IIT Bhubaneswar
School of Electrical Sciences
Operating Systems Lab (0-0-3)
Autumn 2020
Lab Schedule: Tue (2:30-5:30)

Instructor: Debi Prosad Dogra (dpdogra@iitbbs.ac.in)
Teaching Assistant: Kamalakar and Mohini

Laboratory 4 (**Submission Deadline: 5:30 PM**)

Assignment 5

Points: 60 + 40 **(Only submission)**

Q1. Write a multithreaded program that calculates various statistical values for a list of numbers. This program will be passed a series of numbers on the command line and will then create three separate worker threads. One thread will determine the average of the numbers, the second will determine the maximum value, and the third will determine the minimum value.

For example, suppose your program is passed the integers 90 81 78 95 79 72 85
The program will report

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The average value is 82
The minimum value is 72
The maximum value is 95
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The variables representing the average, minimum, and maximum values will be stored globally. The worker threads will set these values, and the parent thread will output the values once the workers have exited.

Q2. Write a multithreaded program that outputs prime numbers. This program shall work as follows: The user runs the program and enters a number through the command line. The program then creates a separate thread that outputs all the prime numbers less than or equal to the number entered by the user.