ORIE5270 - Homework 1
Due February 1st, 2019 at 1:25pm

You are not allowed to collaborate with your classmates, but you may freely use the internet to look up documentation for operating system commands that may help you! In fact, you will likely need this to accomplish this assignment. At the start of each file, give citations to any resources used. For each problem in this homework, you will be asked to write a bash script that accomplishes a given task. Submit this assignment via the course blackboard and attach the four requested bash files to your submission.

Problem 1 For this problem, you will write a bash script (with filename "p1.sh") that downloads and manipulates files. When run, it should check if a file named "data.txt" exists in the current directory. If this is not the case, it should download the file "https://people.orie.cornell.edu/bdg79/data.txt" to the current directory. Then it should write a file (with filename "summary.txt") in the current directory containing the first 5 lines of "data.txt" followed by the last 5 lines of "data.txt".

Problem 2 For this problem, you will write a bash script (with filename "p2.sh") that uses regular expressions to process a given text file looking for phone numbers. The bash script should take one argument as input, which is the name of the file to be processed. If no input is given, it should use a file named "data.txt" in the current directory. Then the script should write a new file (with filename "phone_<name of the processed file>.txt") that contains each phone number in the given file.
You can assume that all phone numbers are either of the form "(###)###-####" or of the form "##########". Do not assume the given file has any particular structure.

Problem 3 For this problem, you will write a bash script (with filename "meta.sh") that runs every bash script in the current directory with name "p<any sequence of numbers>.sh". The time taken to run each of the bash scripts should be output to the terminal (using the time command). Afterwards, it should create a new folder in the current directory (named "Outputs") and move all ".txt" files in the current directory into this new folder.

Problem 4 For this problem, you will write a bash script (with filename "movies.sh"). The script should take a single argument and output "1" to the terminal if it is in the first list below (Movies I like) and output "0" to the terminal if it matches anything in the second list (Movies I dislike). Your bash file should just execute a single command of the form "echo $1 | grep -c <your regular expression>" to accomplish this.
Half of the credit for this problem is based on giving a correct regular expression. Half of the credit will be based on the shortness of the regular expression used (this is known as regular expression golf: https://xkcd.com/1313).

Movies I Like	Movies I Dislike
avatar	aquietplace
blackpanther	birdbox
interstellar	fargo
moana	killbill
thegodfather	madmax
themartian	thebigshort
therevenant	thewolfofwallstreet