CAMPUS VIRTUAL UPC / Les meves assignatures / 2021/22–01:FIB–270020–CUTotal / Unit 3.2: Introduction to parallel architectures II

/ Questions after video lesson 5

Començat el	diumenge, 17 d'octubre 2021, 12:23
Estat	Acabat
Completat el	diumenge, 17 d'octubre 2021, 12:27
Temps emprat	3 minuts 37 segons
Qualificació	**2,00** sobre 2,00 (**100**%)

Pregunta **1**

Correcte

Puntuació 1,00 sobre 1,00

Assume a directory–based multiprocessor system with four processors, each with 24 GB of main memory and with the corresponding directory associated. Memory lines are 64 bytes long. Data coherency is maintained using a Write-Invalidate protocol.

How many entries exist in each one of the four directories?

Trieu–ne una:

- ○ 24 x 2^{30} entries in each directory

- ○ 4 entries in each directory

- ● 24 x 2^{24} entries in each directory   ✔ Correct! The number of entries is the number of memory lines in each memory, that is 24 x 2^{30} / 2^6, since each memory line is 64 bytes (i.e. 2^6 bytes).

La teva resposta és correcta.

Pregunta **2**

Correcte

Puntuació 1,00 sobre 1,00

Assuming the explanation in the video lessons, how many bits are needed in each directory entry?

Trieu–ne una:

- ○ 4 bits in total

- ● 5 bits in total   ✔ Well done! In class we will use two bits for the state (M , S, U), which in total would be 6 (2+4)

- ○ 1 bit for clean/dirty (D)

- ○ 64 bits, one for each byte in the line

La teva resposta és correcta.

◄ Video lesson 5 (part 3): directory entry (notation a bit different from the one used in class)

Salta a...

Additional material ►