

# Networking Project

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## Working

The whole system works in the following manner

- Server are launched using the `server.py` which launches the virtual servers that are set on the port given in the arguments
- Client is launched using the `client.py` where the parameters for launched servers are passed
- The client tries to connect with server and receives a checksum from all the server
- The checksum is generated from the file which is going to be downloaded by the client and will **only** connect to the server which have the same checksum in majority. This is a initial corruption check done by the client
- Now the client will request the file size from one of the server instead of all of them since the same checksum guarantee same size as well
- After receiving the size of file, the client divides them into equal parts (such that they are integers) and send argument to the server
- The argument contains offset and bytes to transfer, which will be parsed by server and the specified part of the file will be sent
- The client after receiving the file will generate combine them and generate a checksum and compare to the original checksum. In case, this fails the client will restart the process
- Once the file is checked, the connection is terminated by the client