

CS 3424 Quiz - Week 11

Price Hiller ◊ zfp106 ◊ Quiz 6 ◊ CS 3424

If you are interested in viewing the source code of this document, you can do so by clicking [here](#).

1. Given:

- 4 byte pointers and 4096 byte blocks
- Max data by just the 12 direct pointers in data node: 49,152 data bytes
- Max data by the single indirect plus the 12 direct pointers: 4,243,456 data bytes (slightly more than 4 MB)
- Max data by the double indirect and the previous 4,299,210,752 bytes (slightly more than 4 GB)
- Anything larger would require using the triple indirect.

How many physical reads (as a worst case) would it take to access any particular data block in an 8MB file?
Assume you will have to read the inode.

The worst case for physical reads would be 4 reads.