Additional Information for Homework 3 Problem 5

This will mostly help those with windows for set up. And is intended to help everyone with the use of the NIST program.

In order to get this process to work for those running on PC. It is recommended that you set up some Linux subshell. I prefer ubuntu.

From there download the file NIST SP 800-22 from the link provided on problem 5.

Save this in an easy-access place when you unzip the file.

Follow these steps https://www.how2shout.com/how-to/how-to-access-windows-subsystem-for-linux-from-ubuntu-terminal.html

in order to get Linux to access to your windows environment.

The file location on ubuntu for where you unzipped your download should look something like this: “student@laptop:/mnt/c/users/student/Downloads/sts-2.1.2/sts-2.1.2$”

This will become your CFLAGS. Remember this for later.

Now since you have unzipped your file and all is well. Your CC will be something very similar to /usr/bin/gcc This can be found on your own machine if that line does not work.

After putting the necessary information into the makefile you can run the command "make" in your shell. It is recommended to capitalize the makefile given to you prior to running the command.

This should allow the file to run and create a file called "assess" when you type "ls". That is an L as in Lion but lowercase.

The manual is kind of vague from here on out so us this in conjunction with Section 5.6

Afterward, you need to run the command ./assess followed by a number for the sequence length. Hint: it needs to be greater than 100 but less than 500 to work well.

After running this in order to run all the statistical tests enter 0

Then enter your file location of the input. This should be stored inside the "data" folder of what you unzipped. BIG IDEA HERE: You need to take the hex file given to you and convert it to binary. The internet can assist with that.

Save that binary file for use for the next steps.

Next enter 1 to do ALL the statistical tests.

Next hit 0 to continue for all tests. Then the bitstreams need to be calculated. This is equal to the number of input bits divided by the sequence length.

Then finally hit 0 for the ASCII file to run and the test will be generated.

Open the file called finalAnalysisReport which is under the experiment folder in the unzipped files and you will see the results. Section 4.2 part 2 will be helpful in understanding your results.