

# CS352: Operating System

## Project: Portable File Manipulator (pofm)

**Note:** this project will be done in groups of 2 people.

### Details

Design a portable file manipulator, called *pofm*, which will manipulate files. *pofm* must have the following attributes:

- It can be used in any programming language.
- Since it must be portable, it does NOT use any OS commands which means that *pofm* can be easily ported to any operating system and platform. For example, if you use C programming, all commands must be standard C functions, and you cannot use the `system()` call in C.
- *pofm* must provide the following functionality:
  - Create a new file
  - Delete a file
  - Rename a file
  - Copy a file
  - Move a file from one directory to another
  - For text files only:
    - Append text to the end of a file
    - Insert text in a specific position (counted in characters) of the file
    - Remove all text in a file
    - Show the content of a text file, with the ability to pause per page. The number of lines per page can be specified by the user.
- All commands must have a “help” utility; i.e., if the user types `command1 /h`, for example, then the program must show how the command is used.
- All commands must catch exceptions and problems: file does not exist, file is read-only, file name already exists, this is not how the command is used, etc.
- You can name your commands as you like.

### Deliverables and Marking Scheme:

1. In-class **demo (40%)**, in the last week of classes. Please email the TA, Hamed Hamzeiy [hamzeiy.hamed2014@gmail.com](mailto:hamzeiy.hamed2014@gmail.com) to fix your demo date (first come, first serve). Please mention in your email to the TA who are the group members (names and student numbers):  
May 26 (8 presentations)  
May 28 (4 presentations)
2. **Final report (60%)**: by email to the TA, no later than Sunday June 3. This consists of 3 components:
  - a) A design guide (30%): start by a short introduction, followed by explanation of your design and implementation. Give reasons for your design and implementation choices.

There should be enough details in your report to explain everything. I do not set number of pages: it's up to you and how many pages you need to explain things.

- b) A user manual (20%).
- c) All your code, with in-line comments (10%).