



CSCI-3753: Operating Systems Spring 2021

Biljith Thadichi

Department of Computer Science

University of Colorado Boulder



University of Colorado
Boulder

Week 14

- > Inode practice problem

- > PA4 Questions



Practice Problem

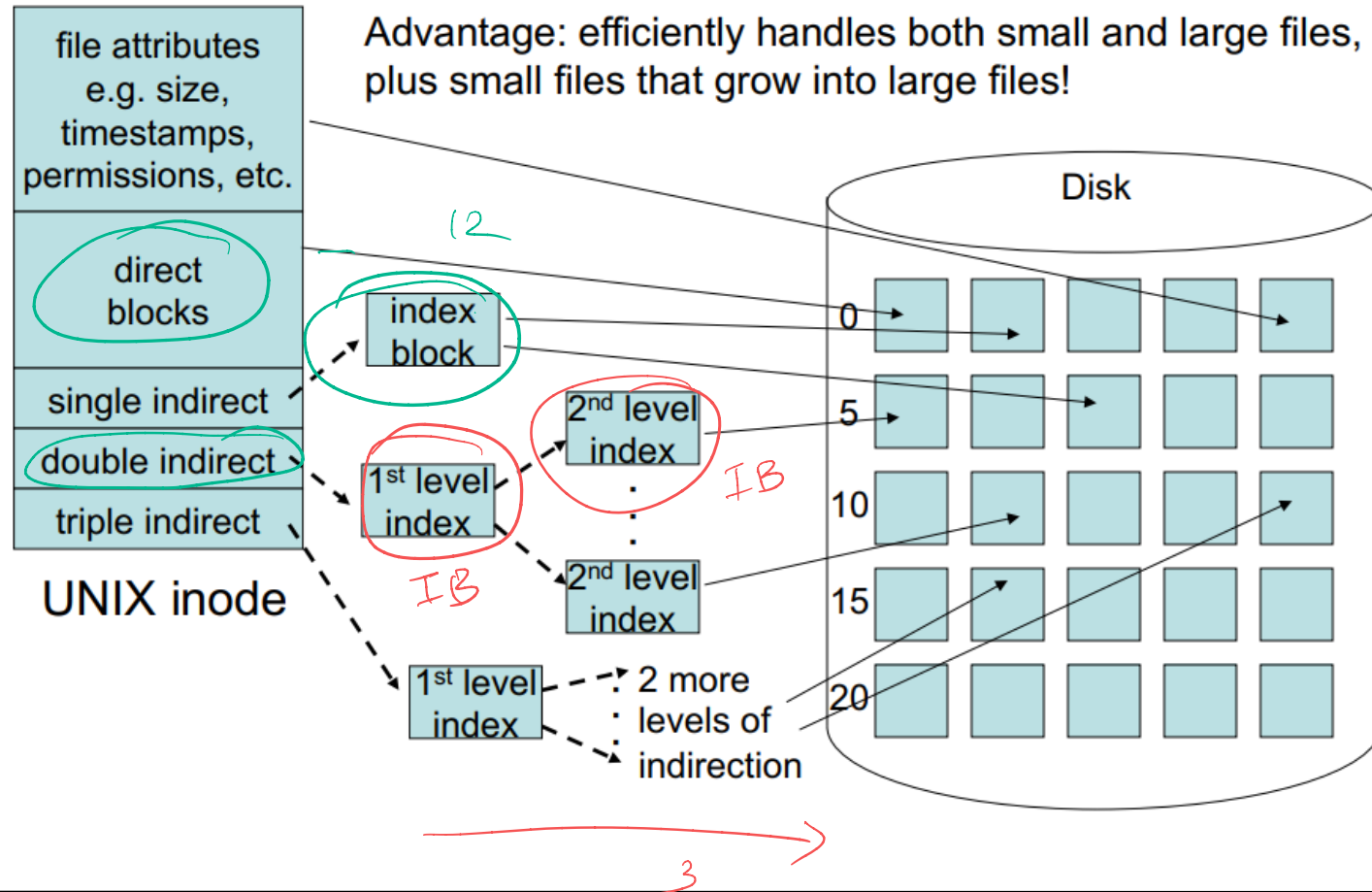
- You are asked to allocate a file according to the multi-level indexed allocation (UNIX inode - triply indirect). Assume that the memory block pointers to support a file containing 200K bytes of data. There are 1 KB per disk block, an index block holds 64 entries, and there are 12 direct pointers in the inode. Fill in the details of how many disk blocks are allocated for this file (NOT including the inode itself).

1. # blocks in direct blocks = 12
2. # blocks in single indirect = 65
3. # blocks in double indirect = 127
4. # blocks in triple indirect = 0
5. # metadata blocks = 4

$$\frac{200K}{1K}$$

Recall Inodes

UNIX Multilevel Indexed Allocation



Practice Problem Solution

You are asked to allocate a file according to the multi-level indexed allocation (UNIX inode - triply indirect). Assume that the memory block pointers to support a file containing 200K bytes of data. There are 1 KB per disk block, an index block holds 64 entries, and there are 12 direct pointers in the inode. Fill in the details of how many disk blocks are allocated for this file (NOT including the inode itself).

1. # blocks in direct blocks = **12**
2. # blocks in single indirect = **65**
3. # blocks in double indirect = **127**
4. # blocks in triple indirect = **0**
5. # metadata blocks = **4**

Week 14

- > Inode practice problem

- > **PA4 Questions**

