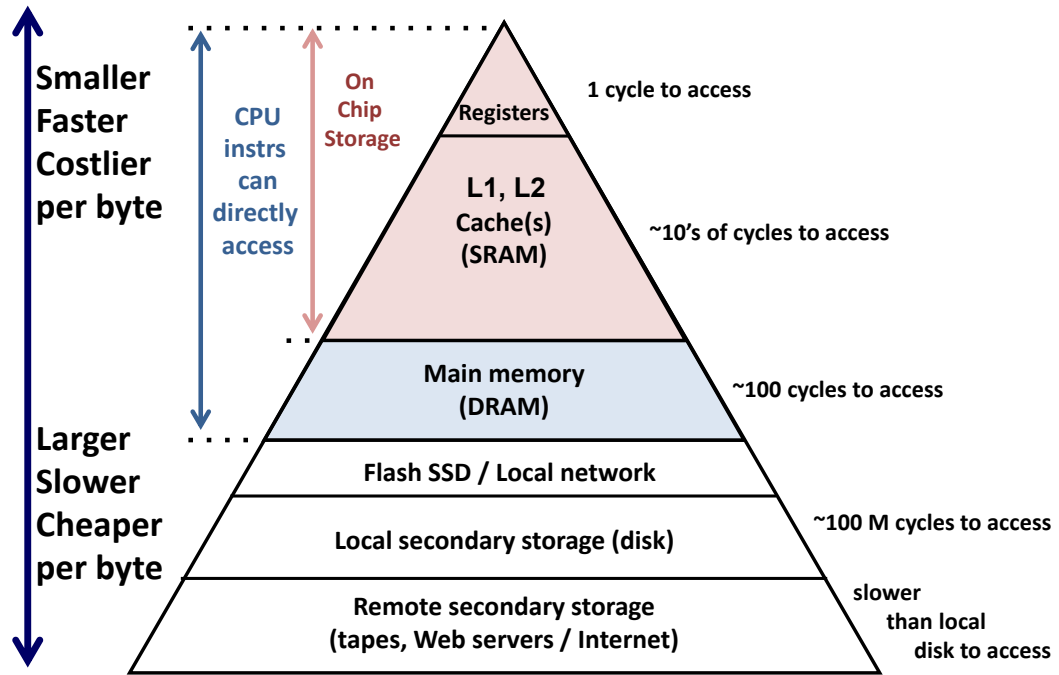
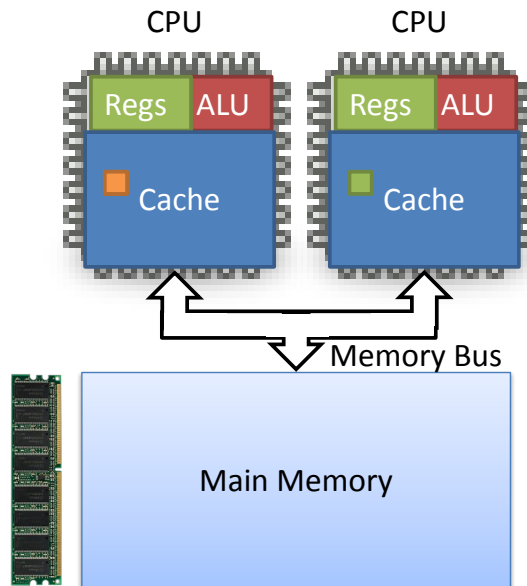


# The Memory Hierarchy



# Cache Coherency





# Direct-Mapped Address Components

(32-bit example)

Tag (19 bits)	Index (10 bits)	Byte offset (3 bits)

Line	V	D	Tag	Data (8 Bytes)
0				
1				
2				
3				
4				
...			...	
1020				
1021				
1022				
1023				



# Direct-Mapped Address Components

Tag (19 bits)	Index (10 bits)	Byte offset (3 bits)
4217	4	2

Line	V	D	Tag	Data (8 Bytes)
0				
1				
2				
3				
4	1		4217	
...			...	
1020				
1021				
1022				
1023				



0	1	2	3	4	5	6	7
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