Cache coherence + memory consistency

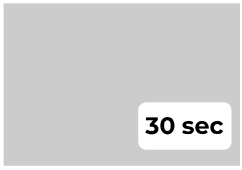
1 play • 72 players

A kahoot by Penn State

Questions (4)

1 - Quiz

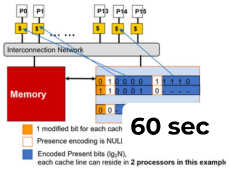
Why is directory-based cache coherence better than snooping-based?



- Less memory use ✗
- Less hardware cost ✗
- Better scalability ✓
- Better cache hit rate ✗

2 - Quiz

What was the DISadvantage of limited directory-based coherence?



- More memory needed for directory ✗
- Cannot support many processors ✗
- Will have to fallback when more processors than expected shared a block ✓
- None of the above ✗

3 - Quiz

In sequential consistency, which of the following cannot be printed?

- A=1, B=1 ✗
- A=1, B=0 ✗
- A=0, B=1 ✗
- A=0, B=0 ✓

4 - Quiz

What is NOT true about processor consistency?

- A=0, B=0 can be printed ✗
- To achieve sequential consistency, fence must be placed properly ✗
- Write buffer is one possible reason for reordering ✗
- Loads and stores to the same memory address can be reordered ✓