

Student Number:
Name:

6CS005 High Performance Computing Week 2 Workshop

Revision on Multithreading

Tasks – Multithreading

You will need to refer to the Week 2 lecture sides in order to complete these tasks.

1. Write a multithreaded C program to print out all the prime numbers between 1 to 10000. Use exactly 3 threads.
2. Convert this program to prompt the user for a number and then to create the number of threads the user has specified to find the prime numbers.
3. Convert the program in (2) so that each thread returns the number of prime numbers that it has found using `pthread_exit()` and for main program to print out the number of prime number that each thread has found.
4. Convert the program in (3) to use `pthread_cancel()` to cancel all threads as soon as the 5th prime number has been found.