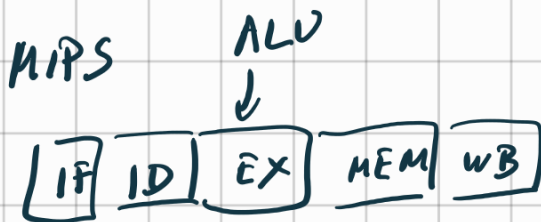


AAD 2024-10-21

DETI coins

13 * 4 = 52 bytes (string)

13 inteiros



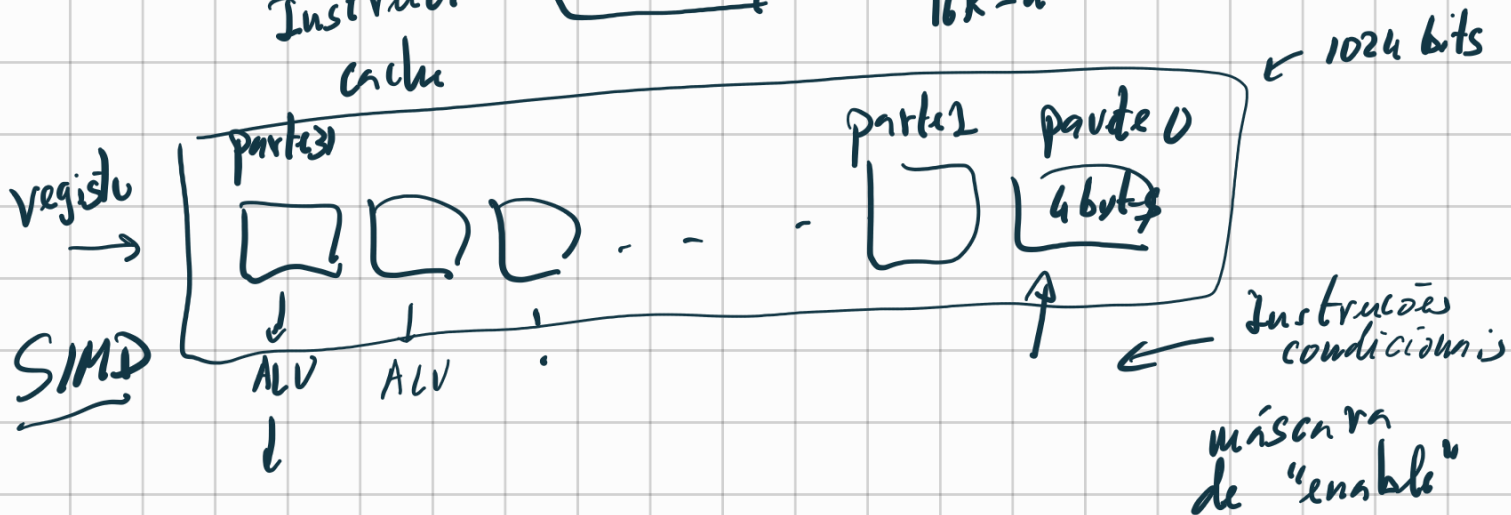
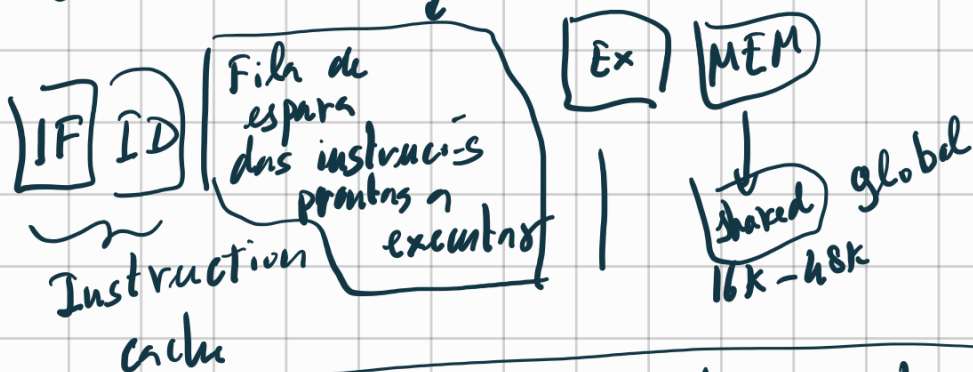
Multi-threading x2
SMT

2 Register Files

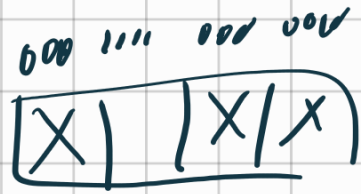
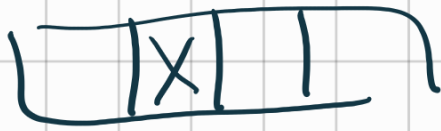
Placa gráfica

Registos com 32 partes (32 x 4 bytes)

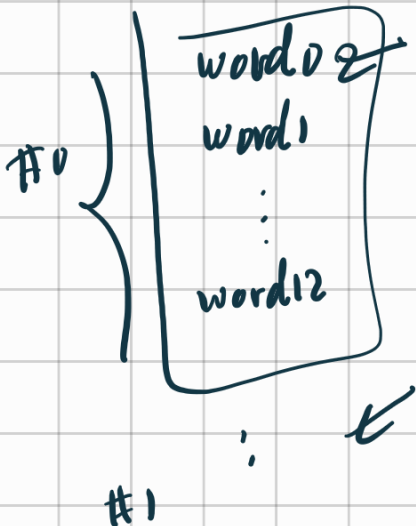
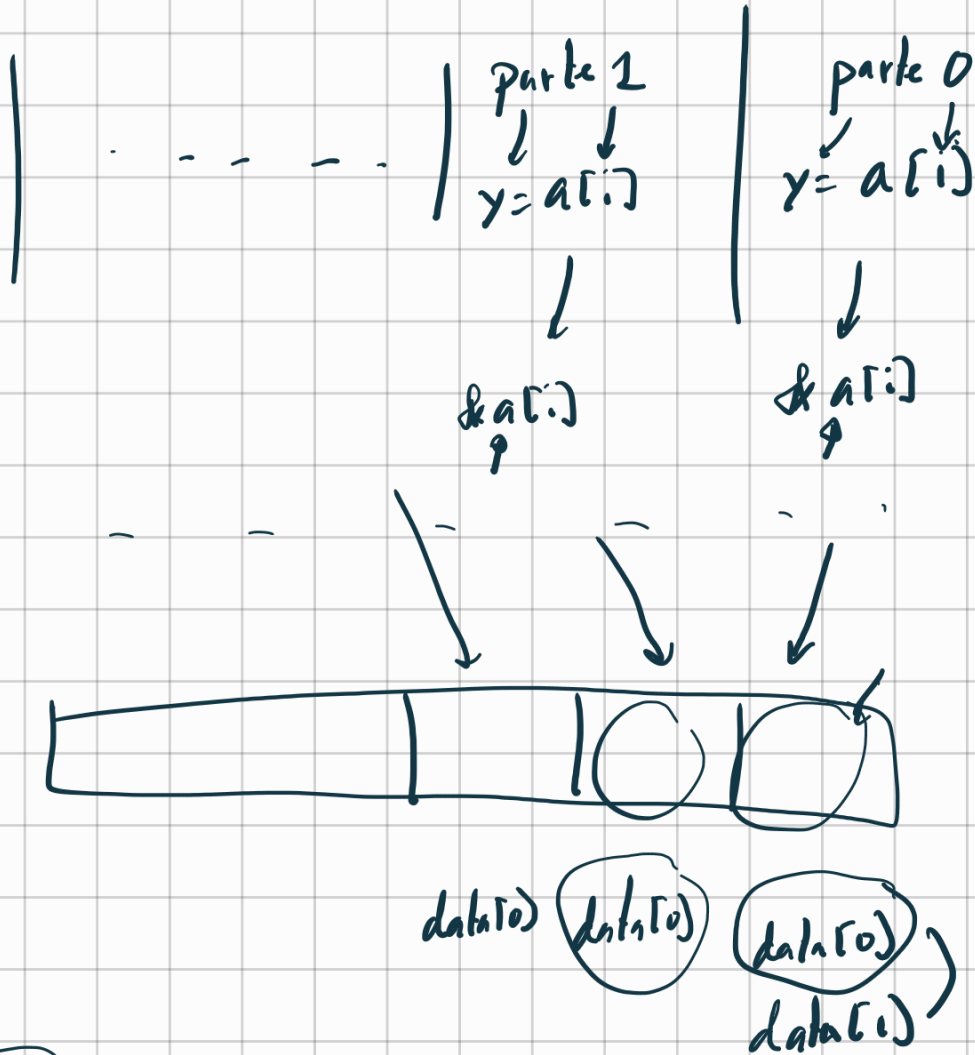
Multi-threading x16 a x32



Intel SIMD



1111 ~~000~~ 1111 ~~000~~ tmp

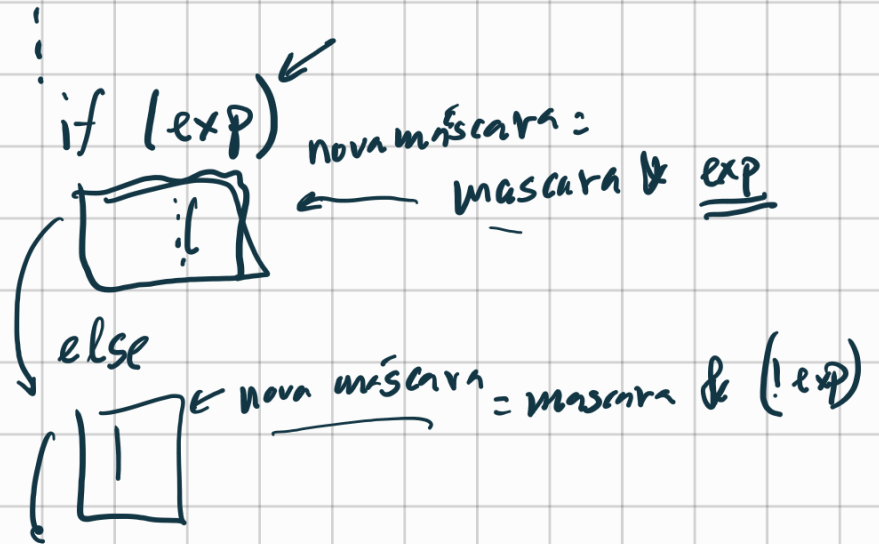


word0 #0
word0 #1
:
word0 #31

word1 #0

if

máscara



switch (a & 15)

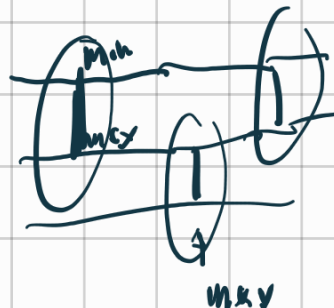
} case 0:
 c = ...
 break;
 case 1:
 c = ...
 break;
 case 15:
 break;



lançar 1000000 threads



Filtro mediano
sorting network



blocos de threads

nº máximo 1024
1536

bloco



512 threads

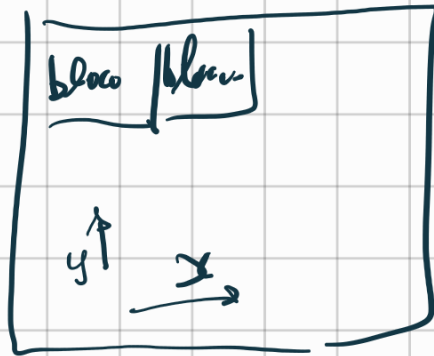
512 x 1

256 x 2

:

1 x 512

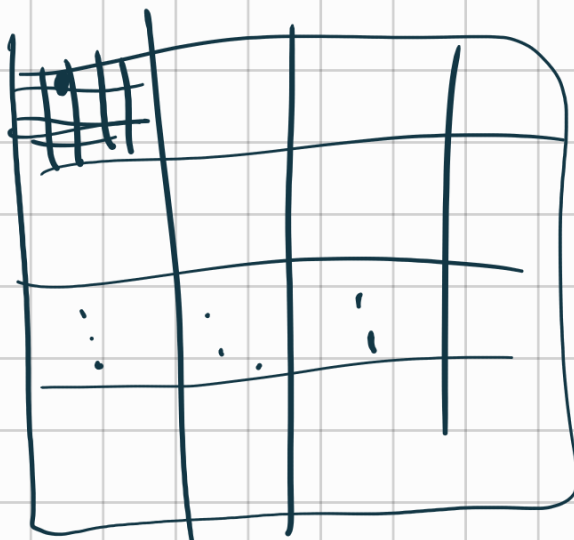
gradeira de
blocos



1024 x 1024

→ blocos de $32 \times 32 = 1024$
thread
= 32 warps

gradeira de 32×32 blocos



DETI coin

13 inteiros de 32 bits = 52 chars

data[13]



coin[13]



MD5 message digest



hash[4] = 16 bytes

"DETI coin" + arbitraria + "\n"

10

utf-8

41 bytes



□ □ □ □ □

□ 16

ascii

32..126