

Lab 8 Summary

Lab 8 was about decoding the boot sectors of a fat 12 file system. The program would run the same as ls or dir in DOS. The first thing it did was use the same endian conversion as lab 7 and decoding function as lab 7 for the Fat-12 filesystem.

We then had to run different functions that start at different offsets in the buffer. These offsets were described in the documentation of the lab. For each function we had to manipulate the buffer data to turn it into printable information. For the Filename we had to take the first 8 bits then add a dot then take the next three bits to get the filename and extension. For the attributes I used a bitwise operator & to AND the key and the bit for each attribute together to check if the bit was set or not. For the date and time all that was required was shifting the bits so the ones you wanted were in the least significant position and anding the rest of them with 0 so that the only bits were the ones you were looking for.

This lab showed how you can view a file system with programming and the different bits that each part of the file system represent and how they are shown when ls is called in the terminal.