Bradford Doughty
CSC 442-003
Individual Assignment
March 29, 2019

Linux OS:

On the Linux Mint Virtual Machine, the provided program hidden as binary numbers would produce an interesting result. Once the program was compiled in C++ and run using the ./a.out file in the command line, the program would not produce anything at first. After a few seconds, the program started continuously printing out the line "sh: 1: Cannot fork". This means that the program was creating too many new processes. Next, the VM started slowing down significantly, even in the host OS. The only way to stop the program was to completely exit out of the terminal.

Windows OS:

On the host Windows 8, the provided program would produce a result almost similar to the Linux OS. One major difference was that the program would output "sh: warning: shell level (1000) too high, resetting to 1" while running the C++ file in the Cygwin64 Terminal. Basically, the program was creating too many child shells. Also, the computer started lagging behind more than in the Linux OS. Another difference was that the program could not be stopped even when trying to shut down the terminal completely. The only way to stop the program was to force the computer to shut down.

The Program:

The program seems to be a fork bomb considering that it would continuously create new processes. The purpose of a fork bomb is to force the victim's operating system to be flooded with too many processes until it either shuts down or cannot create new processes. An attacker could use this code to shut down computers and prevent them from creating new processes until the system is completely rebooted. The attacker could then gain access to sensitive information while the computers are being restarted. Finally, a way to handle a fork bomb would be to completely shut down the computer in order kill the attack that was creating new processes.