

CAMPUS VIRTUAL UPC / Les meves assignatures / 2021/22-01:FIB-270020-CUTotal / Unit 3.1: Introduction to parallel architectures I  
/ UMA coherence quizz (2)

<b>Començat el</b>	diumenge, 17 d'octubre 2021, 11:50
<b>Estat</b>	Acabat
<b>Completat el</b>	diumenge, 17 d'octubre 2021, 11:53
<b>Temps emprat</b>	3 minuts 25 segons
<b>Qualificació</b>	<b>6,00</b> sobre 6,00 ( <b>100%</b> )

Pregunta **1**

Correcte

Puntuació 1,00 sobre 1,00

Assuming a UMA system with two processors, sharing the access to 8 GB of main memory. Coherence is implemented with snooping write-invalidate MSI.

Assuming initially empty caches, let's consider the following sequence of memory accesses to the same memory address w0, r0, w0, r1, r0, w1, w0, r1 (being rx a read access by processor x and wx a write access by processor x). In order to answer the following questions we suggest you do a table showing the CPU event (PrRd or PrWr), bus transaction (BusRd, BusRdX, BusUpgr or Flush) and cache line status (M, S or I) for each processor.

Is it true that all accesses to memory in the previous list always imply a bus transaction placed on the bus by the corresponding snoopy?

Trieu-ne una:

## Respostes

☐ Vertader

☒ Fals ✓

Well done! there are three accesses by processor 0 (the two r0 accesses and second w0 access) that do not place any bus transaction.

Pregunta **2**

Correcte

Puntuació 5,00 sobre 5,00

### Fil in the empty spaces in the following two sentences:

The previous sequence of memory accesses implies

✓ BusRd,

✓ BusRdX,

✓ BusUpgr, and

✓ Flush commands. In total

✓ cache line invalidations are performed.

◀ UMA coherence quizz (1)

Salta a...

Video lesson 5 (part 1): why directory-based coherence? ►