

1 play • 70 players

🙎 A kahoot by Penn State

0.	Jesti		- 1	101
C)I	Jesti	On	15	B

1 - Quiz

What is true about Coarse-Grain multithreading (CGMT)

60 sec

Sacrifies significant single thread latency

Can fill load-use stalls efficiently

Flushes the entire pipeline on switch

Good for complicated long pipeline

2 - Quiz

What is true about fine-grain multithreading?

60 sec

- Multiple threads can share ALU

- Multiple threads can share register file

- The entire BHT/BTB must be duplicated

- Only one thread run at a time for the entire pipeline

3 - Quiz

20 sec Who is Tomasulo? 2 4 - Quiz 60 sec What does the add becomes after issuing? add, -1, 2 3 \$2 -1 Register files add 3, -1 2 add \$1, \$2, \$3 add RS1, 2 RS4 RS1 add, 7, 3 RS4 div, RS1, 2 add RS4, RS1 \$2 RS1 RS2 sub, RS4, RS1 RS5 \$3 RS3 RS2 ALU (add/sub) ALU (mul/div) RAT 5 - Quiz 60 sec What is NOT supported in the original Tomasulo? Out-of-order dispatch Precise exception Dynamic register renaming In-order issue

6 -	Quiz	
W	hat is related to out-of-order dispatch?	20 sec
	Reorder buffer (ROB)	×
•	Load-store queue (LSQ)	×
	Reservation station (RS)	✓
	Instruction queue	×
7 -	Quiz	
W	hat is NOT true about modern OoO processors?	60 sec
	Instruction is issued in-order	×
•	Instruction is executed out-of-order	×
	Instruction is committed out-of-order	✓
	All of the above are true	×
8 -	Quiz	
	a load accesses the same memory address from an immediately preceding ore, where do the value come from?	60 sec
	Cache/memory	×
•	Broadcasted from the bus	×
	Store queue	✓
	ROB	×

Resource credits

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