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Programming Assignment #2

The first one, also known as filecnt, takes in argument and divides into 2 categories: directories and plain files. The argument can be absolute or relative paths. Anything that are not directories are considered as plain files. The program recursively go through entire argument and counts number of directories and plain files in directory. If the pointer points to null, just return. While pointer is reading the directory and is not null, following cases occur. When the pointer is pointing at the directory, it checks whether it has a dot or double dots. If the pointer does not find any, then the pointer found the directory. The program then increment the number of directory. When the pointer is not pointing at the directory, the pointer is pointing at plain files. We then increment the number of plain files. After accepting the number of plain files, we take entire files in directory, then we calculate the total amount of bytes occupied in that directory. Afterward, we get the data and output the number of directories, the number of plain files and the number of bytes occupied in directory.

The second one, also known as filedisp, takes in options and divides into 3 categories: -d, -f, and -b. When this program finds one of the options, it then display the line with the corresponding word. -d is directories, -f is files, and -b is bytes. For example, when the program sees -f, it will display the line with files. My program first check whether it has validate options and set it to that option. Otherwise, output an error message. Afterward, the program loops through until they find no directories, files, and bytes and takes the line with corresponding options.