ULI101SA Lab 5 – matrix UNIX Regular Expressions

Course Name:	**Introduction To Unix, Internet And XHTML**
Course Code:	**ULI101SA – Semester 142**
Instructor:	Rudy Maharajh
Lab Start Date:	16th Jul, 2014
Lab Due Date:	30th Jul, 2014
Time Allotted:	**1 Hr**.
Total Marks:	**3 Marks**

Please Note:

- **This Lab is worth 3% of your final mark**
- Please read the instructions carefully before attempting this Lab
- **Write all your answers on this Lab document for hand-in, STAPLE all pages**
- **Include additional printouts as necessary**
- Make sure your **Name and Student ID** are clearly written below

Your Name: _____ **Student ID: _____**

Lab Objectives:

- To study the effects of various **Regular Expressions** in **matrix** using the "**vi**" text editor and the "**grep**" command.
- To practice using the "**find**" command.

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- To study the effects of various Regular Expressions in matrix using the "vi" text editor and the "grep" command.
- To practice using the "find" command.

Lab Instructions:

1. This lab contains 2 sections, please answer each section separately
2. Open up a **secure telnet session** window for logging into remote computers, using **Putty** or other **SSH** secure telnet application**.**
3. Set your connection to the server at **matrix.senecac.on.ca**
4. At the login prompt enter your **username**.
5. At the password prompt enter your **password**.
6. Follow the instructions listed below and record your results in the space provided.

Enter the following commands explain what each command does.

1. In your **matrix** home directory, create a sub directory named **lab5**.
   Enter this command: **mkdir lab5**

2. Make **lab5** your working directory.
   Enter this command: **cd lab5**

Create a file containing the following lines and save it with the name "regexp":

```
=============== Start of file ============================
this is an IBM423 computer I am using
416-491-5050
my phone is 416-667-9782

t
tx
one
threeXxYy9124
howareyou
Mazda G123
Corvette gx45
Honda 98Accord

G567
I bought a mercury Lynx car today
My parents always told me to Save all your $
Save all your $
=============== End of file ============================
```

Hint: Use the "u" key (lower case) to reverse all changes made to the file. This key acts as a toggle to alternate between original file and the changed one.

Section I: Execute each command below using the vi editor with the file "regexp", then record the line numbers ONLY, that change. Use the "u" key to view changes.
Explain the result of each regular expression used.

1. `%s/^....*$/XXXX/c`
   1,2,3,7,8,9,10,11,12,14,15,16,17, (Exclude: 4,5,6,13)

2. `1,$s/^$/XXXX/c`
   4,13

3. `1,$s/[gG].[23]/XXXX/c`
   10

4. `%s/^[gG].[23]/XXXX/c`
   NONE

5. `%s/^Save all your $/XXXX/c`
   NONE

6. `%s/^Save all your \$$/XXXX/c`
   17

7. `%s/^..$/XXXX/c`
   6

8. %s/[0-9]*/XXXX/c
   all lines

9. %s/[Xx]..[01256789]/XXXX/c
   8

Section II: Execute each command below from the shell prompt, using the file regexp, then record the line numbers ONLY, that change.
Explain the result of each regular expression used.

1. grep -n "^....*$" regexp
   1,2,3,7,8,9,10,11,12,14,15,16,17, (Exclude: 4,5,6,13)

2. grep -n "^$" regexp
   4,13

3. grep -n "[gG].[^23]" regexp
   10

4. grep -n "^[gG].[^23]" regexp
   NONE

5. grep -n "^Save all your $" regexp
   NONE

6. grep -n "^Save all your \$$" regexp
   17

7. grep -n "^..$" regexp
   6

8. grep -n "[0-9]*" regexp
   All Lines

9. grep -n "[Xx]..[01256789]" regexp
   8

Section III: Explain the purpose of each command below:

1. find /etc -name "[0-9]*" 2>/dev/null
   - **Starting from /etc folder, find all files and folders whose names start with a number and followed by zero or more characters**
   - **Redirect all Standard error messages (STDERR) to the bit bucket**
   - **Redirect all Standard messages (STDOUT) to the monitor.**

2. `find /etc -name "[!0-9]*" 2>/dev/null`
   - **Starting from /etc folder, find all files and folders whose names start with a character OTHER THAN a number and followed by zero or more characters**
   - **Redirect all Standard error messages (STDERR) to the bit bucket**
   - **Redirect all Standard messages (STDOUT) to the monitor.**

3. `find /etc -name "[A-M]*" >/dev/null`
   - **Starting from /etc folder, find all files and folders whose names start with an upper case letter from A to M and followed by zero or more characters**
   - **Redirect all Standard messages (STDOUT) to the bit bucket**
   - **Redirect all Standard error messages (STDERR) to the monitor.**

4. `find /etc -name "[!A-M]*" >/dev/null`
   - **Starting from /etc folder, find all files and folders whose names start with a character OTHER THAN with an upper case letter from A to M and followed by zero or more characters**
   - **Redirect all Standard messages (STDOUT) to the bit bucket**
   - **Redirect all Standard error messages (STDERR) to the monitor.**