Manual:

All version can be simple compiled by just typing `make` in the directory of the folder.

The “Shared” program simply works by typing the following command “./main *input.txt option*” where input.txt contains the list of points of the polygon formatted in the following way {x_0 y_0 x_1 y_1 … x_n y_n x_0 y_0} and option represents what you want from the program where 0 gives you information about the polygon, -1 runs the iterative version, 1 runs the cache oblivious version, and *n* runs the multithreaded version with *n* threads.

To run the MPI version use the following command: “mpirun -n *n ./*main” where *n* is the number of processes . After running the programs the time needed is reported alongside the result of whether the polygon is decomposable or not. Note, when using MPI as soon as one process reaches true it aborts all other processes giving am message on the terminal which you should not worry about. To avoid the unclarity of seeing your result for it may be mixed up with the message you can redirect the output to a file for example “mpirun … > output.txt” and then open output.txt for a clearer view (this was the case on Linux OS).

To run the hybrid version use the following command: “mpirun -n *n ./*main *threads*” where *n* is the number of processes and *threads* is the number of threads to be used in each process. Same thing about aborting the program and redirecting the output to a file.

The main of each version contains all of the functions to be used. These functions can be commented and uncommented for choosing which one to use.