Homework 5

Due by 7:00 p.m. Tuesday, 11/18/14

Part 1
Implement access control on a directory of files. Create two C functions, `myread` and `mywrite`, that call the `read` and `write` functions, respectively, but only after verifying that the user has permission to access the requested file in the requested manner. You can find the user id of the current process by calling `getuid`. Your access control mechanism will be separate from that provided by the operating system; your functions should search a file containing access control lists for each file in the directory. (You will create this file and determine its format.)

Part 2
Implement the Bell-La Padula Confidentiality Model on a directory of files. Create two C functions, `BLPread` and `BLPwrite`, that call the `read` and `write` functions, respectively, but only after verifying that the access does not violate the Simple Security Policy or the *-Property of Bell-La Padula. Your functions should search a separate file containing security levels both for users and for the files in the directory to determine whether the access is a violation.

In addition to your source code, submit an archive file containing a directory of files plus the two reference files used by `myread` / `mywrite` and `BLPread` / `BLPwrite.`