Lab 3 is where we build the file system and put it on the sdisk

The file system will have two data structures. One for the filenames/firstblock and one for the block sectors

The first one is a parallel vector. One for strings for the filename and one an int for the first block number.

File name: 5 chars

Firstblock: 4 chars

File1\_5\_

Rootsize = blocksize / 11

Variables:

Rootsize - # elements in filename firstblock vectors :: Rootsize = blocksize / 11

How many entries in FAT?

Ans = # blocks on disk

Fatsize = # blocks users to store FAT

* + - Max # blocks 90,000 [0 … 9,999]
    - FATSIZE = (5 x #blocks)/blocksize + 1
      * (5 because 4 digits and a space)

How do we -

1. Chcek for a filesystem on Sdisk

String buffer;

Getblock(1, buffer);

If (buffer[0] == '#')

Need to create a filesystem

Else

//filesystem exists

Read it in to root and FATS

To create the root

For (int I = 1; I <= rootsize; I++)

Filename.push\_back("XXXXXXXX");

Firstblock.push\_back(0);

Create the FAT

Fat.push\_back(fatsize + 2)

Fat.push\_back(1): //For the root

For (int I = 1; I <= fatsize; I++)

Fat.push\_back(1); //to establish the FAT reserves

For (int I = fatsize+2; I < getnumberofblocks(); I++)

Fat[I] = I+1;

Fat[getnumberofblocks()-1] = 0;

Create 2 buffers for ROOT and FAT

String buffer1, buffer2;

Ostringstream rstream;

For (int I = 0; I < rootsize; I++)

Rstream << filename[I] << " " < firstblock[I] << " " ;

Buffer1 = rstream.str();

Ostringstream fastream;

For (int I = 0; I < fat.size(); I++)

Fastream << fat[I] << " ";

Buffer2 = fastream.str();