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Senior Project  
Assignment #7

### Project Constraints Essay

When examining the major constraints on the project to write a penetration tool, there are many different important ones to consider. Economically speaking, the devices to write the project are all going to be personal computers already owned, and the devices that the script will be used on will have to be a mix of old devices that were already owned, or a few new cheap purchases of devices that would make good examples. The end result will likely be ~3 consumer-grade devices which can make a good example. In a professional standpoint, this project is very valuable. It will be great to put such a project on a resume and will make the already shortage ridden labor market for cyber engineers that much easier. In terms of actually needing professional experience, I'm happy to say that my previous co-ops have been almost direct examples for this sort of work. From an Ethical standpoint, this project might be tricky. Penetration tools can always be used by bad actors, but in this example, as long as I'm careful not to publish the results in popular sites, there should be no threat of someone using it for harm. At the end of the day, it will likely result in myself learning more about security, which will hopefully result in a safer world for all if anything. From a legal standpoint there are few issues. As long as I'm using my own devices and not trying to use other's, then there's really no concern. Security concerns are the whole point of the project. To make this tool a stealthy pen testing tool that can allow for violating security by the user for research purposes, this will be perfectly fine on my own hardware. Similarly to the ethical concerns, there is a true social impact. If I manage to make this tool and have it teach me and any others concerned about how penetration by bad actors can work, then it can benefit any in the cyber security sector that are shown it. There's no concern really in the environmental section. If I purchase a device for use as a target system, I suppose it will slightly increase the waste generated by myself, but I'll make sure to dispose of any devices in a sensible manner to limit it.