# Verification

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In this report, I will mainly describe the tests passed to prove my program is correct. Also I will describe any possible cases that my program could be wrong.

## Verification:

For all the verification test, I already give a very detailed description in both output.pdf and manual.pdf. In the output.pdf, I run my code step by step to test each functionality and no problem happens. So I will skip the redundant descriptions in this report. Please refer to the output.pdf and manual.pdf to see my program works on all functionality. It also has some new added fancy features.

## Possible problems:

I test my programs for many times and do find one problem may happen in some cases. Because my program uses MD5 value to compare the original file and downloaded file, in the downloading stage. Say if client 1 download a file a.txt from client2, after downloading client 1 will sent his downloaded file's MD5 value to client 2 to compare with client 2's file's MD5 value, to see whether the file downloaded successfully. But due to the java's InputStream and OutputStream and some different separators, sometimes the program may show that the MD5 does not match the original one. But actually the file's content should be the same. Because even one single symbol changed will make the MD5 value change, so I guess this problem arises from some file's coding program and the input stream and output stream transmission problem. Anyway, this problem does not happen a lot, and the file can still be correctly downloaded, only the MD5 value may have a little difference.

Another problem is that my program still does not support the downloading for pictures or PDF files. Only the text stream files are best supported. Some other kinds of files may not be correctly downloaded.