CSI 3336 Systems Programming
Project 6

fileInfo

This problem will give you a chance to practice with pointers and several system calls. For this assignment, you may not use the string or stdio libraries. You will write a program called **fileInfo.c**. fileInfo will process command-line arguments in the form of file names. And, will display a menu allowing the user to select which criteria to sort the array. It will store a linked list of file information obtained from the stat() system call. In addition, it will allow the user to sort the list based off of file size, access time, modification time, or status change time. Do not use any other data structure to store, even temporarily, the FileInfo structure array.

You must use the following structures:

node:
```
typedef struct Node
{
      struct FileInfo file;
      struct Node *next;
}node;
```

struct FileInfo:
```
struct FileInfo
{
      char *path;
      struct stat info;
};
```

The following examples illustrate the operation of fileInfo. Each line starting with an angle bracket illustrates how one might invoke fileInfo. The following line shows the output of fileInfo.

```
> ./fileInfo simple.txt catinthehat.txt
Choose your order:
1.  by size
2.  by access time
3.  by modified time
4.  by status change time
: 2
simple.txt catinthehat.txt

> ./fileInfo simple.txt catinthehat.txt
Choose your order:
1.  by size
2.  by access time
3.  by modified time
4.  by status change time
: 1
catinthehat.txt simple.txt
```

When you are done, turn in a printout of your source code and submit an electronic copy using submit.systems.