

Project #3 [75 points]

Due date is Wednesday, 10/17.

- A. [20 points] Write a script named **listEmptyDir.sh** that will do the following: (a) take a name of a directory as a parameter; (b) loop through all files in this directory and display their names; (c) if a file is a directory and has no files in it (empty directory), add the name of this empty directory to the file **EmptyDir.txt** in your current directory. If the number of parameters is not 1 or a parameter is not a directory, display the “usage” message and exit with non-zero status. Your file for submission should demonstrate that you have investigated all possible situations.
- B. [15 points] Transform a script **contact_one.sh** (sec. 5.2) so that instead of using a file with names it will use a HERE document (it may include the same information as the file **myContactlist**). Another change is that instead of using a positional parameter you read a pattern from a user (don’t forget about a prompt). Include a command **grep** into a **while** or **until** loop providing different input strings. If a name is not in HERE document, display a message saying that.
- C. [20 points] Write a script named **fileInfo.sh** to present a user information about the given file or directory. Include the following into your script and show in the output: (a) if a file or directory exists, say so; if not, exit with a non-zero status; (c) inform the user if the file is a regular file, a directory or a special file. Perform all the above operations in a function. Make calls to the function using a loop on the list of files specified as positional parameters. If the user does not specify any parameter, print the “usage” line and exit with non-zero status. Your file for submission should demonstrate that you have investigated all possible situations.
- D. [20 points] In this assignment you will work with the file **~piatnitskaia/CS2750/donors**. The first column of this file contains names of people who donated money during the first three months of the year; in the second column you will find their telephone numbers; the last three columns are donations during January, February and March. Write a Bash shell script containing **awk** commands to produce the following output:

1. Insert a heading line and display information from this file in the following format:

NAME	PHONE	JAN	FEB	MAR
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Jane Smith	(314)516-5239	\$10.00	\$50.00	\$15.00
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2. Change the last name ‘Savage’ to ‘Savauge’
3. Put the list of donors (with all information) with area code 916 in a file named **specialAreaCode**.
4. Put lines with first names starting with C or E in the file **CNames**.

5. Put the list of people who donated over \$500 to the campaign to the file **over500**. This list must be sorted by last names and contain only full names and telephone numbers. Use a command **sort** for sorting.

Submit the code of your Bash shell script and results of its execution.