

## Project 1 Programming - Unix Shell

CS 300, Hong

All the coding must be done in C language, being able to compile and execute in [cs-intro.ua.edu](http://cs-intro.ua.edu). If you use a different OS environment in completing the project, you should take extra care to test your C code in [cs-intro.ua.edu](http://cs-intro.ua.edu) so to make sure it can compile and run as you expected.

### Programming Project 1, Unix Shell Part I

The description can be found in the attached PDF file [ProgrammingProject1-24s.pdf](#). Read carefully. The project is very clearly described in the PDF file.

#### Additional project requirements:

0. Source code should be written in C language
1. Write the code to get process ID. Use your last name and process ID as your prompt (*lastname\_pid*). Do NOT use "osh".
2. **Correction in Figure 3.36:**  
Line "*\* (3) if command included &, parent will invoke wait()*" should be:  
*"\* (3) ..., parent will NOT invoke wait()"*.

#### Software requirements

1. At the beginning of your source code, comment lines of your full name and CWID should be included. Other comment lines are optional, but recommend.
2. Name your file as: *Fullname\_part1.c*

#### Compiling and testing

Grading uses compilation command `gcc -Wall filename -std=c99` at the [cs-intro.ua.edu](http://cs-intro.ua.edu) server. You should use the same command at the server to compile your source code. Compilation errors lead to points drop.

#### Submission:

1. Submit to Blackboard "Proj 1" before deadline.
2. Submit only the source file, do not zip. Don't submit Makefile if you use one.

#### Delay policy:

Each one-day delay will drop 20% points. You should start your projects early to avoid potential last minute issues that cause late turn-in.

#### Grading will count:

- a) submission and compilation successful, 10 points;
- b) modified main, prompt and input handling;
- c) use of `fork()` and `wait()`, and `execvp()`;
- d) various commands;

#### FAQs:

- (1) As long as it compiles, i.e., produces an executable file, it is ok.
- (2) When grading, only valid commends will be tested.
- (3) Encourage you to compare your shell with a real Linux shell.
- (4) Test your program at cs-intro
- (5) Email your question to either me or TA, or join office hours.