What this code is about

The C++ code LU.cpp computes the matrix in equation (3.8)

$$P(n,m) = m!2^{n-\nu+1} \sum_{k=0}^{m} \frac{(-2)^k \Gamma(n+k-\nu+1)}{(k!)^2 (m-k)!}. \tag{1}$$

The code writes the elements $P(n,m)$ to the file matrix_p.txt in a row-major fashion.

The file compile.job is a SLURM script to compile the code in an HPC and generate an executable.

The file together.job is a SLURM script to run the executable in an HPC.

The file mpfr.sh is a shell script used to compile and run the code in an Ubuntu 22.04 local machine.