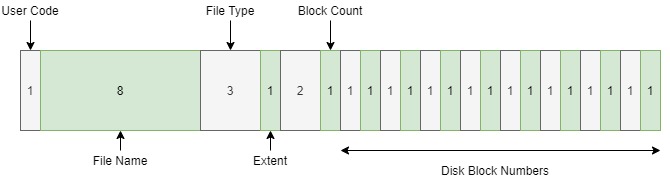
Project 4 Report

1. Design of cpmFS:

The directory entries are structured as follows:



Block 0 contains the directory which contains the pointers to each location in the disk. This disk is 256 blocks, which contain 1024 bytes each. The first byte indicates whether an extent is used or not. The next 8 bytes contains the file name, followed by 3 bytes containing the file extension (e.g. .txt or .py). the next 4 bytes contain both the number of bytes past the last full sector aswell as the number of sectors used. Finally the rest of the bytes contain the data for the file.

To implement such a system, I used a function-oriented approach. I started with the code provided to fill in the stubs. The functions are as follows:

• mkDirStruct()

• writeDirStruct()

• makeFreeList()

• printFreeList()

• cpmDir()

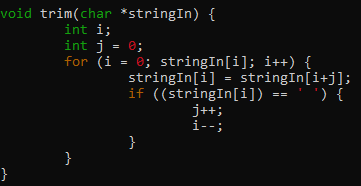
• checkLegalName()

• findExtentWithName()

• cpmDelete()

• cpmRename()

I also implemented a method to trim spaces from string as I found it saved me a lot of code (pictured below).



All functionality was fully tested using centOS a sample output can be seen below:

Lessons Learned: