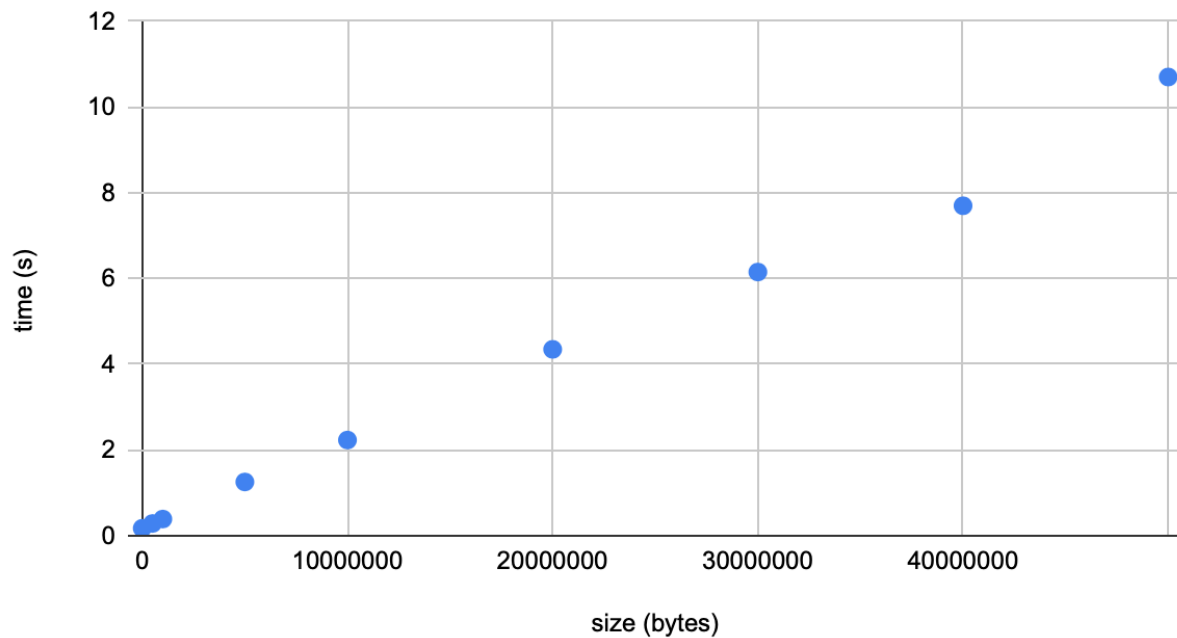


time (s) vs. size (bytes)



Trend: The trend of execution time vs file size is roughly linear, in which time and size increase proportionally. This makes sense as the time it takes to copy a file, including all of its contents, should depend on the size of the file. Additionally, based on the trend, though it may be hard to see, a file size of 0 would technically have a non-zero runtime, which makes sense as it still takes time to create the channels, open and close the FIFOs, and run the code in a constant time.

Bottleneck: The main bottleneck that stops the code from transferring the files faster is the buffer size because, assuming that the max buffer size is constant when transferring files of different sizes, the larger the file size, the more times the buffer has to read from the fifo in order to transfer all the contents. This can be visualized in a scenario where a single bucket is used to scoop water from tanks of varying sizes, and the bucket can only hold so much water, so the larger the tank, the more times the bucket needs to be filled to scoop all the water from the tank.