

Rendering Tutorial 1

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Assignment 1

In the lecture we discussed an initial implementation of a brute force path tracer.

1. Get the source code from the course material.
2. Compile and link the program on the system of your choice.
 - The program is written in C++ version 2020
 - The build system is [CMake](#)
 - No external libraries are required
3. Run the program.

The program writes an output image in [PFM format](#). This format allows to store floating point data for the RGB channels so that we do not need to deal with conversion to integers, and it is extremely simple so that we do not need to use an external library. [The Gimp](#) can open PFM images. The [qv](#) viewer offers some inspection capabilities (statistics, histogram, pixel values, ...). Note that Adobe Photoshop imports PFM images upside down; you can work around this bug by flipping the image vertically.

Keep track of all changes you make to the program during the tutorial,
and be sure to verify their correctness!
Each modification will be required in future tutorials,
and you will probably want to use your modified path tracer as a basis for the project task!

There will be no downloadable sample solutions!

Assignment 2

Implement Anti-Aliasing for the brute force path tracer, as discussed in the lecture.