CSCI 275 – Fall 2022 UNIX Scripting

**Homework 4** – parse - from a lab machine $submit 275 parse

**Please read entire document before starting**

Develop the **start of a shell script** named parse **that focuses on UI – User Interface** for a script that parses a log of user activities on a Linux system and displays output which is useful to a Sysadmin. Your script should meet the following criteria (at a minimum):

**Use “getopts”** to process the options provided on the command line.

The log file and/or its location on the lab machines will be provided in Canvas

If the user provides no parameters, the script should do nothing and exit.

If the user provides the following options at the command line, the following searches should occur:

–h : display a usage message

–a: count the number of total valid logins in the log

–b: count the number of total invalid login attempts in the log

–c: count the number of times a provided login has logged in

–d: display all the successful log lines for a provide login

–e: display all the log lines for a provided login

–f: display all the successful log lines for a provided host

–g: display all the log lines for a provided host

–i: provide an interactive menu system for at least 4 of the options here that will be displayed if the user provides a ‘-i’ as a parameter

–j: display all the successful log lines for a provided remote IP address

–k: display all the log lines for a provided remote IP address

–m: displays all the IP addresses that were blocked by the hosts, uniquely sorted

–s: [optional] restricts a search to a single date

–t: display the login information in a table -at a minimum display: date, login, lab host, IP

–u: [optional] restricts a search to a single host

Your script should be able to handle any date format that the ‘date’ command can handle. The date command is a very powerful tool for manipulating and processing string input and output of the date data. *(Tip: ‘ date “+%b %d” –d “<date>” ’ is your friend…)*

**At this point, script need not perform ANY of the actions. All of your actions are to put in “debugging echos” which just echo option: what it will return. You are just building the FRAMEWORK for the next assignment.**

You should produce a well commented script file, which (politely) provides feedback on any problems with the parameters provided by the user. Please upload your completed script from a lab machine using **$** submit 275 parse