

// II.A. Base case, look for file itself in 'dirnameCPtr':

```
void printdir(char dirnameCPtr, int depth)
{
    // Check if the directory exists & can be opened
    DIR dirnameCPtr;
    struct dirent *entry;
    struct stat statbuf;
    if((dp = opendir(dir)) == NULL) {
        fprintf(stderr,"cannot open directory: %s\n", dir);
        return;
    }
    chdir(dir);
    // Reading the directory
    while((entry = readdir(dirnameCPtr)) != NULL) {
        lstat(entry->d_name,&statbuf);
        if(S_ISDIR(statbuf.st_mode)) {
            /* Found a directory, but ignore . and .. */
            if(strcmp(".",entry->d_name) == 0 ||
               strcmp("..",entry->d_name) == 0)
                continue;
            printf("%s%s/\n",depth,"",entry->d_name);
            /* Recurse at a new indent level */
            printdir(entry->d_name,depth+4);
        }
        else printf("%s%s\n",depth,"",entry->d_name);
    }
}
```

```
    chdir("..");  
    closedir(dirnameCPtr);  
}
```

```
int main()  
{  
    printf("Directory scan of /home:\n");  
    printdir("/home",0);  
    printf("done.\n");  
    exit(0);  
}
```