

Lab10: SIMD with Intrinsics

Polynomial evaluation using SIMD instructions was discussed in class (see slides).

An example is provided here below:

$$3x^2 + 2x - 3$$

If $x = 1$,

the polynomial will evaluate to $3 \cdot 1 \cdot 1 + 2 \cdot 1 - 3 = 3 + 2 - 3 = 2$.

Coefficients are $\{3, 2, -3\}$.

“evalPoly.c” file contains function “evaluate” to solve a polynomial given an input x and coefficients of the polynomial. Lab work is to implement “evaluateSIMD” function that uses intrinsics to evaluate the polynomial.

Measure the run-time of the code and check if you get any speedup by using intrinsics compared to the code that does not use intrinsics.