Final Project

Your group is tasked with creating one challenge for this year's Cyber Storm (to be held on a Fri sometime likely in May 2021). The scope of the challenge must involve (i.e., your challenge must incorporate in some form) access control, covert channels, and/or steganography. Groups must have sufficiently different challenges, and all challenges must be approved by me. Your challenge must be self-contained (i.e., you support the infrastructure that students competing in Cyber Storm need to complete your challenge) or directly implementable on their systems (which are guaranteed to support Linux Mint Xfce 64-bit).

Deliverables:
- A (likely) evolving challenge document (see below);
- All source code (well documented), scripts (well documented), READMEs, notes, diagrams, and other files required to successfully deploy your challenge; and
- An in-class presentation of your challenge (see below).

Your **challenge document** must use the template provided and include:
- A detailed description of your challenge;
- A bill of materials (BOM) identifying all required hardware and software (e.g., dependencies) to successfully deploy your challenge during Cyber Storm;
- Instructions related to setting up and deploying your challenge during Cyber Storm;
- An introduction to your challenge that, once deployed, will be provided to students participating in Cyber Storm;
- A description/tutorial of the ideal solution to your challenge; and
- A mechanism or suggestion of how to score your challenge during Cyber Storm.

Your **presentation** must include detailed coverage of your challenge document. You should target 15 minutes for the entire presentation (note that the times specified below are recommended). Every member of your group must participate in the presentation (i.e., everyone must speak). There is no need for slides; however, they may make it easier to describe your project. Make sure to cover:
- A detailed description of your challenge, including a summary of the BOM and scoring details (5 minutes);
- A live tutorial of the ideal solution to your challenge (10 minutes); and
- Q&A (we will have a few minutes per project for this).

If applications and/or files required for your challenge are too large or cannot be reasonably distributed, simply include a list of what is needed as part of the BOM. Please include versions and Internet links (if applicable). We will make arrangements to transfer your documents some other way (e.g., in my office via a USB stick).

Since this is a major project, it will make up a large part of your final grade in this class. Please take it seriously! I suggest that you begin working on it immediately so that you have plenty of time to get it finished. The project is due on the day of your team's scheduled presentation. Here is the **tentative** presentation schedule:

- Thu 25 Feb:
    - Team 1:
    - Team 2:
    - Team 3:
    - Team 4:
    - Team 5:
    - Team 6:
- Tue 2 Mar:
    - Team 7:
    - Team 8:
    - Team 9:
    - Team 10:
    - Team 11:
    - Team 12:

Grading for this project will occur as follows:

- Every student in the class will evaluate every presentation, including their own presentation.
- The instructor, using the same rubric, will also evaluate every presentation. However, these evaluations serve only as a back-up/sanity check and usually do **not** figure into the grade computation. Students should evaluate their fellow students in an honest and fair manner. If I feel that the class as a whole is either far too harsh or far too lenient in its evaluations, I will discard the student evaluations and use my own. However, if the class is reasonable, I will use your evaluations and discard mine.
- As part of the final evaluation, team members must provide an estimate of their and their teammates effort over the course of the project. The effort estimates for each team **must add to 100%**. You are only allowed to estimate the effort in your **own** team.
- See the grading form for more details.