Sys-Intro Lab1 Report

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Part 1: Loop orders

The result of the first part is shown in Figure 1.
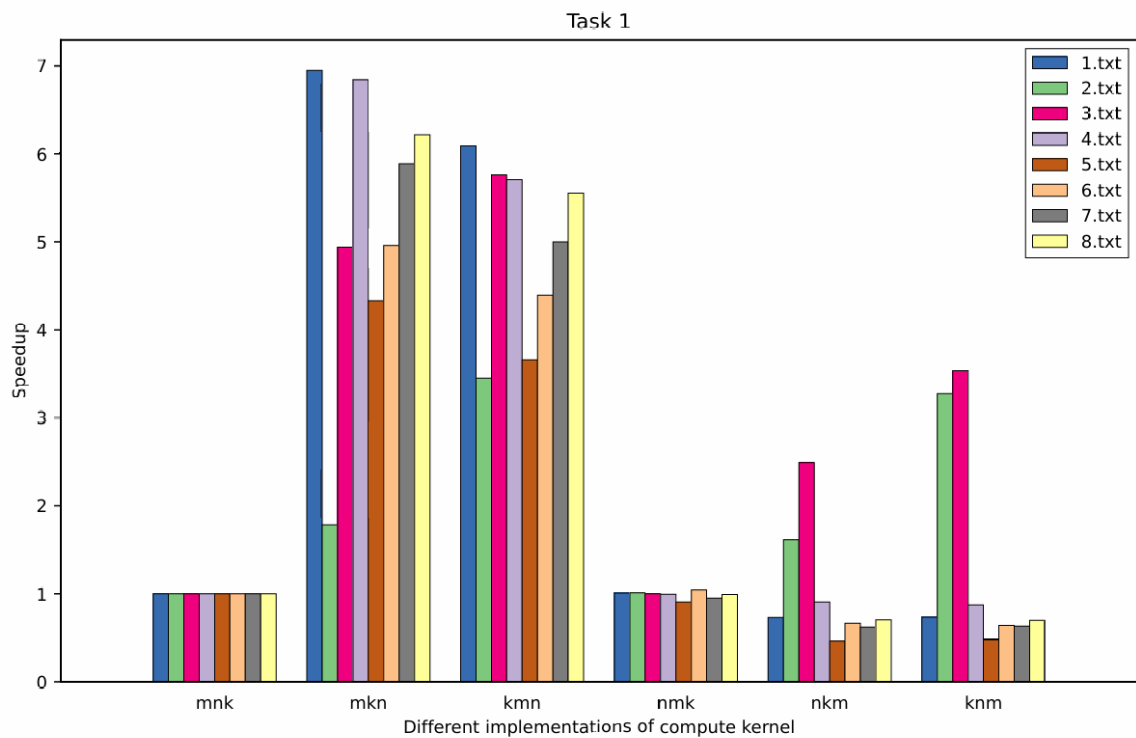

Figure 1: Part 1

Part 2: Common techniques
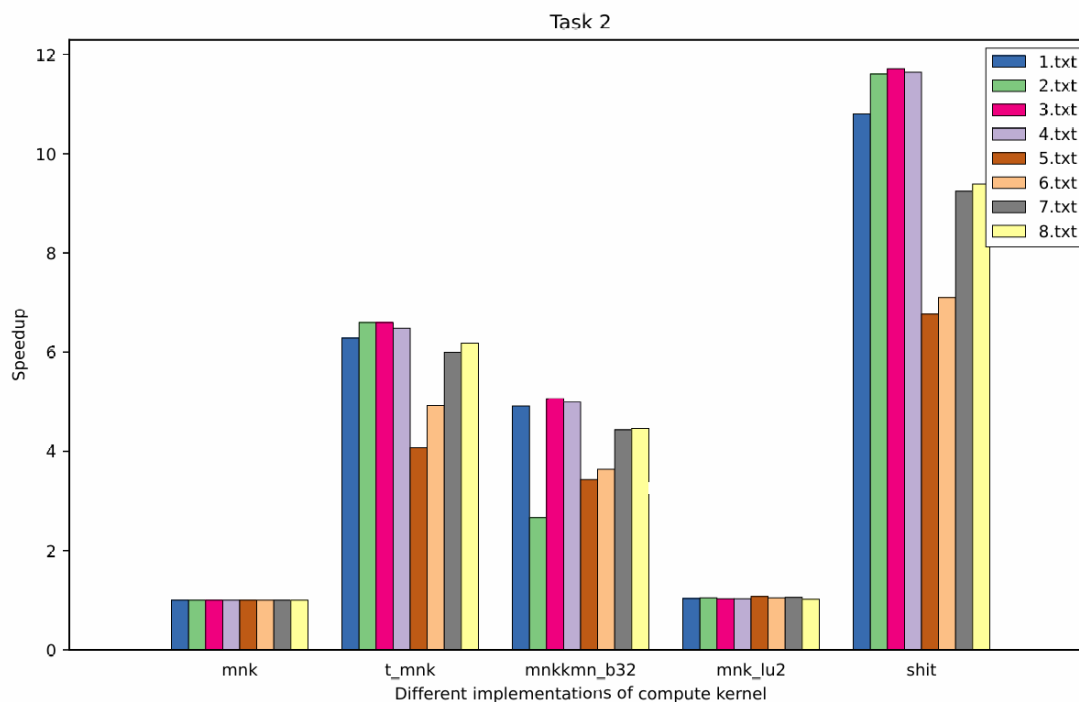
The result of the second part is shown in Figure 2.

Figure 2: Part 2

From these, we can see that the lu2 method doesn't have a good performance to the mnk method. The t_mnk and mnkkmn_b32 method are better than the lu2 method. The t_mnk method is the best one among them. Plus, we speed up the t_mnk method by using register, it can achieve nearly 10 times faster than the original one. (which displayed in the "shit" entry)

Part 3: With SIMD

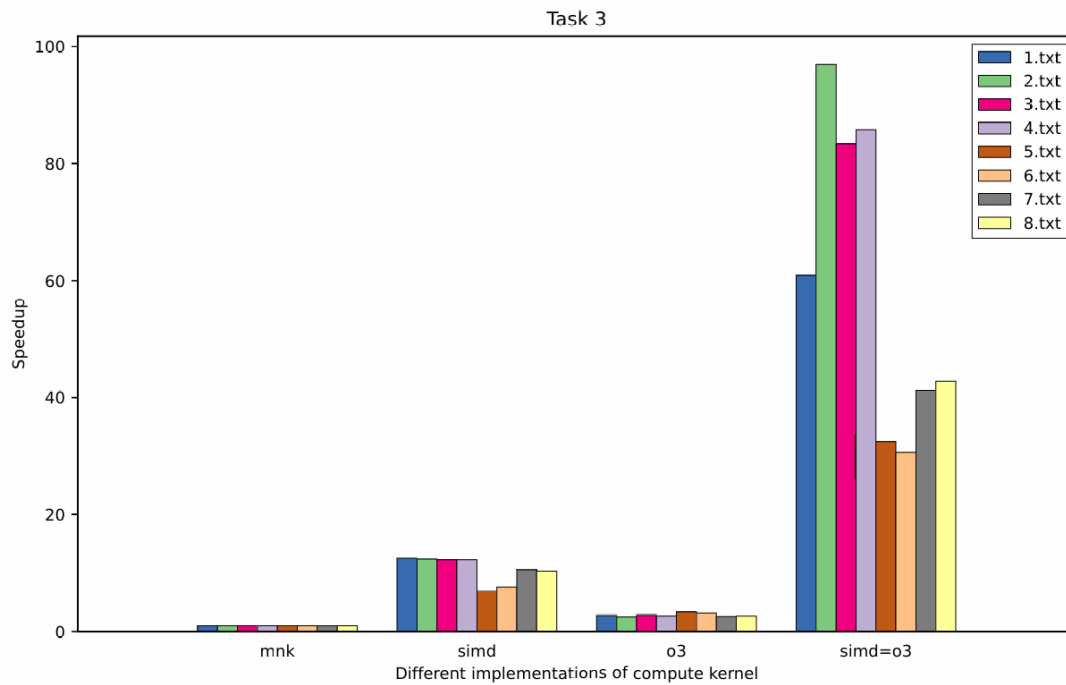The result of the third part is shown in Figure 3.

Figure 3: Part 3

With simd, we achieve nearly 10 times speedup. when using simd-o3, it achieves nearly 100 times than the original one.