

CSC 3320

Lab assignment 4

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Part-1

(4)

```
[smohan6@gsuad.gsu.edu@snowball Lab4]$ [smohan6@gsuad.gsu.edu@snowball Lab4]$ grep 'CSC 3' CSC_Course.txt
CSC 3450 - C programming
CSC 320 C Programming
• CSC 3202 - Java Programming Issues in Computing 3 Credit Hours
CSC 3210 - Computer Organization and Programming 4 Credit Hours *
CSC 3320 - System-Level Programming 3 Credit Hours
CSC 3325 - Operating Systems 4 Credit Hours
CSC 3330 - Programming Language Concepts 4 Credit Hours
CSC 3200 - Design and Analysis of Algorithms 4 Credit Hours
```

This command looks for lines in the document that contain the string 'CSC 3'.

(5)

```
[smohan6@gsuad.gsu.edu@snowball Lab4]$ grep 'CSC 3|CSC 1' CSC_Course.txt
[smohan6@gsuad.gsu.edu@snowball Lab4]$
```

Command tries to display lines with 'CSC 3' or 'CSC 1' strings, using regular expression.

(6)

```
[smohan6@gsuad.gsu.edu@snowball Lab4]$ grep -E 'CSC 3|CSC 1' CSC_Course.txt
• CSC 1301 - Principles of Computer Science I 4 Credit Hours
• CSC 1302 - Principles of Computer Science II 4 Credit Hours
CSC 3450 - C programming
CSC 320 C Programming
CSC 100 Computer Introduction
• CSC 3202 - Java Programming Issues in Computing 3 Credit Hours
CSC 3210 - Computer Organization and Programming 4 Credit Hours *
CSC 3320 - System-Level Programming 3 Credit Hours
CSC 3325 - Operating Systems 4 Credit Hours
CSC 3330 - Programming Language Concepts 4 Credit Hours
CSC 3200 - Design and Analysis of Algorithms 4 Credit Hours
```

Command displays lines with 'CSC 3' or 'CSC 1' strings, using regular expression with the extended attribute.

(7)

```
[smohan6@gsuad.gsu.edu@snowball Lab4]$ egrep 'CSC 3|CSC 1' CSC_Course.txt
• CSC 1301 - Principles of Computer Science I 4 Credit Hours
• CSC 1302 - Principles of Computer Science II 4 Credit Hours
• CSC 3450 - C programming
• CSC 320 C Programming
• CSC 100 Computer Introduction
• CSC 3202 - Java Programming Issues in Computing 3 Credit Hours
CSC 3210 - Computer Organization and Programming 4 Credit Hours *
CSC 3320 - System-Level Programming 3 Credit Hours
CSC 3325 - Operating Systems 4 Credit Hours
CSC 3330 - Programming Language Concepts 4 Credit Hours
CSC 3200 - Design and Analysis of Algorithms 4 Credit Hours
```

Command displays lines with 'CSC 3' or 'CSC 1' strings, using extended regular expression.

(8)

```
[smohan6@gsuad.gsu.edu@snowball Lab4]$ fgrep '3.000 Credit hours' CSC_Course.txt
[smohan6@gsuad.gsu.edu@snowball Lab4]$ fgrep '3 Credit Hours' CSC_Course.txt
• CSC 2510 - Theoretical Foundations of Computer Science 3 Credit Hours
• MATH 2420 - Discrete Mathematics 3 Credit Hours
• ACCT 2101 - Principles of Accounting I 3 Credit Hours
• ACCT 2102 - Principles of Accounting II 3 Credit Hours
• BIOL 2107 - Principles of Biology I 3 Credit Hours
• CHEM 2400 - Organic Chemistry I 3 Credit Hours
• CSC 2301 - Introduction to Python Programming 3 Credit Hours
• CSC 2302 - Python Programming for Data Science 3 Credit Hours
• CSC 3202 - Java Programming Issues in Computing 3 Credit Hours
• ECON 2105 - Principles of Macroeconomics 3 Credit Hours
• ECON 2106 - Principles of Microeconomics 3 Credit Hours
• GEOL 1121 - Introductory Geology I 3 Credit Hours
• GEOL 1122 - Introductory Geology II 3 Credit Hours
• SCOM 1500 - Public Speaking 3 Credit Hours
• SCOM 2300 - Business and Professional Communication 3 Credit Hours
CSC 2720 - Data Structures 3 Credit Hours
CSC 3320 - System-Level Programming 3 Credit Hours
```

Command displays the names of subjects with 3 Credit Hours.

(9)

```
[smohan6@gsuad.gsu.edu@snowball Lab4]$ fgrep -x '3.000 Credit hours' CSC_Course.txt
[smohan6@gsuad.gsu.edu@snowball Lab4]$ fgrep -x '3 Credit Hours' CSC_Course.txt
[smohan6@gsuad.gsu.edu@snowball Lab4]$
```

Command only displays full lines that only say, '3 Credit Hours.'

(10)

```
[smohan6@gsuad.gsu.edu@snowball Lab4]$ grep 'CSC.*Programming' CSC_Course.txt
For CSC 2302 - Python Programming
CSC 4930 - C++ Programming Series
CSC 223 Database Programming Introduction
• CSC 2301 - Introduction to Python Programming 3 Credit Hours
• CSC 2302 - Python Programming for Data Science 3 Credit Hours
• CSC 3202 - Java Programming Issues in Computing 3 Credit Hours
CSC 3210 - Computer Organization and Programming 4 Credit Hours *
CSC 3320 - System-Level Programming 3 Credit Hours
CSC 3330 - Programming Language Concepts 4 Credit Hours
```

Command is used to search for CSC courses that have 'Programming' in their titles.

(11)

```
[smohan6@gsuad.gsu.edu@snowball Lab4]$ grep '^CSC.*Programming$' CSC_Course.txt
[smohan6@gsuad.gsu.edu@snowball Lab4]$
```

Command is used to display lines starting with 'CSC.' And ending with 'Programming.'

(12)

```
[smohan6@gsuad.gsu.edu@snowball Lab4]$ grep --color 'CSC[^3]*3{2}' CSC_Course.txt
[smohan6@gsuad.gsu.edu@snowball Lab4]$
```

Command is used to search for CSC Courses in the 3300 range (excluding those in the 3330 range). But because '{3}' was used, no result came.

(13)

```
[smohan6@gsuad.gsu.edu@snowball Lab4]$ egrep --color -w 'CSC[^3]*3{2}[^3]*' CSC_Course.txt
CSC 3320 - System-Level Programming 3 Credit Hours
CSC 3325 - Operating Systems 4 Credit Hours
```

Command is used to search for lines with words that match the specific format: CSCX33XX*, where X, is not 3.

(14)

```
[smohan6@gsuad.gsu.edu@snowball Lab4]$ grep 'CSC.*C++' CSC_Course.txt
CSC 4930 - C++ Programming Series
```

Command is used to search for CSC Courses with 'C++' in the title using regular expression.

(15)

```
[smohan6@gsuad.gsu.edu@snowball Lab4]$ egrep 'CSC.*C\+\+' CSC_Course.txt
CSC 4930 - C++ Programming Series
```

Command is used to search for CSC Courses with 'C++' in the title using extended regular expression.

(16) Command is used to display names of CSC Courses with 'C' followed by one or more characters in the title using extended regular expression.

Optional Part

(1)

```
[smohan6@gsuad.gsu.edu@snowball Lab4]$ sed -E -n 's/(CSC 3[0-9]{3})(.*)/\1/p' CSC_Course.txt
CSC 3450
• CSC 3202
CSC 3210
CSC 3320
CSC 3325
CSC 3330
CSC 3200
```

Command is used to display only the first fields of lines for CSC Courses in the 3000s range using the stream editor with '-' as the delimiter.

(2)

```
[smohan6@gsuad.gsu.edu@snowball Lab4]$ awk -F '-' '/(CSC 3[0-9]{3})(.*)/{print $1}' CSC_Course.txt
CSC 3450
• CSC 3202
CSC 3210
CSC 3320
CSC 3325
CSC 3330
CSC 3200
```

Command is used to display only the first fields of lines for CSC Courses in the 3000s range using the 'awk' program with '-' as the delimiter.

(3)

```
[smohan6@gsuad.gsu.edu@snowball Lab4]$ sed -E -n 's/(CSC [0-9]{4})( - )(.*)/\3/p' CSC_Course.txt
• Principles of Computer Science I 4 Credit Hours
• Principles of Computer Science II 4 Credit Hours
• Theoretical Foundations of Computer Science 3 Credit Hours
For Python Programming
  C programming
  C++ Programming Series
• Introduction to Python Programming 3 Credit Hours
• Python Programming for Data Science 3 Credit Hours
• Java Programming Issues in Computing 3 Credit Hours
Data Structures 3 Credit Hours
Computer Organization and Programming 4 Credit Hours *
System-Level Programming 3 Credit Hours
Operating Systems 4 Credit Hours
Programming Language Concepts 4 Credit Hours
Design and Analysis of Algorithms 4 Credit Hours
```

Command is used to display only the third fields of lines for CSC Courses using the stream editor.

(4)

```
[smohan6@gsuad.gsu.edu@snowball Lab4]$ sed -E -n 's/(CSC [0-9]{4})( - )(.*)/\3/p' CSC_Course.txt|sort
Computer Organization and Programming 4 Credit Hours *
  C programming
  C++ Programming Series
Data Structures 3 Credit Hours
Design and Analysis of Algorithms 4 Credit Hours
For Python Programming
• Introduction to Python Programming 3 Credit Hours
• Java Programming Issues in Computing 3 Credit Hours
Operating Systems 4 Credit Hours
• Principles of Computer Science I 4 Credit Hours
• Principles of Computer Science II 4 Credit Hours
Programming Language Concepts 4 Credit Hours
• Python Programming for Data Science 3 Credit Hours
System-Level Programming 3 Credit Hours
• Theoretical Foundations of Computer Science 3 Credit Hours
```

Command is used to display only the third fields of lines for CSC Courses in alphabetical order using the stream editor, and then passing to 'sort' using a pipe.