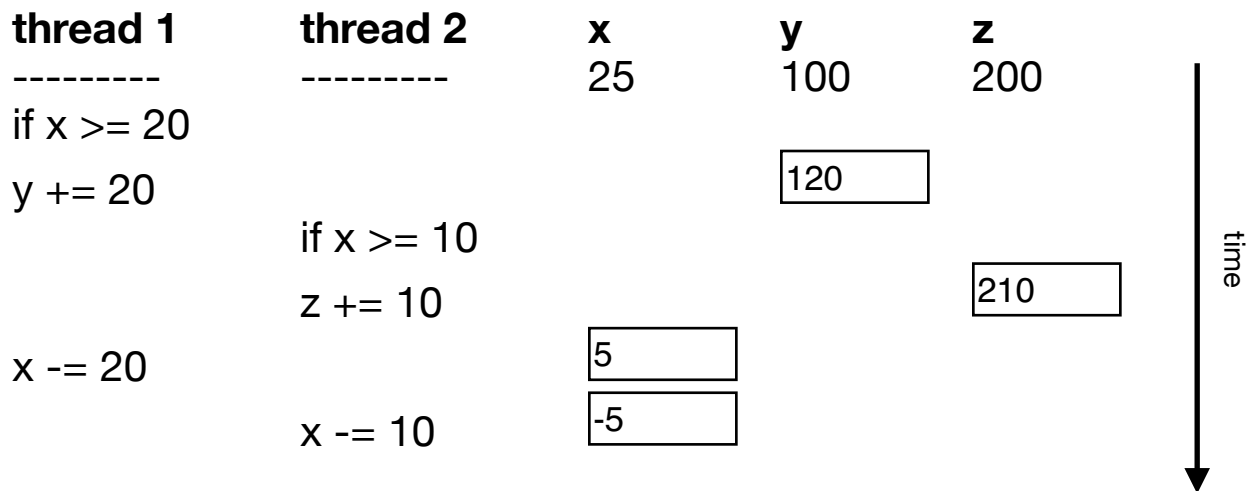
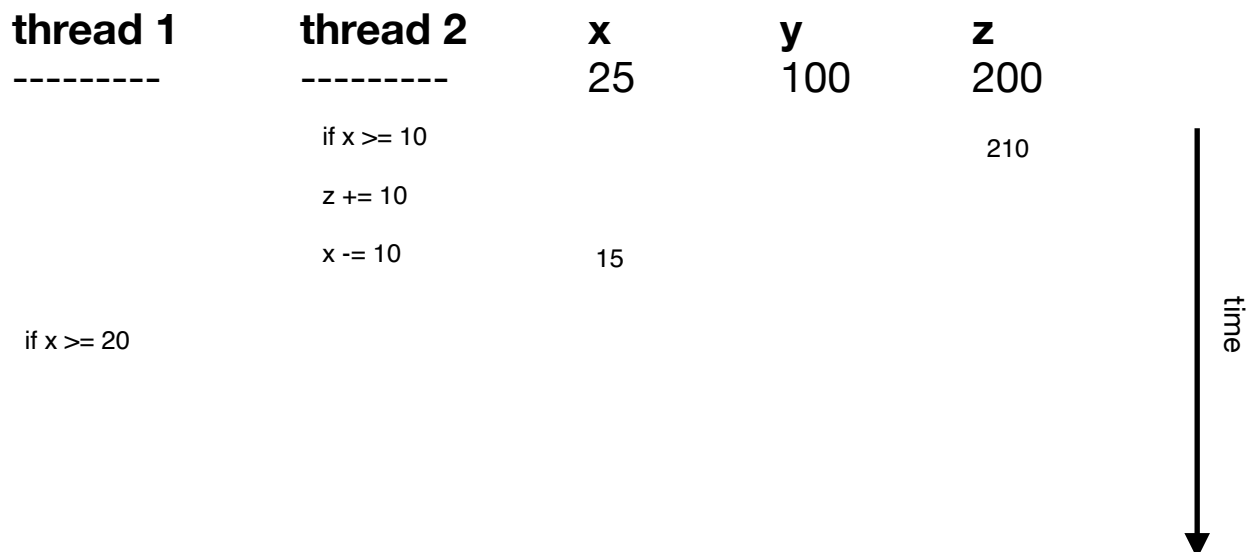


CS 544, Race Condition Worksheet

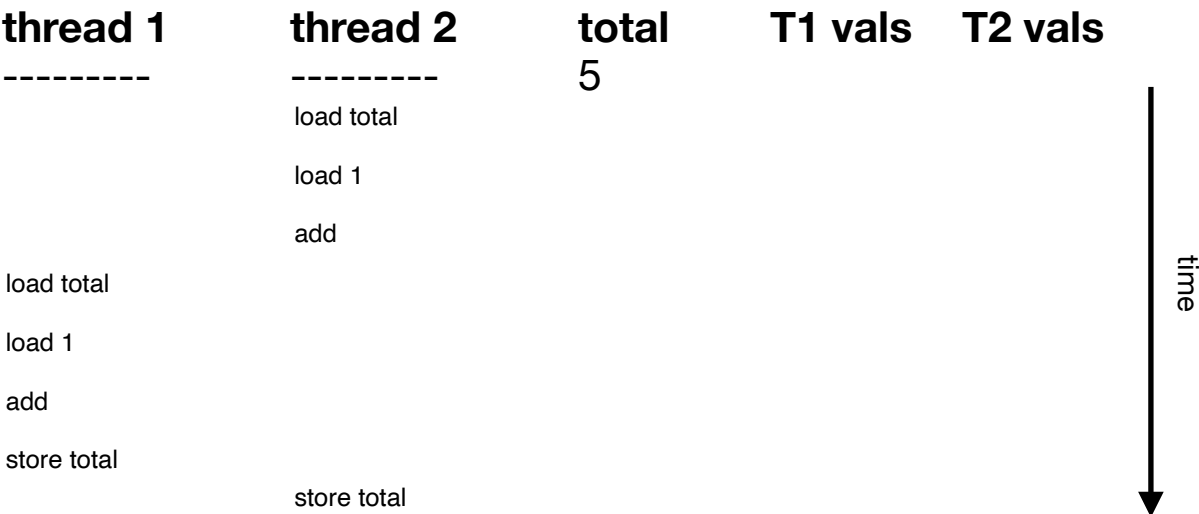
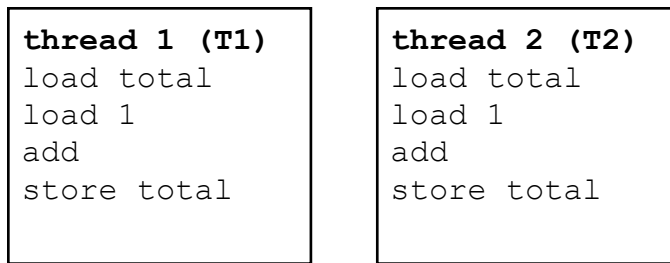
thread 1 if x >= 20: y += 20 x -= 20	thread 2 if x >= 10: z += 10 x -= 10
--	--



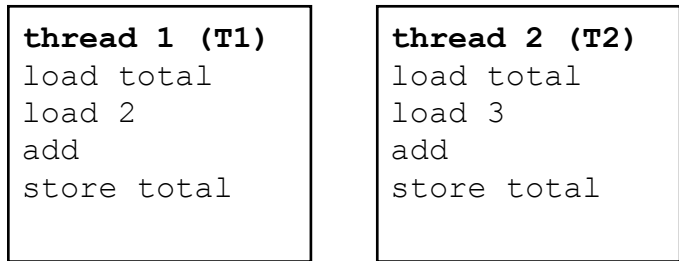
Problem 1: Fill in the above boxes to indicate the variable changes.



Problem 2: Fill in a timeline above so that x is always >= 0 and z ends at 210.



Problem 3: Choose a bytecode-level interleaving above to finish with total=6.



Problem 4: Assume any bytecode-level interleaving is possible, and total starts at 0. What is the SMALLEST possible final value for total?