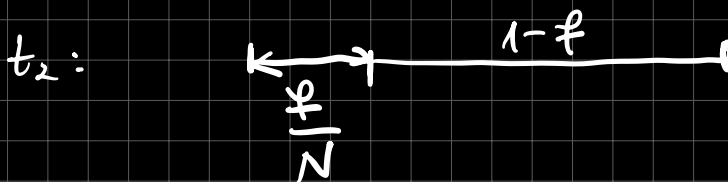
→ KIPITNI ROLI:

- 2 v zbirnem rep. obdelavi
- 1 v javništem rep. obdelavi
- 2 naložbe se oddajo projekte naložbe

ZAKAJ NE VZPOREDNO?

ANDALOV ZALON!





Pohítku ( $S$  - speedup)

$$S(N) \triangleq \frac{t_1}{t_2} = \frac{1}{\left(\frac{f}{N}\right) + (1-f)}$$

$$\lim_{N \rightarrow \infty} S(N) = \frac{1}{1-f}$$

⇒ DON'T. JUST  
DON'T.

Če je  $f > 1$ :  $S(N) \rightarrow \infty$

Če je  $f > 0$ :  $S(N) \rightarrow 1$

! 0

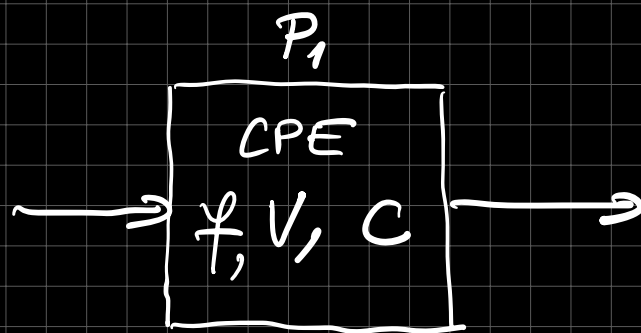
Samo za občas:

$$N \rightarrow \infty, \quad f = \frac{1}{2} : S(N) = 2$$

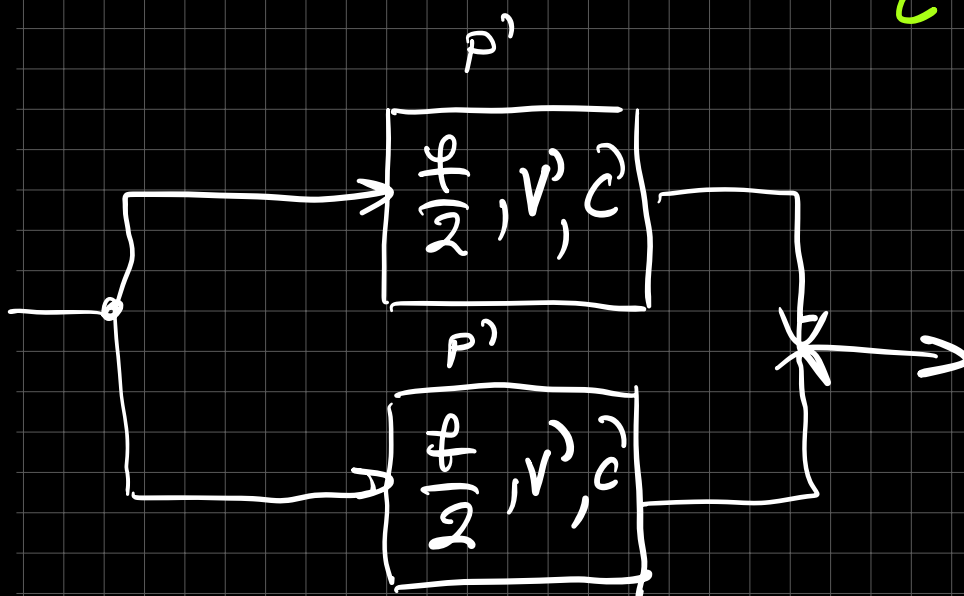
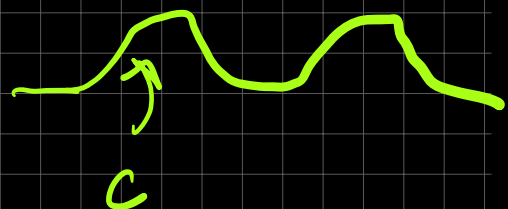
$$f = \frac{3}{4} : S(N) = 4$$

$$f = \frac{9}{10} : S(N) = 10$$

24KAS JA?



$\varphi$  je odveto od  $V, C$   
 $C$  je odveto od poritne  
 opm



$$P_1 \sim f \cdot V^2 \cdot C$$

$$P' \sim \left( \frac{f}{2} \cdot V'^2 \cdot C' \right) \cdot 2$$

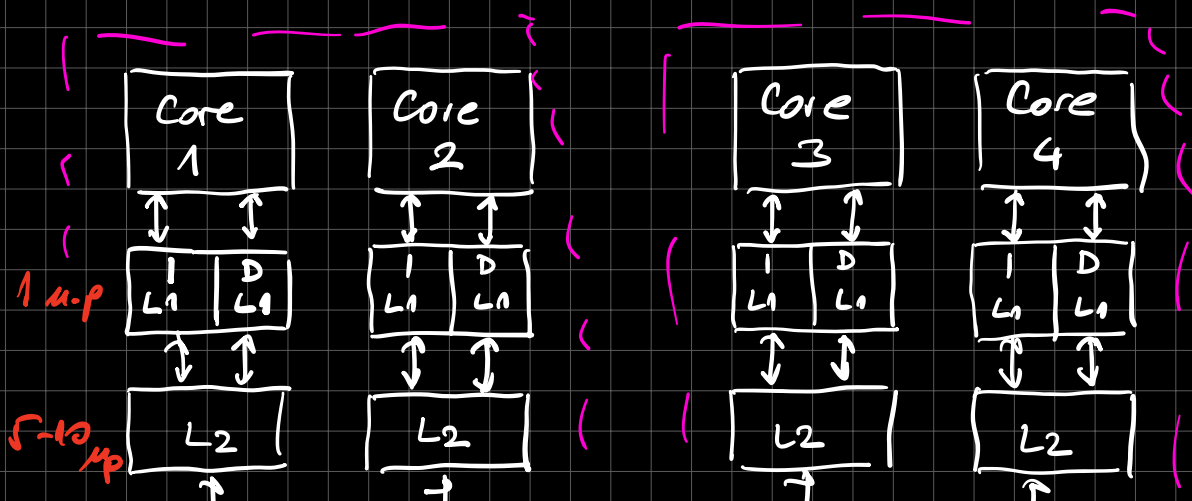
Empirico:  $\frac{f}{2} \rightarrow 0.6V \Rightarrow V' = 0.6V$   
 $C' \sim C$

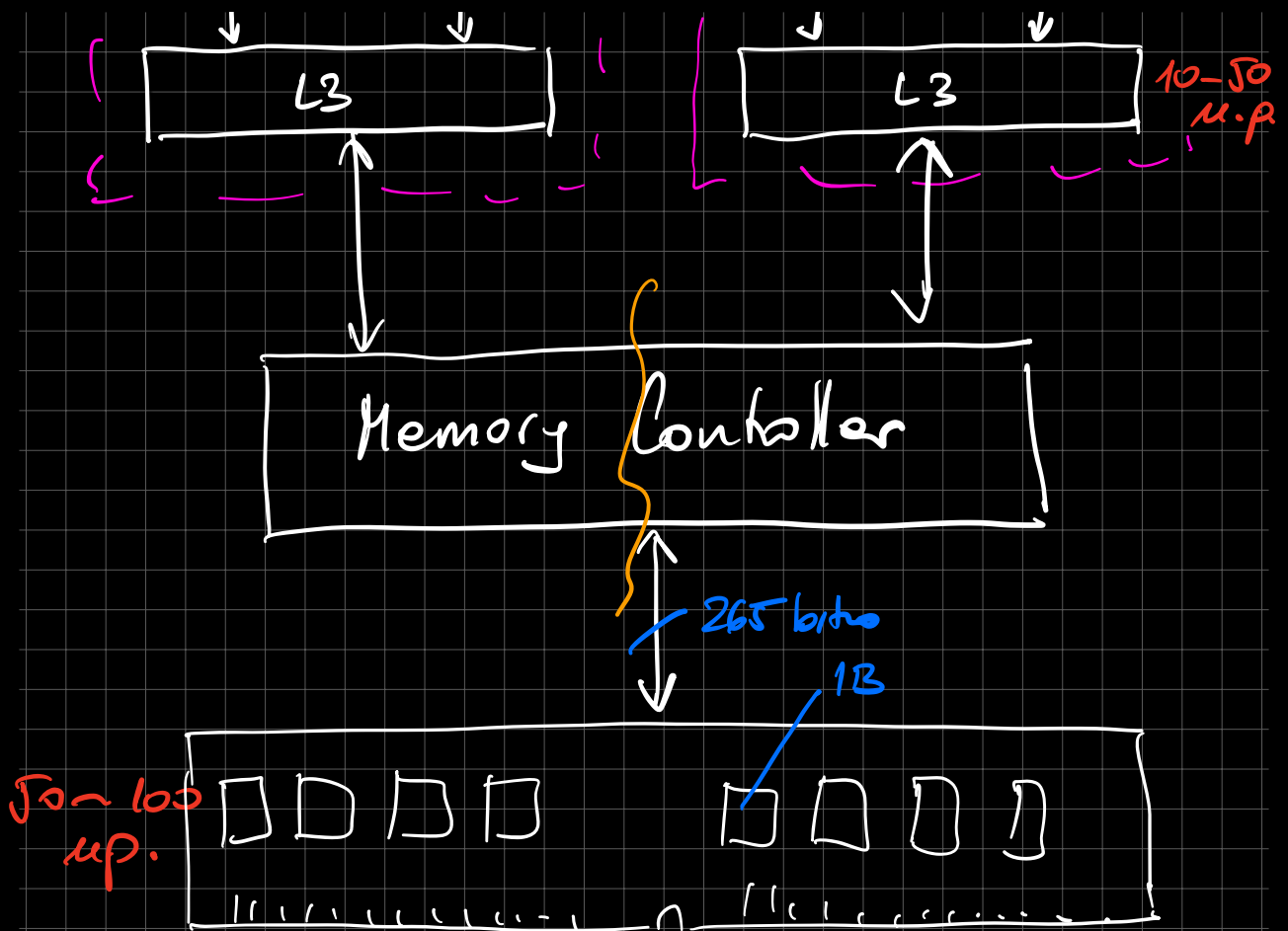
$$P' = f \cdot (0.6)^2 \cdot V^2 \cdot C$$

$$= \underline{0.36} \cdot \underbrace{f \cdot V^2 \cdot C}_{P_1}$$

↓  
DO IT!

Sistemi 5 stupini paralleli





DDR4 DIMM

→ prefetch = 8 ⇒ 1 READ: 64B

Velikost kladu v PP = 64B

# Program: Vids

