

HEIDELBERG UNIVERSITY  
INSTITUTE FOR COMPUTER ENGINEERING (ZITI)

MASTER OF SCIENCE COMPUTER ENGINEERING  
GPU COMPUTING

## Exercise 7

gpucomp03

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Due date January 26th, 09:00

## 7.1 Naive GPU implementation

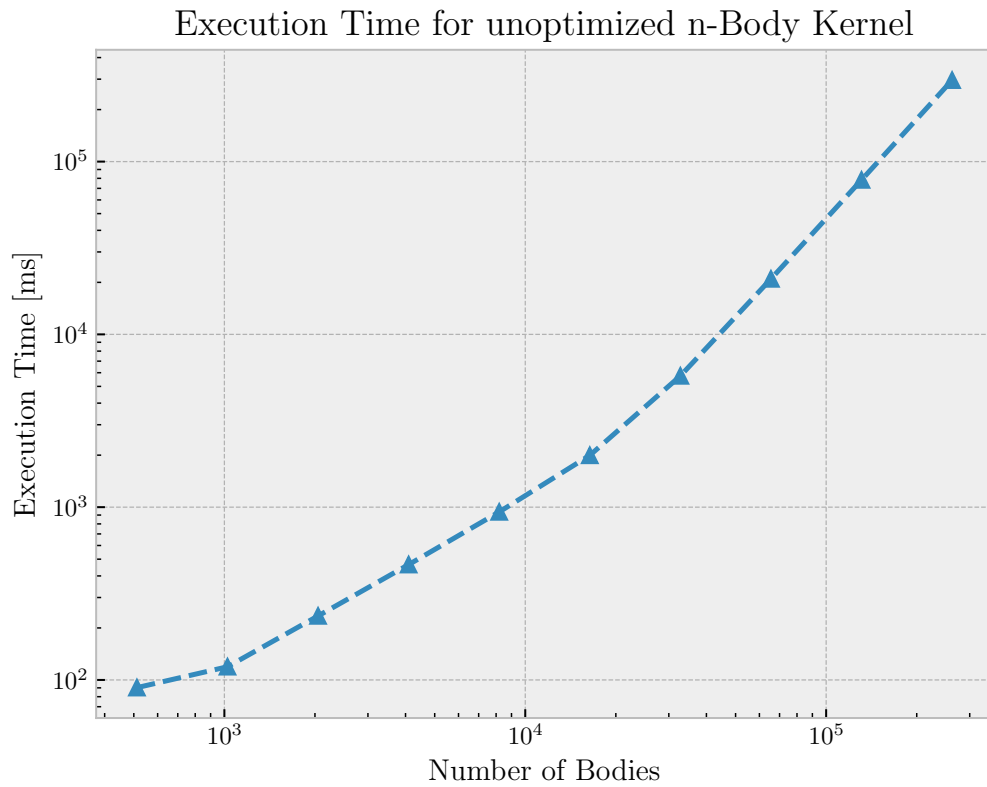


Figure 1: Execution times for unoptimized n-body kernel

## 7.2 Optimized GPU implementation

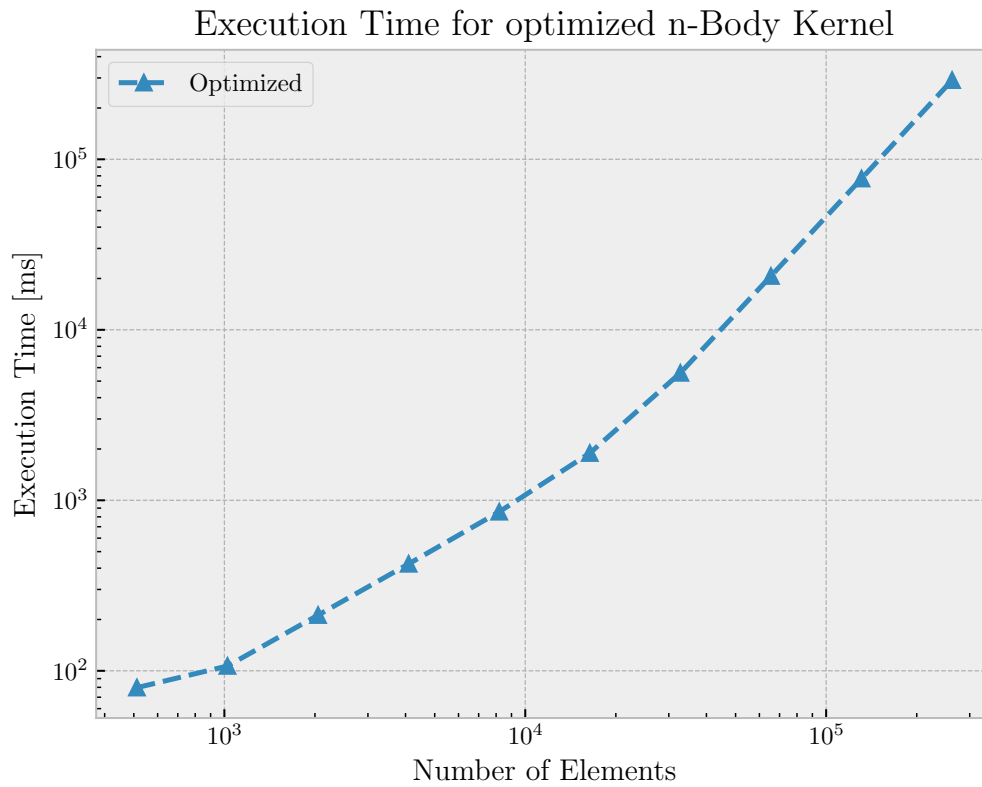


Figure 2: Execution times for unoptimized n-body kernel

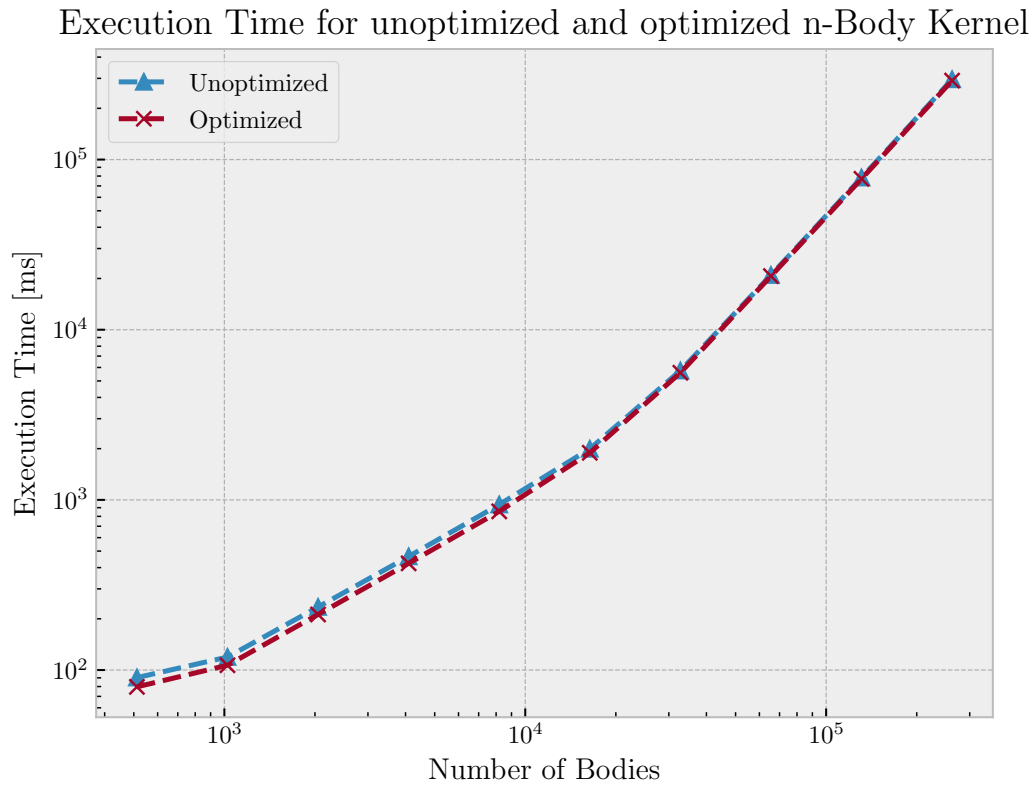


Figure 3: Comparison of execution times for optimized and unoptimized versions

### 7.3 n-Body GPU computations and streaming

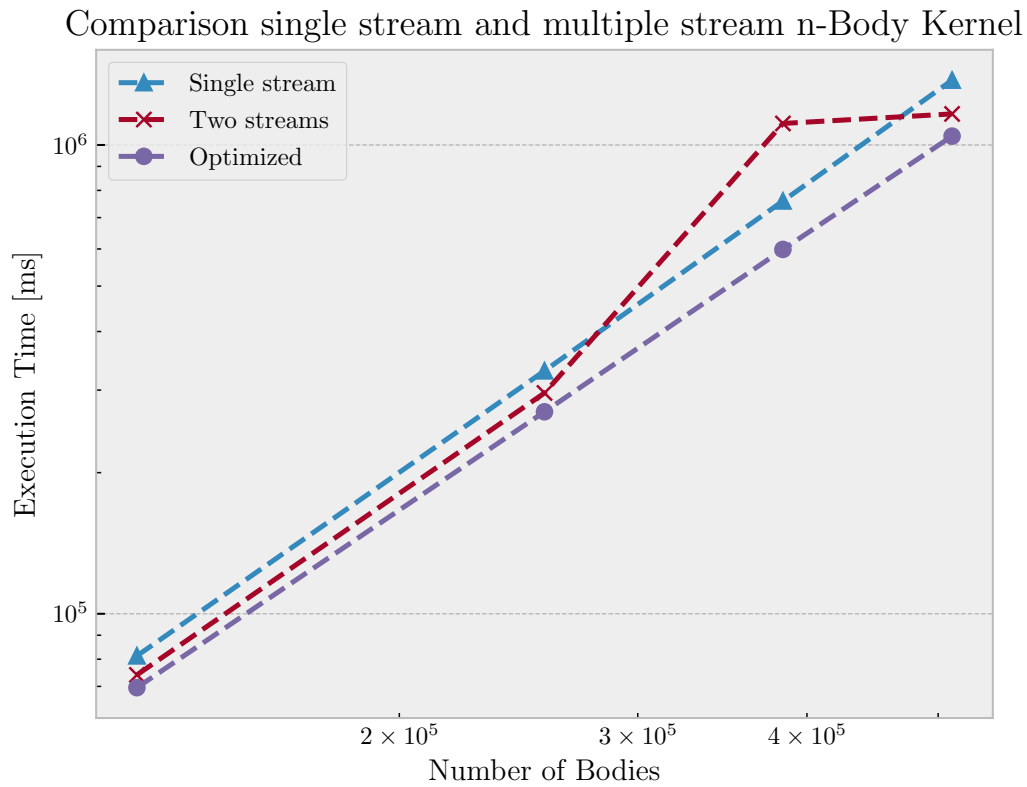


Figure 4: Execution times for n-body kernel using one and two streams

### 7.4 Willingness to present

Hereby, we declare our will to present the results shown in the former sections.