

**EECS 3540: Operating Systems : Project 1**  
**Parallel File Copy**  
**Due: September 22, 2016**

**Description:**

In this project you will use multiple processes to copy a tree of files. The goal is to familiarize you with the use of the `fork()` and `exec()` calls as well as directory calls.

**Details:**

The command will be implemented with the following syntax:

`parcp -f fromDirectory -t toDirectory`

You should process the files in the `fromDirectory`. If it is a normal file (not a directory) you will copy it to the `toDirectory`. If it is a directory you should fork off a new process and `exec` the command with the new directory information. You can choose to use as large of a read buffer as you would like for your program.

**Run Testing:**

You should run your program on the provided tar'ed and gzipped file and record the run time. Make sure you are reading and writing to the local hard drive and not a network drive. It should be run on a multi-core machine (all the Linux stations are multiple cores). Record the times and CPU utilization. Can you tell if your implementation is improving performance?

**Submission:**

You should submit your source code and a makefile to build it on BlackBoard.