20875 Software Engineering

Tutorial 5

1. We read (from standard input) a stream of bytes as unsigned 8-bit integers. We want to filter those integers, and write (to standard output) only some of them. Specifically, we write those who are divisors of 873248763249102240.

   Download `filter_0.c`, and implement the code of the function `filter()`.

   Then, find performance issues and, if possible, improve the implementation.

2. We want to implement a fast matrix multiply code for square fp32 matrices (starting with medium sizes, e.g. 2048×2048).

   Download `matmul_0.c`, and implement the code of the function `matrix_multiply()`.

   Then, find performance issues and, if possible, improve the implementation.