PHW5 Report:
Isaiah Lee
Used CARC

```
========================================
SLURM_JOB_ID = 17600478
SLURM_JOB_NODELIST = d13-05
TMPDIR = /tmp/SLURM_17600478
========================================
Kernel Execution Time: 6.170048 ms
Result at C[451][451]: 2048
Kernel Execution Time: 4.582112 ms
Result at C[451][451]: 2048
```

In this figure, p1 was first, then p2.
The execution time of the optimized vs unoptimized approach showed a difference in performance, where the optimized approach outperformed by around a factor of 1.3. The shared memory means that the kernel does not need to access global memory, and it acts as a cache to lower memory access times, which is why it is faster.

I did not include the module load cuda/11.6.2 into my makefile as I could not get it running. My makefile compiles both .cu programs, but you still need to run the sbatch job.sl file to get the output.