

The server is started by `myserver <portnumber>`

Server is a single threaded program . It loops reading from the udp socket and processes each message. If the message is valid client request the server tries to return proper response.

The server quits if it encounters any error but the file related and communication with client related ones. If it encounters conditions like missing file, cannot fopen or cannot seek it responds back to the client the error condition. Server doesn't handle any input and it must be killed to be closed.

The client is started by `myclient <servers text file> <number of chunks>`. Then it reads the list of servers, up to a maximum of **MAX_SERVERS** defined as 20 and wait for input of filename. `Dwn_` is prepended to the output filename.

The client tries to connect to some server to get the file size, it iterates over all servers in order. If no server responds with valid filesize the client thinks it cannot download the file and fails 'Cannot transfer this file'.

If a correct file size is received the client divides the filesize into **numchunks** chunks, allocates parameter block for each chunk (containing the offset, chunksize, file pointer, synchronisation mutex and a few other fields) and spawns **numchunks** threads.

Each thread tries to communicate with the initial server, if the communication fails (either at the beginning, or during the file transfer) it switches to the next server. The thread sends packets to read consecutive parts of the file, of 1024 bytes maximum size, after all the data that the thread is responsible for writing is written the thread sets a success flag.

If after all threads terminate if some part is not successfully downloaded the client prints 'Download failed', else it prints 'Successful download of filename'.