MPI: Practical 5 Solutions

1 Laplace's equation

1.1 Blocking point-to-point

1.1.1 `MPI_Send` and `MPI_Recv`

See `laplace_send.cpp`.

1.1.2 `MPI_SendRecv`

See `laplace_sendrecv.cpp`. This uses `MPI_PROC_NULL` as the source/destination process for rank 0, or `nproc - 1`, accordingly.

1.1.3 Buffered sends

This is a straight-forward modification of the first code - it simply adds a routine to attach buffer space and replaces `MPI_Send` with `MPI_Bsend`.

1.2 Non-blocking communication

See `laplace_isend.cpp`.