



In this stage, you'll download the entire file and save it to disk.

You can start with using a single peer to download all the pieces. You'll need to download all the pieces, verify their integrity using piece hashes, and combine them to assemble the file.

Here's how the tester will execute your program:

\$./your_bittorrent.sh download -o /tmp/test.txt sample.torrent

and here's the output it expects:

Downloaded sample.torrent to /tmp/test.txt.

Optional: To improve download speeds, you can download from multiple peers at once. You could have a work queue consisting of each piece that needs to be downloaded. Your worker (connection with a peer) could pick a piece from the work queue, attempt to download it, check the integrity, and write the downloaded piece into a buffer. Any failure (network issue, hashes not matching, peer not having the piece etc.) would put the piece back into the work queue to be tried again.