Assignment: Environment Setup

Description:

Please setup a Ubuntu 20.04 (or similar) virtual machine containing all of the tools we've discussed. Specifically, it should include…

- GCC and/or Clang compilers
- A hex editor of your choice
- GDB
  - with GEF plugin (or PEDA, or Pwndbg if you prefer)
- Pwntools
- Ropper

Next, please build scripts to solve each of the following Lab CTF challenges.

- Lab 1-1
- Lab 1-2
- Lab 1-3

These aren't meant to be terribly difficult, but they could require a little research. Links are provided with each example to help guide you along. The goal for each is to obtain a flag in the format "flag{xxx...}", where "xxx..." is a randomly generated string. These flags will usually be found in a file called "flag.txt" after obtaining a shell. Submit each flag as you go to prove you solved it!

I would strongly recommend you write your solutions in Python 3, using the pwntools library, but it's ok to use other languages or libraries if you prefer. Regardless, please do your best to write clean, clear code. As these labs get more complex I will ask you to fully document your solutions, either using code comments, or in a separate write-up. That's not so important here, as these three scripts will probably be less than 10 lines each and are pretty self-explanatory, but it never hurts to get in the habit. :)

Deliverable:

- A few sentences describing your current knowledge and skill level (if any) with software exploitation. Is this a topic you've explored at all before? If so, in what way? If not, totally fine.
- Scripts which solve each of the above lab CTF challenges.
  - Detailed comments/documentation is not required this time, but please do for future labs.