Assignment 6.

Write a CUDA code that parallelizes the sequential pseudo code given below so that each thread working on updating a sub-matrix of size n/p x n, where p is the total number of threads. Use multiple thread blocks and multiple threads in each block. You may assume n divisible by the total number of threads.

Due: Dec 3 (Friday) before midnight.

Input: D, n x n matrix with 0 on diagonal, positive values other places
Output: D

```
/*** hbuf[n], vbuf[n]:  local buffers used in the alg. ***/
for k starting from 0 through n-1
   for i starting from 0 through n-1
      vbuf[i] = D[i][k]
   end for i
   for j starting from 0 through n-1
      hbuf[j] = D[k][j]
   end for j

   for i starting from 0 through n-1
   for j starting from 0 through n-1
        D[i][j] =  min{ D[i][j], vbuf[i]+ hbuf[j] }
   end for j
   end for i
end for k
```