CMSC 6950

Assignment #1

Command line and Bash Scripting

Due Tuesday, May 15, 2018

The purpose of this assignment is to teach you how to write a simple script to find the numbers between 1 and 1000 that are dividable by 7. The script have many other commands to learn how you can use bash commands in a script.

Part of the grade is for the history of all the commands you typed at the command line when you solve this assignment. See next page (point *e*)

Instructions:

1. Open a new file called "**userid_assignment1.sh**" with any text editor you choose. We will refer to this file as a script. [For userid, I mean your MUN user id/email .e.g. abc123 and not your student number]

2. In the script:

   (a) Specify that you want to use "bash" interpreter environment to run.

   (b) Write the proper commands to:

      i. Go to **Desktop**

      ii. Make a directory called "**userid-CMCS6950-A1**"

      iii. Go to "**userid-CMCS6950-A1**"

      iv. Remove a file called "**numbers.dat**". Note that this file initially does not exist.

      v. The script will read three arguments from the user in the command line. So, write **if** statement that exits the script if the number of arguments sent by the user is not three arguments.

      vi. Using "**for**" loop (see scripting.sh in the lectures notes), write down the numbers in the range 1-1000 with step of 2. The range and the step must be defined as inputs or arguments that are sent to the script by the user when you run it. Print out the numbers into a file called "**numbers.dat**" (note that you have to append the output to the file and not overwrite it.)

vii. Make a directory called "**DIVIDE-BY-7**"

viii. Go to "**DIVIDE-BY-7**"

ix. Unlink the file "**numbers_link.dat**" with the "**unlink**" command which takes the syntax:

```
unlink <link_file>
```

x. Generate a link file "**numbers_link.dat**" that points to the file **numbers.dat**". Note that the file **numbers.dat**" belongs to the parent direrctory.

xi. Remove the file "**dividable_by_7.dat**". Note that the file initially does not exist and this is fine.

xii. Using **while** command (see scripting.sh in the lecture notes), print out the data points from "**numbers_link.dat**" that are dividable by 7 and append to a file called "**dividable_by_7.dat**".
Hint: You can use the mod operator in bash which has the syntax,

```
$(($d%7)) -eq "7"
```

Note that $**d** is the variable represents that data point you read from the file "**numbers_link.dat**"

xiii. Go back to "**userid-CMCS6950-A1**"

xiv. Go back to your "**Desktop**"

(c) Save the script and exit the file

(d) Run the script

(e) Get the history of all the commands you typed at the command line and send the output to "**userid_history.dat**". Use the command,

```
history >>  userid_history.dat
```

ans make sure "**userid**" is replaced by your user id.

(f) Submit your script and your "**userid_history.dat**" files through D2L dropbox