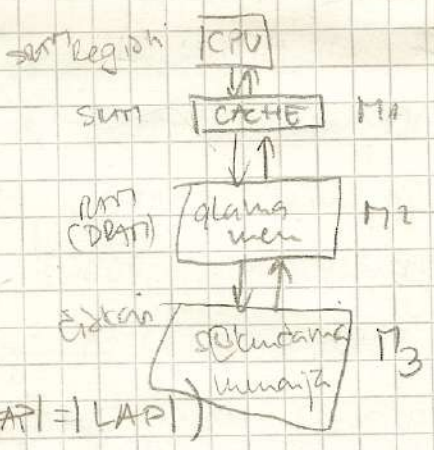
NEREŠENI ZADACI

1) RAM = 1 MB primarno

HARD = 1 GB sekundarno



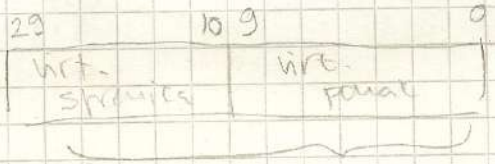
veličina stranice = 1 KB

→ direktan način preslikavanja (|FAP| = |LAP|)

↓ a = 1

Indeks straničnog priključka?

Virtuelna adresa = 4098_{10} = 1002 $_{16}$



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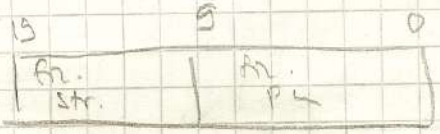


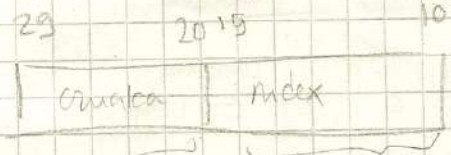
V.P. = $\log_2\left(\frac{1\,KB}{1\,B}\right) = 10$ bita

V.A. = $\log_2(1\,GB) = \log_2(2^{30}) = 30$ bita

V.S. = V.A. − V.P. = 20 bita

F.A = $\log_2(1\,MB) = 2^{20} = 20$ bita

F.S. = F.A − F.P. = 10 bita



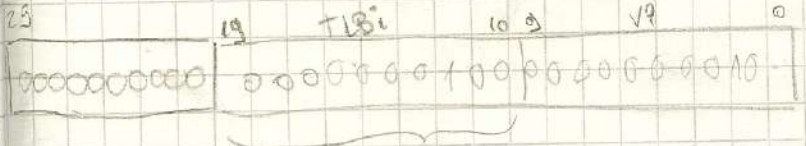
$\frac{\text{primarna}}{\text{velič. str.}} = \frac{1\,MB}{1\,KB} = \frac{1024 \cdot 1024}{1024} = 1024 = 1\,K$

↓

ukupni broj linija primarne

w(TLBi) = $\log_2(1024) = 10$ bita

w(TLBo) = w(VS) − w(TLBi) = 10 bita



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↑ indeks stranicnog prikljucka

DIREKTNA FORMULA ZA OVAJ ZADATAK:

j = i (mod Bp)

Bp = $\frac{\text{primarna}}{\text{velič. stranice}} = 1K$

i - indeks u sek. mem. = $\frac{\text{VA}}{\text{velič. str.}}$

j - indeks u prim. mem.

j = 4 (mod 1024) = (4 : 1024) = 4 (ostatak)

Jezgra + 2 tablice = 4 KB + 2 · 4 KB = 12 KB

Ukupno stranična tablica
32 − 12 = 20 zapisa

$2^{20} \cdot w(\text{zapis}) = 2^{20} \cdot 4\ B = 4\ MB$

$$\frac{\text{dvorazinsko}}{\text{petorazinsko}} = \frac{12\ KB}{4\ MB} = \frac{3 \cdot 1024}{1024 \cdot 1024} = \frac{3}{1024} = 2{,}929 \cdot 10^{-3}$$

ubrzaje od 300 puta

ZAD) VIRT. MEM.

primarna 512 MB
sekundarna 32 GB
stranica 4 KB
VA = 619305(10)
izravno mem. preslikavanje → a = 1

Indeks stranič. priključka?

DIREKTNA FORMULA

$j = i \pmod{Bp} = 15M \pmod{128K} = 1024$

$Bp = \frac{\text{primarna}}{\text{vel. stranice}} = \frac{512\ MB}{4\ KB} = \frac{512 \cdot 1024 \cdot 1K}{4 \cdot 1K} = 128K$

!!!

$i = \left\lfloor \frac{VA}{\text{vel. str}} \right\rfloor = \frac{619305}{4 \cdot 1024} = 151$