PA2 Overview

PA2

- **Goal**
  - Final goal of this assignment is to create a shell with signal, redirection and pipe support.
  - This assignment can be divided into four parts:
    - » Implementing 6 executables found in GNU Core Utilities (coreutil), which are head, tail, cat, cp, mv, and rm.
    - » Extending shell by using concepts from weeks 5~8, including signal handling, process groups, redirection.
      - » Covered this week (by 4/21)
    - » Adding pipe support
      - » Covered next week (by 4/24)
    - » Writing a report on your work

PA2

- **Restrictions**
  - This is a personal project. You can discuss the task together, but you must write the source code on your own.
  - Use the Linux system call/library functions you have learned so far to implement the task.
    - » This means that you can use printf(), readline(), etc. as well (not just read(), write()).
    - » You can also use other standard POSIX and GNU C functions/extensions like getopt(), argp(), or error() if needed.
    - » However, use of system() or popen()/pclose() functions is prohibited.
  - If a resource is dynamically allocated, it must be freed before the program terminates.
    - » Resources refer to files, memory, and child processes.
  - If the pgid of the child process created by the shell is the same as the pgid of the shell, the submission is not scored.

PA2 Organization

- **pa2 should be organized in the following manner**
  - pa2/
    - » Makefile
    - » executable_src/*.{c,h}
    - » shell_src/*.{c,h}
    - » **bin/** (should be removed when submitting pa2)
      - » **pa2**, pa2_head, pa2_tail, pa2_cat, pa2_cp, pa2_mv, and pa2_rm
  - When *make* is called, it should compile all the binaries (pa2_cp, pa2_mv, **pa2**, etc.) to bin/
  - However, when bundling pa2, **bin/** should be removed.

PA2 Submission

- **Submit your source code and Makefile**
  - via **iCampus**
  - Bundle *source code* and Makefile with the tar command
    - » *tar.gz* format

    $ tar cvzf [student_id].tar.gz pa2
  - We'll grade your submission with **make**
    - » If compilation fails, your points for this exercise will be zero
  - 10 points will be deducted per day if submitted past the deadline.
  - Worth 95 points

PA2 Report

- **Submit your report**
  - via **iCampus**
  - The report should contain both the design of the project and the details of its implementation.
  - This should be a pdf file with the following format:
    - » [student_id]_pa2.pdf
  - Worth 5 points