系統程式設計

Lab4 File Attributes

學號:411410005

姓名:莊翔鈞

I.   How do you modify fig4_22.c?

The screenshot below is the diff result of my code and the original

code given.

```
lab4_example $ diff fig4_22.c t.c
4,7d3
< #include <sys/stat.h>
< #include <unistd.h>
< #include <sys/types.h>
<
13,14c9
< static long nreg, ndir, nblk, nchr, nfifo, nslink, nsock, ntot, valid, invalid, totalSize;
< char linkName[4096];
---
> static long nreg, ndir, nblk, nchr, nfifo, nslink, nsock, ntot;
38,40d32
<               printf("valid = %ld\n",valid);
<               printf("invalid = %ld\n",invalid);
<               printf("total size = %ld\n",totalSize);
74d65
<               chmod(fullpath,0777);
103d93
<               totalSize+=statptr->st_size;
111,124c101
<                                               case S_IFLNK:
<                                                       if(readlink(pathname,linkName,4096)!=-1){
<                                                         if(access(linkName,F_OK)==0){
<                                                         valid++;
<                                                         }
<                                                         else{
<                                                         invalid++;
<                                                         }
<                                                       }
<                                                       else{
<                                                         exit(0);
<                                                       }
<                                                       nslink++;
<                                                       break;
---
>                                               case S_IFLNK: nslink++; break;
```

II. The count of the various types of files?

Ex: File type = Count, Percentage

```
regular files   =        53, 80.30 %
directories     =         5,  7.58 %
block special   =         0,  0.00 %
char special    =         0,  0.00 %
FIFOs           =         5,  7.58 %
symbolic links  =         3,  4.55 %
sockets         =         0,  0.00 %
```

III. The count of total files size?

Ex: Total size = Size

```
total size = 20573
```

IV. (Bonus) The count of valid and invalid link?

Ex:

Valid link = Count

Invalid link = Count

```
valid = 2
invalid = 1
```