CS3030 BASH ASSIGNMENT 1

This is an introductory assignment. The goal is to review concepts of input and output, conditional statements, calling functions, and command line arguments. It also introduces running commands to gather data. Your final script should be able to run on both, your own VM as well as in the CS Linux server (Icarus)

TASK 1

Create a bash script that accomplish the following three items:

1. Print a welcome message with your information and the machine name ($HOSTNAME)
2. Verify who the user is and display a message acknowledging him
    a. Most Linux servers have an environment variable called $UID. If the numerical value of $UID is **0**, then the user is root.
        i. Test your script by switching accounts in your VM using the **su** command. For help ask the terminal: *$ su –help*
    b. Use a CASE statement to accomplish this step
3. Check if the script is running on a Linux OS, for example, bash could be running through Cygwin, which isn't Linux.
    a. To obtain the operating system, run the uname –s command. Capture the output of this system call in a variable.
    b. Use an IF statement to accomplish this step
4. Check if the –w argument was given as the first argument. If this is the case, check if a second parameter is defined. If it is, print out that second argument three times. (For example, if you run your script with *"$ task1.sh –w mytest*", and you select the third option, it should print "*mytest mytest mytest*".
5. Finally, your script should provide a –help option. This should be passed to the script as your first parameter. Provide a help message describing your script through a function.

The three items above should be presented to the user in a menu form

This script can do three things:

1. Check to see if the user is the root user

2. Check to see if the script is running on Linux OS

3. Check to see if the -w argument was given

What would you like to do? (1, 2, 3):

SAMPLE OUTPUT:

Sample output is given below:

hvalle@icarus:~$ *./hugoValle_hw1.sh --help*

Usage ./hugoValle_hw1.sh [--help] [-w]

--help Print this help message

-w Print name three times

With no arguments it provides a menu to test the system

hvalle@icarus:~$ *./hugoValle_hw1.sh*

Welcome to my first script for CS3030
My name is Waldo WSU
You are running this script in ***hvalle-Office***

This script can do three things:

1. Check to see if the user is the root user

2. Check to see if the script is running on Linux OS

3. Check to see if the -w argument was given

What would you like to do? (1, 2, 3): 1

You are not the root user, exiting...

hvalle@icarus:~$ *./hugoValle_hw1.sh*

Welcome to my first script for CS3030
My name is Waldo WSU
You are running this script in ***hvalle-Office***

This script can do three things:

1. Check to see if the user is the root user

2. Check to see if the script is running on Linux OS

3. Check to see if the -w argument was given

What would you like to do? (1, 2, 3): 2

The script is running on Linux

hvalle@icarus:~$

./hugoValle_hw1.sh ***-w testing***

Welcome to my first script for CS3030
My name is Waldo WSU
You are running this script in ***hvalle-Office***

This script can do three things:

1. Check to see if the user is the root user

2. Check to see if the script is running on Linux OS

3. Check to see if the -w argument was given

What would you like to do? (1, 2, 3): 3

testing testing testing

NAMING CONVENTION:

Your scripts will be submitted through the Icarus server and they must follow this naming convention:

FirstName_LastName_Hw#.sh[pl][py]

For example if your name is John Perez, and you need to submit hw#1, task#1, your script name will be: ***john_perez_hw1.sh***

The easiest way to avoid confusion is to start your vim session with the correct file name:

$ vim john_perez_hw1.sh

HOW TO SUBMIT:

At the end of this assignment, copy your script (file.sh), to the following folder on the Icarus server:

From within the Icarus server:

$ cp john_perez_hw1.sh /home/hvalle/submit/cs3030

From other server (your VM) to the Icarus server, use secure copy (scp) using your credentials of the server:

$ scp john_perez_hw1.sh user@icarus.cs.weber.edu:/home/hvalle/submit/cs3030

Note: repeat the above step for all tasks required in the assignment

SUBMISSION CHECKLIST

1. Does it follow the naming convention?
2. Does it run in the Icarus server and your own VM?
3. Did you copy the file to the designated area in the Icarus server?
4. **Did you submit the entry in canvas?**
    1. This is the name of your script as a text entry
5. Does it have a help function?
6. Are you using IF and CASE statements?

---------- Program essential help ----------

Make sure you understand the following:

The **su** command

The IF, CASE conditional (Chapter 5)

The declare and use functions (with no arguments)

How to use input parameters (Chapter 6)