3.2bash-variables-lab

CST 334 (Operating Systems)
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Lab: Bash variables

1. Start a bash shell on your own machine or the hosting server. Set shell variable x to 1

2. Display the value of x

3. Try setting shell variable y using “y = 1” and “y=1”. What’s the difference?

4. Set variable tod to the value of today’s date. Today’s date can be found with command ‘date’.

5. Display the value of tod.

6. Create a child shell by using command ‘bash’ within your current shell.

7. In the child shell, display the value of tod. What is the value?

8. Exit the child shell.

9. Create a tiny bash program whose only job is to display the value of variable x. You could call it “showx.sh”. Don’t forget the shebang on the first line.

10. Give your program execute permission (or really, give yourself execute permission for the program).

11. Display the value of x.

12. Run your program. What is displayed? Why?

13. Create a global variable x, and set its value to 1.

14. Run your program. What is displayed? Why?

15. Create an alias ‘today’ for the command ‘date -R’.

16. Run your new alias.

17. Create a child shell.

18. Run your alias ‘today’. What do you get?

19. Exit the child shell.

20. Find the `.bashrc` file in your home directory (use the -a option of ls). If the file is not there, then create it.

21. Edit .bashrc with an editor. Add the aliases below, and other aliases if you like:

```
alias lsl='ls -l'
alias lsf='ls -f'
alias j='jobs'
alias c='clear'
```

22. After saving the file, enter `$ . ~/.bashrc`. Are the new aliases working? (Note: command `.` sources the contents of a file.)

23. Now edit `.bash_profile`. Add the following lines to the end of the file:

```
echo "Hi $USER"
echo "Welcome to $HOSTNAME"
echo -n "Current time: "
/bin/date
```

24. Save the file and exit the shell. Now start a new shell. What do you see when you start the shell?

25. Run command ‘set’ and look at the output.

26. Run command ‘printenv’ and look at the output.

27. Assign shell variable foo the value “baz”. Assign global variable BAR the value “raz”.

28. Run command ‘set’. Do you see variables ‘foo’ and ‘BAR’?

29. Run command ‘printenv’. Do you see variables ‘foo’ and ‘BAR’?

30. Is the ‘export’ command a bash built-in command?

31. Does the bash man page ever use the term ‘environment variable’?

32. What does ‘export -p’ do?

33. If you haven’t already, read the bash man page.