

4) THIS COMMAND WILL ONLY SHOW LINES THAT HAVE THE TEXT CSC 3 ON THEM

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[hgunerli1@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
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5) this will require an expression to be recognized, like egrep or grep -E

6) THIS WILL ONLY REPRESENT LINES THAT HAVE CSC 3 OR CSC 1

```
[hgunerli1@gsuad.gsu.edu@snowball Lab4]$ 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 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
[hgunerli1@gsuad.gsu.edu@snowball Lab4]$ |
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7) ALTHOUGH THIS REPRESENTS THE LINES TO BE EXTENDED REGULAR EXPRESSIONS (EGREP IS THE SAME AS GREP -E) , FOR THIS CONTEXT THERE IS NO DIFFERENCE.

```
[hgunerli1@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
[hgunerli1@gsuad.gsu.edu@snowball Lab4]$
```

8) n/a it is supposed to print lines matching the pattern, but there is no line that matches 3.000 gpa.

9) n/a it is supposed to print lines matching exactly the whole line, but there is no line that matches 3.000 gpa.

10) THIS COMMAND WILL HIGHLIGHT ALL TEXT BETWEEN CSC AND PROGRAMMING

```
[hgunerli1@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 analyzing and mining massive datasets, graphs and social network data. Topics include the storage, management, processing and analysis of massive datasets, as well as Big Data governance, security, and privacy issues.
CSC 4840      Advanced Computer Graphics Programming
[hgunerli1@gsuad.gsu.edu@snowball Lab4]$ |
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11) IT WILL ONLY MATCH THE BEGINNING, SO IF THERE IS ANY TEXT OR AFTER THE FILE, IT WILL NOT BE REPRESENTED. ^ IS BEGINNING, \$ IS END.

```
[hgunerli1@gsuad.gsu.edu@snowball Lab4]$ grep '^CSC.*Programming$' CSC_Course.txt
CSC 2301      Introduction to Python Programming
CSC 3210      Computer Organization and Programming
CSC 3320      System-Level Programming
CSC 4225      Internetwork Programming
CSC 4370      Web Programming
CSC 4380      Windowing Systems Programming
CSC 4760      Big Data Programming
CSC 4840      Advanced Computer Graphics Programming
[hgunerli1@gsuad.gsu.edu@snowball Lab4]$ |
```

12) No result, {} is not a special character

13) this will actually match EITHER CSC AND NUMBER OR 3,2 and represented as white.

```
[hgunerli1@gsuad.gsu.edu@snowball Lab4]$ egrep --color -w 'CSC[^3]*3{2}[^3]*' CSC_Course.txt
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 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 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
[hgunerli1@gsuad.gsu.edu@snowball Lab4]$ |
```

14)N/A, none matches.

15) N/A, none matches.

16) THIS WILL MATCH CSC STARTING WITH ANY NUMBER UNTIL C FOLLOWED BY A LETTER.

E.G. THE LETTER C WILL MATCH BUT COMPUTER WILL NOT MATCH.

```
[nguner11@gsuad.gsu.edu$ snowhall Lab$] egrep 'CSC.*C++' CSC_Course.txt
CSC 1000 Computers and Applications
CSC 1001 Principles of Computer Science I
CSC 1002 Principles of Computer Science II
Prerequisites CSC 1001 with a C+ or higher
Prerequisites CSC 1001 or CSC 2001 with a C or higher, or permission of instructor
CSC 2000 Theoretical Foundations of Computer Science
Prerequisites (CSC 1001 or CSC 1002) and (MATH 1113 or MATH 2211) with a C or higher.
CSC 2009 Ethical and Social Issues in Computing
Prerequisites CSC 1001 and CSC 1002 with a C or higher or permission of the department
CSC 3000 Computer Organization and Programming
Prerequisites CSC 1002, and CSC 2009 or MATH 4020 with A C or higher
Prerequisites CSC 3020 with grade of C or higher
Prerequisites CSC 3020 with a C or higher
Prerequisites CSC 3020 Computer Architecture
Prerequisites CSC 3020 with grade of C or higher
CSC 4000 Computer Networks
Prerequisites CSC 3020 and either MATH 3020 or MATH 3030 with a C or higher
CSC 4020 Wireless Networks & Mobile Computing
Prerequisites CSC 2720 and CSC 3020 with grades of "C" or higher. Students must meet the Computer Science Major Eligibility Requirement in order to enroll in this course
CSC 4022 Cyber Security
Prerequisites CSC 2720 and CSC 3020 with grades of "C" or higher
Prerequisites CSC 2720 and either MATH 3020 or MATH 3030 with a C or higher
Prerequisites CSC 2720 (Data Structures) and CSC 3320 (System Level Programming)
Prerequisites CSC 4020 with grade of C or higher
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
CSC 4030 Computer Forensics
Prerequisites CSC 2720 (Data Structures) and CSC 3320 (System Level Programming)
Prerequisites CSC 2720 or CSC 2728 with a C or higher. Students must meet the Computer Science Major Eligibility Requirement in order to enroll in this course.
Prerequisites CSC 4030 with grade of C or higher
CSC 4030 Parallel and Distributed Computing
Prerequisites CSC 3020 and CSC 3320 with grades of C or higher
CSC 4031 Cloud Computing
Prerequisites CSC 2720 or CSC 2728 with a C or higher. Students must meet the Computer Science Major Eligibility Requirement in order to enroll in this course.
Prerequisites CSC 3320 with grade of C or higher
CSC 4030 Programming Language Concepts
Prerequisites CSC 2720, CSC 3210, and CSC 3320 with a C or higher
CSC 4040 Compilers
Prerequisites CSC 2720 and CSC 3210 with grades of "C" or higher
CSC 4050 Software Engineering - CW
Prerequisites CSC 4050 with a C or higher
Prerequisites CSC 2720 with a 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 2720 with a C or higher
Prerequisites (CSC 2720 or CSC 2728) and either MATH 3020 or MATH 3030 with a C or higher. Students must meet the Computer Science Major Eligibility Requirement in order to enroll in this course.
Prerequisites CSC 2720, B10L 1103M, [or B10L 1103 and B10L 1103L] and CHEM 1211M [or CHEM 1211 and CHEM 1211L] with grades of "C" or higher. Students must meet the Computer Science Major Eligibility Requirement in order to enroll in this course
CSC 4060 Human-Computer Interaction
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with a C or higher
Prerequisites CSC 2720 with grade of C or higher
Prerequisites CSC 2720 with a C or higher
Prerequisites CSC 2720 with a C or higher
Prerequisites CSC 2720 with a C or higher
Prerequisites CSC 2720 with a C or higher
Prerequisites CSC 4060 Interactive Computer Graphics
Prerequisites CSC 3320 with grade of "C" or higher
Prerequisites CSC 3320 with grade of C or higher
CSC 4060 Advanced Computer Graphics Programming
Prerequisites CSC 3320 with a grade of C or higher
CSC 4061 Computer Animation
Prerequisites CSC 3320 with a grade of C or higher
Prerequisites CSC 4060 with a grade of C or better
Prerequisites CSC 4060 or CSC 4060 with a C or higher. Students must meet the Computer Science Major Eligibility Requirement in order to enroll in this course.
CSC 4080 Computer Science Internship
CSC 4980 Topics in Computer Science
CSC 4982 Undergraduate Research in Computer Science
CSC 4990 Directed Readings B.S. - TW
[nguner11@gsuad.gsu.edu$ snowhall Lab$] ]
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OPTIONAL

1) MATCH TEXT WITH CSC

```
[hgunerli1@gsuad.gsu.edu@snowball Lab4]$ sed -E -n 's/(CSC 3[0-9]{3})(.*)/\1/p' CSC_Course.txt
CSC 3210
CSC 3320
Prerequisites    CSC 3320
Prerequisites    CSC 3210
Prerequisites    CSC 3210
Prerequisites    CSC 3320
Prerequisites    CSC 2720 and CSC 3320
Prerequisites    CSC 2720 and CSC 3320
Prerequisites    CSC 2720 (Data Structures) and CSC 3320
Prerequisites    CSC 2720 Data Structure and CSC 3320
Prerequisites    CSC 3210
Prerequisites    CSC 2720 (Data Structures) and CSC 3320
Prerequisites    CSC 3210
Prerequisites    CSC 3320
Prerequisites    CSC 2720, CSC 3210
Prerequisites    CSC 2720 and CSC 3210
Prerequisites    CSC 3320
Prerequisites    CSC 3320
Prerequisites    CSC 3320
Prerequisites    CSC 3320
Prerequisites    CSC 3320
Prerequisites    CSC 3320
Prerequisites    CSC 3320
Prerequisites    CSC 3320
Prerequisites    CSC 3320
[hgunerli1@gsuad.gsu.edu@snowball Lab4]$ |
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2) MATCH CSC AND A NUMBER AND SHOW UNTIL THE END OF THE LINE.

```
[hgunerli1@gsuad.gsu.edu@snowball Lab4]$ awk -F'|' '/(CSC 3[0-9]{3})(.*)/{print $1}' CSC_Course.txt
CSC 3210      Computer Organization and Programming
CSC 3320      System
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3210 with a C or higher
Prerequisites CSC 3210 with grade of C or higher
Prerequisites CSC 3320 and either MATH 3020 or MATH 3030 with a C or higher
Prerequisites CSC 2720 and CSC 3320 with grades of "C" or higher.Students must meet the Computer Science M
ajor Eligibility Requirement in order to enroll in this course
Prerequisites CSC 2720 and CSC 3320 with grades of "C" or higher
Prerequisites CSC 2720 (Data Structures) and CSC 3320 (System Level Programming)
Prerequisites CSC 2720 Data Structure and CSC 3320 System
Prerequisites CSC 3210 Computer Organization and Programming, CSC 2720 Data Structure
Prerequisites CSC 2720 (Data Structures) and CSC 3320 (System Level Programming)
Prerequisites CSC 3210 and CSC 3320 with grades of C or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 2720, CSC 3210, and CSC 3320 with a C or higher
Prerequisites CSC 2720 and CSC 3210 with grades of "C" or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with a C or higher
Prerequisites CSC 3320 with grade of "C" or higher
Prerequisites CSC 3320 with grade of C or higher
Prerequisites CSC 3320 with a grade of C or higher
Prerequisites CSC 3320 with a grade of C or higher
[hgunerli1@gsuad.gsu.edu@snowball Lab4]$ |
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