

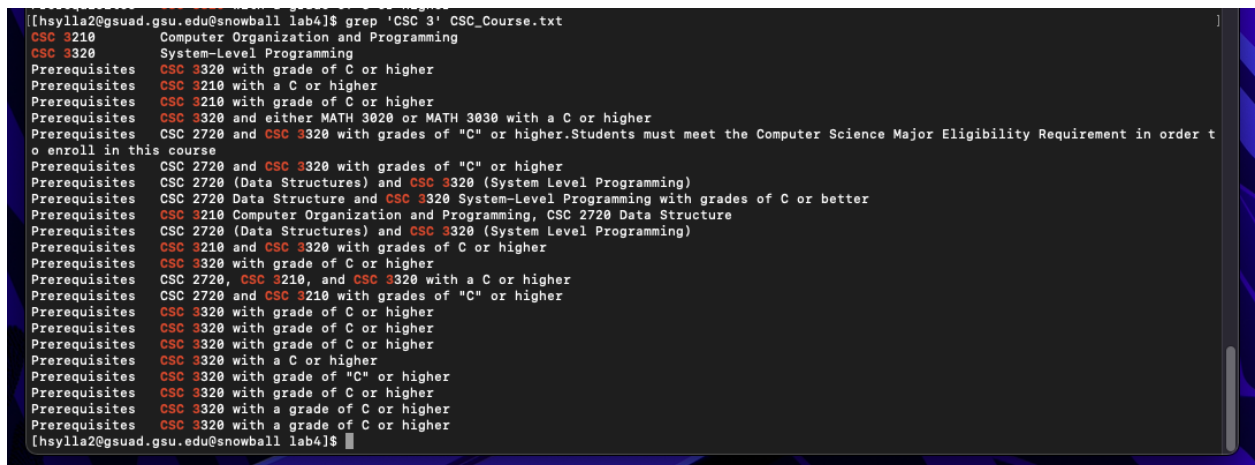
CSC3320 System Level Programming

Lab Assignment 4 - Part 1 (In- Lab) Answers

Instructor: Fil Rondel

4) `$ grep 'CSC 3' CSC_Course.txt`

Attach a screenshot of the output and describe what this command does.



```
[hsylla2@gsuad.gsu.edu@snowball lab4]$ grep 'CSC 3' CSC_Course.txt
CSC 3210      Computer Organization and Programming
CSC 3320      System-Level Programming
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3210 with a C or higher
Prerequisites CSC 3210 with grade of C or higher
Prerequisites CSC 3320 and either MATH 3020 or MATH 3030 with a C or higher
Prerequisites CSC 2720 and CSC 3320 with grades of "C" or higher.Students must meet the Computer Science Major Eligibility Requirement in order to enroll in this course
Prerequisites CSC 2720 and CSC 3320 with grades of "C" or higher
Prerequisites CSC 2720 (Data Structures) and CSC 3320 (System Level Programming)
Prerequisites CSC 2720 Data Structure and CSC 3320 System-Level Programming with grades of C or better
Prerequisites CSC 3210 Computer Organization and Programming, CSC 2720 Data Structure
Prerequisites CSC 2720 (Data Structures) and CSC 3320 (System Level Programming)
Prerequisites CSC 3210 and CSC 3320 with grades of C or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 2720, CSC 3210, and CSC 3320 with a C or higher
Prerequisites CSC 2720 and CSC 3210 with grades of "C" or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with a C or higher
Prerequisites CSC 3320 with grade of "C" or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with a grade of C or higher
Prerequisites CSC 3320 with a grade of C or higher
```

Searches for a text match of 'CSC 3' within the file (case sensitive)

5) `$ grep 'CSC 3|CSC 1' CSC_Course.txt`

Attach a screenshot of the output and describe what this command does.

Searches for a text match of either 'CSC 3' or 'CSC 1' within the file (case sensitive)
No output because '|' does not register as 'or' in regular grep

6) `$ grep -E 'CSC 3|CSC 1' CSC_Course.txt`

Attach a screenshot of the output and describe what this command does.

Use extend regular expression

Searches for a text match of either 'CSC 3' or 'CSC 1' within the file (case sensitive)

This time it works because in extended grep, '|' is or.

```
[hsylla2@gsuad.gsu.edu@snowball lab41]$ grep -E 'CSC 3|CSC 1' CSC_Course.txt
CSC 1010 Computers and Applications
CSC 1301 Principles of Computer Science I
CSC 1302 Principles of Computer Science II
Prerequisites CSC 1301 with a "C" or higher
Prerequisites CSC 1301 or CSC 2301 with a C or higher, or permission of instructor
Prerequisites (CSC 1301 or DSCI 1301) and (MATH 1113 or MATH 2211) with a C or higher.
Prerequisites CSC 1302, MATH 2211, and CSC 2510 or MATH 2420 with grades of "C" or higher
Prerequisites CSC 1301 and CSC 1302 with a C or higher or permission of the department
CSC 3210 Computer Organization and Programming
Prerequisites CSC 1302, and CSC 2510 or MATH 2420 with A C or higher
CSC 3320 System-Level Programming
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3210 with a C or higher
Prerequisites CSC 3210 with grade of C or higher
Prerequisites CSC 3320 and either MATH 3020 or MATH 3030 with a C or higher
Prerequisites CSC 2720 and CSC 3320 with grades of "C" or higher.Students must meet the Computer Science Major Eligibility Requirement in order t
o enroll in this course
Prerequisites CSC 2720 and CSC 3320 with grades of "C" or higher
Prerequisites CSC 2720 (Data Structures) and CSC 3320 (System Level Programming)
Prerequisites CSC 2720 Data Structure and CSC 3320 System-Level Programming with grades of C or better
Prerequisites CSC 3210 Computer Organization and Programming, CSC 2720 Data Structure
Prerequisites CSC 2720 (Data Structures) and CSC 3320 (System Level Programming)
Prerequisites CSC 3210 and CSC 3320 with grades of C or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 2720, CSC 3210, and CSC 3320 with a C or higher
Prerequisites CSC 2720 and CSC 3210 with grades of "C" or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with a C or higher
Prerequisites CSC 3320 with grade of "C" or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with a grade of C or higher
Prerequisites CSC 3320 with a grade of C or higher
```

7) \$ egrep 'CSC 3|CSC 1' CSC_Course.txt

Attach a screenshot of the output and describe what this command does.

```

[hsylla2@gsuad.gsu.edu@snowball lab4]$ egrep 'CSC 3|CSC 1' CSC_Course.txt
CSC 1010      Computers and Applications
CSC 1301      Principles of Computer Science I
CSC 1302      Principles of Computer Science II
Prerequisites CSC 1301 with a "C" or higher
Prerequisites CSC 1301 or CSC 2301 with a C or higher, or permission of instructor
Prerequisites (CSC 1301 or DSCI 1301) and (MATH 1113 or MATH 2211) with a C or higher.
Prerequisites CSC 1302, MATH 2211, and CSC 2510 or MATH 2420 with grades of "C" or higher
Prerequisites CSC 1301 and CSC 1302 with a C or higher or permission of the department
CSC 3210      Computer Organization and Programming
Prerequisites CSC 1302, and CSC 2510 or MATH 2420 with A C or higher
CSC 3320      System-Level Programming
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3210 with a C or higher
Prerequisites CSC 3210 with grade of C or higher
Prerequisites CSC 3320 and either MATH 3020 or MATH 3030 with a C or higher
Prerequisites CSC 2720 and CSC 3320 with grades of "C" or higher.Students must meet the Computer Science Major Eligibility Requirement in order to enroll in this course
Prerequisites CSC 2720 and CSC 3320 with grades of "C" or higher
Prerequisites CSC 2720 (Data Structures) and CSC 3320 (System Level Programming)
Prerequisites CSC 2720 Data Structure and CSC 3320 System-Level Programming with grades of C or better
Prerequisites CSC 3210 Computer Organization and Programming, CSC 2720 Data Structure
Prerequisites CSC 2720 (Data Structures) and CSC 3320 (System Level Programming)
Prerequisites CSC 3210 and CSC 3320 with grades of C or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 2720, CSC 3210, and CSC 3320 with a C or higher
Prerequisites CSC 2720 and CSC 3210 with grades of "C" or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with a C or higher
Prerequisites CSC 3320 with grade of "C" or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with a grade of C or higher
Prerequisites CSC 3320 with a grade of C or higher
[hsylla2@gsuad.gsu.edu@snowball lab4]$

```

Like number six, Searches for a text match of either 'CSC 3' or 'CSC 1' within the file (case sensitive)

This time it works because in extended grep, '|' is or. This time extended grep is formatted as egrep, and not grep -E

8) ~~\$ fgrep '3.000 Credit hours' CSC_Course.txt~~

~~Attach a screenshot of the output and describe what this command does.~~

~~No output~~

9) ~~\$ fgrep -x '3.000 Credit hours' CSC_Course.txt~~ ~~Attach a screenshot of the output and describe what this command does.~~

~~No output~~

10) \$ grep 'CSC.*Programming' CSC_Course.txt

Attach a screenshot of the output and describe what this command does.

```
-bash: !: command not found
[hsylla2@gsuad.gsu.edu@snowball lab4]$ grep 'CSC.*Programming' CSC_Course.txt
CSC 2301      Introduction to Python Programming
CSC 2302      Python Programming for Data Science
CSC 3210      Computer Organization and Programming
CSC 3320      System-Level Programming
Prerequisites CSC 2720 (Data Structures) and CSC 3320 (System Level Programming)
CSC 4225      Internetwork Programming
Prerequisites CSC 2720 Data Structure and CSC 3320 System-Level Programming with grades of C or better
Prerequisites CSC 3210 Computer Organization and Programming, CSC 2720 Data Structure
Prerequisites CSC 2720 (Data Structures) and CSC 3320 (System Level Programming)
CSC 4330      Programming Language Concepts
CSC 4370      Web Programming
CSC 4380      Windowing Systems Programming
CSC 4760      Big Data Programming
Students must meet the Computer Science Major Eligibility Requirement in order to enroll in this course. Crosslisted with CSC 6760. This course will
cover the technologies, tools, frameworks and languages that are most commonly used in Big Data Programming. Focus will be on algorithms for anal
yzing and mining massive datasets, graphs and social network data. Topics include the storage, management, processing and analysis of massive datas
ets, as well as Big Data governance, security, and privacy issues.
CSC 4840      Advanced Computer Graphics Programming
[hsylla2@gsuad.gsu.edu@snowball lab4]$
```

Searches for a text match of 'CSC' and anything in between, followed by the word 'Programming' within the file (case sensitive)

11) `$ grep '^CSC.*Programming$' CSC_Course.txt` Attach a screenshot of the output and describe what this command does.

```
[hsylla2@gsuad.gsu.edu@snowball lab4]$ grep '^CSC.*Programming$' CSC_Course.txt
CSC 2301      Introduction to Python Programming
CSC 3210      Computer Organization and Programming
CSC 3320      System-Level Programming
CSC 4225      Internetwork Programming
CSC 4370      Web Programming
CSC 4380      Windowing Systems Programming
CSC 4760      Big Data Programming
CSC 4840      Advanced Computer Graphics Programming
[hsylla2@gsuad.gsu.edu@snowball lab4]$
```

Searches for a text match of 'CSC' and anything in between, followed by the word 'Programming'. The word Programming needs to be at the end of the line.

12) `$ grep --color 'CSC[^3]*3{2}' CSC_Course.txt`

Attach a screenshot of the output and describe what this command does.

No result, `{}` is not a special character

Reason why is that the regex asks to match any number but 3, then '33'. There are no matches class wise in this document, which is why the search resulted in no matches.

13) `$ egrep --color -w 'CSC[^3]*3{2}[^3]*' CSC_Course.txt`

Attach a screenshot of the output and describe what this command does.

```

CSC 3320      System-Level Programming
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 and either MATH 3020 or MATH 3030 with a C or higher
Prerequisites CSC 2720 and CSC 3320 with grades of "C" or higher.Students must meet the Computer Science Major Eligibility Requirement in order t
o enroll in this course
Prerequisites CSC 2720 and CSC 3320 with grades of "C" or higher
Prerequisites CSC 2720 (Data Structures) and CSC 3320 (System Level Programming)
Prerequisites CSC 2720 Data Structure and CSC 3320 System-Level Programming with grades of C or better
Prerequisites CSC 2720 (Data Structures) and CSC 3320 (System Level Programming)
Prerequisites CSC 3210 and CSC 3320 with grades of C or higher
Prerequisites CSC 3320 with grade of C or higher
CSC 4330      Programming Language Concepts
Prerequisites CSC 2720, CSC 3210, and CSC 3320 with a C or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with a C or higher
Prerequisites CSC 3320 with grade of "C" or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with a grade of C or higher
Prerequisites CSC 3320 with a grade of C or higher
[hsylla2@gsuad.gsu.edu@snowball lab4]$

```

This asks to match any line with a three in the middle of it

-w Select only those lines containing matches that form whole words.

14) \$ grep 'CSC.*C++' CSC_Course.txt

Attach a screenshot of the output and describe what this command does.

No result, the two pluses make this an invalid statement.

+ is not a special character in basic regular expression

15) \$ egrep 'CSC.*C\+\+' CSC_Course.txt

Attach a screenshot of the output and describe what this command does.

There is no class called CSC C++, so this yields no result. Its canceled by escaped characters.

16) \$ egrep 'CSC.*C++' CSC_Course.txt

Please only describe what this command does.

The plusses aren't canceled so they can successfully execute.

