Homework #4

✓ **Due date: 11:59pm, 11/29 (Wed)**

1. **Implement a simple C online compiler (80points)**
   - Bothe client and server must be implemented.
   - Desired tasks
     Step 1: The client uploads the C program to the server.
     Step 2: The server uses gcc to compile the received C program. If there are compilation error messages or warning messages is displayed, the server sends the corresponding messages to the client.
     Step 3: If there are no compile errors, the server runs the compiled program and sends the displayed content to the client.
     Step 4: The client prints the messages and results received from the server.
   - Implement a multi-thread server that can handle multiple clients simultaneously.
   - Implement a Makefile to compile both client and server programs.
   - For this homework, please refer to and '**popen()**' and '**pclose()**' in '**popen.c**' to obtain the results of the executed program.
   - Submit the screen capture of the program results as a PDF file (screenshot.pdf).
   - Submission: compress the following files into **tar.gz** and upload it to LMS.
     occ_client.c: Client program
     occ_server.c: Server program
     Makefile: for compilation of both client and server
     screenshot.pdf: screen capture of program results
     etc: files required to compile and execute your programs
   - Example

Client	Server
$./occ_client 203.252.112.26 9000 hello.c Result from Server Hello Handong Global University!!! $./occ_client 203.252.112.26 9000 diamond.c Result from Server * *** ***** ******* ********* ******* ***** *** *	$./occ_server 9000 Received hello.c from 203.252.112.26 Compile hello.c and return results Hello Handong Global University!!! ---------- Received diamond.c from 203.252.112.26 Compile diamond.c and return results * *** ***** ******* ********* ******* ***** *** * ----------

2. **Complete the Practice#10. (20points)**
   - Implement a web server program which delivers text and images. Please refer to the lecture material.
   - Submission: web_adv_server.c