

# Assignment 4

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## 1. Matrix-vector operations on a GPU.

`./inner_product -n 100000000`

GPU/CPU	CPU	cuda1	cuda2	cuda3	cuda4	cuda5
bandwidth	3.703792 GB/s	19.326192 GB/s	125.71524 1 GB/s	206.81534 1 GB/s	85.863332 GB/s	15.800171 GB/s

`./matrix -n 10000`

GPU/CPU	CPU	cuda1	cuda2	cuda3	cuda4	cuda5
bandwidth	4.066486 GB/s	11.183548 GB/s	116.41779 8 GB/s	141.11316 1 GB/s	62.874622 GB/s	54.379985 GB/s

## 2. 2D Jacobi method on a GPU

File in `jacobi.cu`

Run: `./jacobi -n 100`

## 3. Update on final projection

We have finished the step 1: Use C++ to implement FFT and inverse FFT.

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