SWE 594: Multicore Programming
Spring 2018, Homework 1 (due: April 14th)
(This project can be done in groups of at most 2 students)

Problem 1

Implement an OpenMP program that generates prime numbers in the interval [2..M]. You should use the prime generation method given below (Do NOT use other method ! If you use other method, you will get 0 credit).

Your program should generate a csv file called results.csv that reports the timing results in the following format. You should also write a report explaining how you did your project and include the table.

M	Openmp Loop Scheduling Method	Chunk Size	T_1	T_2	T_4	T_8	T_{12}	S_2	S_4	S_8
…	….	….	…	…	…	…	…	…	…	…

```
#include <stdio.h>
#define N 50

int prime[N] ;    // stores the first 50 primes

int main() {
    int j ;
    int k ;
    int n ;
    int quo,rem ;

P1: prime[0] = 2 ;
    n = 3 ;
    j = 0 ;
P2: j =j+1;
    prime[j] = n ;
P3: if (j == (N-1)) goto P9 ;
P4: n=n+2;
P5: k=1;
P6:  quo = n / prime[k] ;
     rem = n % prime[k] ;
     if (rem == 0) goto P4 ;
P7:  if (quo <= prime[k]) goto P2 ; P8: k=k+1;
     goto P6 ;
P9:  for(j=0 ; j < N ; j++) printf("%d\n",prime[j]) ;
}
```

Homework Submission

- Please email me (ozturan@gmail.com) your homework as one zipped file. Do not send any executable files. In the subject of the e-mail, write :
  SWE 594 HW1 partner1name partner2name