

CST 8177 - Lab 10

Working with variables

Student Name	Student number	Lab section:

Objective

To practice problem-solving skills with several small scripts and their PDL, Data Dictionary (where necessary), and so on. Note: Print out your finished PDL, scripts, and test output to include in your Lab Book.

In-Lab Demo-- Demo one script from this lab, explaining its behaviour.

Working with variables

Note: For each script, you need to first write PDL and a brief Test Plan before you begin to write the bash commands.

Part 1: Sourcing a variable from a configuration file

Create a short script that sources a variable from a configuration file, first writing the PDL and then the **bash** commands.

- Login as **root**.
- Create a directory called **config.d** in your home directory and **cd** into it.
- Create a file called **sourcit.conf** and enter the following line:
INIT=/etc/init
- Create a bash shell script and name it **sourcit**.
- Within the script, in this order:
 - Create an **INIT** variable and give it the value **"/no-such-directory"**
 - Display the contents of your variable **INIT** to the screen.
 - Include (**source**) the variable from the config file **sourcit.conf**
source ./sourcit.conf or **. ./sourcit.conf**
 - Display the contents of your variable **INIT** to the screen again. Did it change its value? [Y / N]
 - Check that the directory in **INIT** exists, using the variable, not the filename, to check for its existence.
 - Record the test you use: _____
 - If it doesn't exist, display an informative error message and **exit** with a return status of 1.
 - If it does exist, count all the lines in the files **rcS*.conf** there (using the variable again) that mention **runlevel**, but not as a shell variable. Then **exit** your script with an exit status of 0.

Test it thoroughly, with good input and bad.

Part 2: Updating a variable

Create a short script that sources a variable from a configuration file and adds the content to the PATH. As before, write the PDL first and then the **bash** script.

- Login as root unless you are already root.
- Create a short bash shell script in the same directory as above (**config.d**) and name it **updpath**. Create a config file as above named **path.config** with a variable having the initial value **/root/bin**. If the directory does not yet exist, create it before proceeding.
- Check if the directory **/root/bin** already exists in the PATH. To do this, display the content of the PATH variable (**echo \$variable**) and pipe it to the **grep** command. Be sure to use your sourced variable - do not hard-code the directory name in the script.
- Record the command line you use: _____
- This should not be successful until after you have run the script once.
- Note: Suppress the **grep** output from your script; don't clutter the screen with the output of **grep**.
- Copy the current PATH into a local script variable
- Add the directory **/root/bin** to the end of the path from your variable (note: do not use **~/bin** unless you take care to replace the '~' with the value from the **\$HOME** variable).
- Record the command line you use: _____
- Display the updated path and the original. Ask the user if it's OK to change to the new path. If the reply is **Y** or **Yes**, replace the old path with the newly created path; otherwise, do not. Issue a meaningful message to the screen in both cases.

Test it thoroughly, with good input and bad.