**CS2750 System programming and Tools Fall 2018**

**KEY TO** **QUIZ #6 [13 points]**

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1. [4 points] Assume that you work with the file **Regions**. Write a single **sed** command to do each of the following:
2. Replace all occurrences of **west** in the beginning of the lines to **north**; display only the lines where this replacement was made.

*Answer*:

**sed –n ‘s/^west/north/p’ Regions**

1. For all lines from #5 to the first line starting with the pattern **north**, replace end of line by the pattern \*V\* (asterisks must appear, too); display an entire file

*Answer*:

**sed ‘5,/north/s/$/\\*V\\*/’ Regions**

2. [4 points] Assume that a file called **Data** has strings in the first two fields and numerical information in the remaining fields; fields are separated with a comma ",". Write a single **awk** commands (NOT a script!) to do each of the following:

1. For the lines containing a pattern **good** or **Good** in the second field, display the sum of numbers in the third and the fifth fields:

*Answer*:

**awk –F, ‘$2 ~/[gG]ood/{print $3+$5}’ Data**

1. For the lines that do not contain a pattern **Bad** or **bad** in the beginning, display the number of such a line, its second field and the last field

*Answer*:

**awk –F, ‘$1 !~/^[bB]ad/{print $NR, $2, $NF}’ Data**

1. [1 point] Write a command to create a symbolic link to the file **Results** located in your parent directory. The link with the name **ResultsSoft** should appear in your current directory.

*Answer*:

**ln -s ../Results ResultsSoft**

1. [4 points] Fill in the blanks:
2. A *character* special file represents a byte-oriented I/O device.
3. A *soft* or *symbolic* link is a file that serves as an indirect pointer to another file.
4. Each *filesystem* is a self-contained unit consisting of a group of data blocks on a particular hard disk.
5. Addresses of data blocks, the status and perhaps attribute information of a file are stored in a special data structure known as an *i-node*.