

Assignment 7

Exercise 1

Write a program in C that receives a directory name and prints the names of the containing files and directories, their mode, their owner read right, their type (if they are or not directories), and, for the files modified within the last 10 days, their access time.

Exercise 2

Given a hard disk with a Unix-like filesystem with the following specifications: the block size is 4KB, the block address length is 4 bytes and the i-nodes have a traditional structure (10 direct pointers, 1 single indirect pointer, 1 double indirect pointers and 1 triple indirect pointer).

Answer the following questions:

a) What is the number of blocks (including both the data and address blocks) that have the following files:

- File A with a size of 20 KBytes
- File B with a size of 200 KBytes
- File C with a size of 2000 KBytes
- File D with a size of 20000 KBytes

b) What is the maximum file size?