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**CS 4328**

**Project 1 Report**

* **Overview**

This program was compiled and ran using C++. Unlike some programming languages, C++ can use POSIX Threads to make this program work. I started designing the program by first including the necessary libraries to properly debug the program. Following the libraries that were included were also the amount of threads needed for the program. The amount of threads is also said on the project document. The following p\_threads were defined and initialized after the number of threads. P\_threads like mutex and condition threads were used for the implementation of this project.

* **Results**

In order to run 5 different independent runs, I used Kali Linux to build and run the program.

In order, I tested **./a.out 5**, **./a.out 10**, **./a.out 20**, **./a.out 50**, **./a.out 123**Text

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* **Compile/Run instructions for CS Linux Servers**

Here are the instructions on how to compile/run project1 on CS Linux servers

How to run:

1. Open a Linux command line

2. ssh into Texas State CS Linux Server

-ssh TXST Net\_IDeros.cs.txstate.edu

OR

-ssh TXST Net\_IDzeus.cs.txstate.edu

3. Change to directory that contains the file “project1.cpp”

4. While in that directory, type the following command:

-g++ -std=c++11 project1.cpp -lpthread

5. Press ‘Enter’

-The program will compile and produce a new file in the directory.

-This file, after compiling, will be called “a.out” and will be in the same directory.

6. Type: ./a.out # on the following command line where # represents a seed rand() to produce a random card deck

**Examples:** /.a.out 5

**/.**a.out 43

(The program will use 0 if an integer is not typed)

7. Press ‘Enter’

-program will run and print results to the console

-program will include a text file called “LOG.txt”