

## Exercise

Write a program that receives a directory name and prints the names of the containing files and directories, their mode, their owner read right, their type (if they are or not directories), and, for the files modified within the last 10 days, their access time.

## Solution

```
#include <stdio.h>
#include <string.h>
#include <time.h>
#include <dirent.h>
#include <fcntl.h>
#include <unistd.h>
#include <sys/stat.h>
#include <sys/types.h>
```

```
/* José Manuel Pérez Lobato
```

This program receives a directory name and prints the names of the containing files and directories, their mode, their owner read right, their type (if they are or not directories), and, for the files modified within the last 10 days, their access time.

```
*/
```

```
main () {
int er;
char dirname[100], filename[100], resp[30];
struct stat atr;
DIR *d;
struct dirent *rd1;
time_t access_date;

printf ("Directory name\n");
fgets (dirname, sizeof (dirname), stdin);
/* Delete \n from the directory name*/
dirname[strlen(dirname)-1]='\0';

access_date=time(&access_date);
if ((d=opendir(dirname))==NULL) {
printf ("This directory does not exist \n");
return -1;
}
else {
while (( rd1 =readdir(d)) != NULL) {
if ( (strcmp(rd1->d_name, ".")!=0 )&& (strcmp(rd1->d_name, "..")!=0 )){
strcpy (filename, dirname);
```

Tema: ¿????

Este material se comparte con licencia Creative Commons Reconocimiento  
no Comercial-Compartida-Igual 3.0. España.



```
strcat (filename, "/");
strcat (filename, rd1->d_name);
printf ("fichero :%s:", filename);
er=stat (filename, &atr);
printf ("modo :%#o:", atr.st_mode);
if ((atr.st_mode & 0400) != 0)
    printf ("Read access for owner \n");
else
    printf (" No Read access for owner \n");
if (S_ISDIR(atr.st_mode)) printf (" is a directory \n");
if (S_ISREG(atr.st_mode))
    /* files modifies withing the last 10 days */
    if ( (access_date - 10*24*60*60) < atr.st_mtime) {
        printf ("FILE:%s: access date %s, in seconds %d\n", rd1->d_name,
                ctime (&atr.st_mtime), atr.st_mtime );
    }
}
} /* while*/
closedir (d);
}
} /* main*/
```