

New York University

Tandon School of Engineering

Department of Electrical & Computer Engineering

Introduction to Operating Systems (CS-GY6233) Spring 2022

Assignment 1 (5 points)

In this assignment, you are required to download and install the latest VMware Workstation Player from www.vmware.com and create a new virtual machine after downloading the latest Ubuntu Linux distribution from www.ubuntu.com.

If you already have an Ubuntu linux machine, then you may use it, however it is recommended that you use a virtual machine for assignments that pertain to developing kernel modules. Please note that Mac OS is not the preferred system for this class and it behaves differently from Linux when used with pthreads. As such, you should install Linux even if you have a Mac OS.

After successfully installing and running Linux, create a new directory called hw1 in your home directory and then use one of the pre-installed editors (e.g. vi, gedit, emacs, etc) or download an editor of your choice.

Write a C program that prints the text “Hello world! This is CS6233 Spring 2022” on the first line, and then prints a random number whose value is between 0-199 on the next line. Your program shall then leave a blank line and then exit.

You should use gcc for compiling your program. You should name your output file hw1.out.

Submission file structure:

Please submit a **single .zip file** named **[Your Netid]_lab#.zip**. It shall have the following structure (replace # with the actual assignment number):

- └─ [Your Netid] hw# (Single folder includes all your submissions)
 - └─ lab#_1.c (Source code for problem 1)
 - └─ lab#_2a.c (Source code for problem 2a, and so on)
 - └─ lab#_1.h (Source code header file, if any)
 - └─ Makefile (makefile used to build your program, if any)
 - └─ lab#.pdf (images + Report/answers to short-answer questions)

What to hand in (using Brightspace):

- Source files (.c or .h) with appropriate comments.
- Your Makefile if any.
- A .pdf file named **“lab#.pdf”** (# is replaced by the assignment number), containing:

- Screen shot(s) of your terminal window showing the current directory, the command used to compile your program, the command used to run your program and the output of your program.

RULES:

- You shall **use kernel version 4.x.x or above**. You shall not use kernel version 3.x.x.
- You may consult with other students about GENERAL concepts or methods but copying code (or code fragments) or algorithms is NOT ALLOWED and is considered cheating (whether copied from other students, the internet or any other source).
- If you are having trouble, please ask your teaching assistant for help.
- You must submit your assignment prior to the deadline.