Homework H6: Chapter 12 Concurrency

CS 283 Systems Programming

Grading: 100 points

This homework has two parts. The second part is due one week after the date that the first part is due. Each question is worth 25 points.

Part A

The first two of the following exercises come from the main text, Computer Systems: A Programmer's Perspective, 3rd Edition (CSAPP3).

1.   CSAPP3 Problem 12.16
2.   CSAPP3 Problem 12.17
3.   Starting with file hello-hw.txt, write a program that uses threads that print a string, their own task id and the value of a variable sum. The task id, value of sum and string address must be passed to the string through pthread_create(). Do not change the code in hello-hw.txt but only add statements. Some of the places where new code must be added are shown by /* ... */.

Part B

4.   Starting with file dotpr-hw.txt, write a program that uses threads to calculate the dot product of two vectors. Do not change the code in dotpr-hw.txt but only add statements. Some of the places where new code must be added are shown by /* ... */.

What to hand in:

Please submit the solutions to the problems above by the submission method specified in the Syllabus. Make sure your answers are concise and clear. Make sure you completely explain all your answers. We will deduct points if it is not obvious how you got your answer -- even if your answer is correct.