Pattern Matching using egrep

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Create a file student.dat with following data

name surname marks grade

rameshchandra mane 79 A+

suresh bahrti 88 A++

rajat bhosle 25 C

suraj pancholi 65 A

manoj sharma 55 B

rahul varma 87 A++

manoj pandey 56 B

suraj rajguru 45 B

1. Display all names starting with s

egrep '^s' student.dat

2. Display whose name ending with e or i

egrep '^s' student.dat

3. Display who got 65 marks

egrep '\b65\b' student.dat

suraj pancholi 65 A

4. Display data of records whose surname is Sharma is varma

egrep 'sharma|verma' student.dat

manoj sharma 55 B

5. Display who got grade A only

egrep 'A ' student.dat

suraj pancholi 65 A

6. Display whose 3rd charcter of name is r

egrep '^..r' student.dat

suresh bahrti 88 A++

suraj pancholi 65 A

suraj rajguru 45 B

7. Display whose second character is a or r or t

egrep '^.[art]' student.dat

name surname marks grade

rameshchandra mane 79 A+

rajat bhosle 25 C

manoj sharma 55 B

rahul varma 87 A++

manoj pandey 56 B

8. Display names whose length is exactly 5 character

egrep '^.{5} ' student.dat

rajat bhosle 25 C

suraj pancholi 65 A

manoj sharma 55 B

rahul varma 87 A++

manoj pandey 56 B

suraj rajguru 45 B

9. Display names whose length is more than 6 character

egrep '^.{5} ' student.dat

rajat bhosle 25 C

suraj pancholi 65 A

manoj sharma 55 B

rahul varma 87 A++

manoj pandey 56 B

suraj rajguru 45 B

10. Display name whose marks are ending with 6

egrep '^[^ ]+ [^ ]+ [0-9]\*6 ' student.dat

manoj pandey 56 B

11. Display grade with A+ only

'A\+ ' student.dat

rameshchandra mane 79 A+

Noninteractive Editing using sed

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1. Copy the file /etc/syslog.conf to the current directory as syslog.conf. Insert blank line after every line in the file syslog.conf.

sed -i 'G' syslog.conf

2. Remove the blank lines from the file syslog.conf

sudo sed -i.bak /^$/d syslog.conf

3. Print the first 3 lines of the file syslog.conf

sudo sed 5q syslog.conf

4. Print lines from 3rd to 5th from the file /etc/syslog.conf

sudo sed -n '3,5p' syslog.conf

5. Insert some spaces in the beginning(leading spaces) & end of each line(trailing spaces) manually using vi editor

6. Through sed command remove the leading spaces & trailing spaces in the above file

7. Substitute kern with kernel in the file syslog.conf & then substitute back to kern.

sed -i 's/kernel/kern/g' syslog.conf

8. Search for the lines containing the word kern & write those lines into a file kern.conf

sed -n /kern/p /home/syslog.conf > /home/kern.conf

9. Print all the lines of the file syslog.conf except the 3rd line.

sed '3d' syslog.conf

10. Delete each line that contains the pattern kern

sed '/kern/d' syslog.conf

Create a file “Employee.dat” with text as follows

James 76382 ECAP Chennai

John 34228 GRIT Hyderabad

Peter 22321 GE Bangalore

Albert 32342 GRIT Pune

Mathew 23222 ECAP Mumbai

Richard 23232 ACS Pune

1. Write a sed command to print only the lines starting at line 2 and ending with the letters “Pune”

sed -n '2,$ {/Pune$/p}' employee.dat

Albert 32342 GRIT Pune

Richard 23232 ACS Pune

2. Write a sed command that will display the top 5 lines from the file

sed '5q' employee.dat

James 76382 ECAP Chennai

John 34228 GRIT Hyderabad

Peter 22321 GE Bangalore

Albert 32342 GRIT Pune

Mathew 23222 ECAP Mumbai

3. Write a sed command that will substitute the word “Chennai” for "Pune" used in all instance of the word

sed 's/Pune/Chennai/g' employee.dat

James 76382 ECAP Chennai

John 34228 GRIT Hyderabad

Peter 22321 GE Bangalore

Albert 32342 GRIT Chennai

Mathew 23222 ECAP Mumbai

Richard 23232 ACS Chennai

4. Write a sed command that will replace occurrence of the character e with the string UNIX in all lines. (Use –e option)

5. Write a sed command to delete blank lines

sed '/^$/d' employee.dat

6. Write a sed command to delete lines from 3 to 5

ed -i.bak '3,5d' employee.dat

7. Create a new file “ECAP.dat which has only the lines that contain the word

“ECAP” from Employee.dat

ed -i.bak '3,5d' employee.dat

Report Generation using awk

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1. Consider the results are stored in following format:

EmpID Name Subject Marks(/50)

E001 Nilesh Unix 30

E002 Nilesh DSA 20

Like these you have 10 records ( 5 of DSA and 5 of Unix)

Calculate the avg score secured in Unix and DSA and the first 2 topers in Unix and DSA each.

2. Write a script to get the report of the users logged on to the System in

the following formats. (Records should be sorted on logging time.)

Header must include company name and Date

Records in the format

Username Logged-in-time Terminal

Tailor should include total number of the users logged in.

3. Consider a text file containing the records (colon separated fields) in the format:

EmpName:EmpId:Subject:ObtMarks:TotMarks:Result

Write a script to get the result of “UNIX” Subject in the format (Considering the data file has TotMarks=50 for UNIX)

EmpName:ObtMark:MarksOutof35

The header of the report must contain total marks and the tailor must

specify the percentage result for that subject.

Also generate another summary result containing total number of

participants appeared, total number of participants passed, and Name of

the participants ranked Ist IInd, IIIrd with their total score.

4. Consider the Arizona roaster as an input data file for this exercise. Using

any combination of the text-processing utilities listed below, write a oneline shell command that performs each of the following tasks

(a) reports the number of players on the roster

(b) displays the roster in order by jersey number

(c) displays the roster in alphabetical order by surname

(d) displays the heaviest five players

(e) displays all players who attended Wisconsin

The Roaster is given below:-

JersyNo|Name,surname |linebackers|Weight | Date | Experience| Country

20 | Anderson, Damien |RB 5'10" | 212 | 07/17/1979 | 3 |Northwestern

30 | Ayanbadejo, Oba |FB 6'02" | 235 | 03/05/1975 | 5 |San Diego

92 | Berry,Bert |DE6'03" | 250| 08/15/1975 | 7 |NotreDame

81 | Boldin,Anquan |WR6'01" |215 | 10/03/1980 |2 | FloridaState

91 | Bryant,Wendell |DT6'04" |303| 09/12/1980 | 3 | Wisconsin

35 | Carter,Dyshod |DB5'10" |197 | 06/18/1978 |2 | Kansas State

52 | Fisher,Levar |OLB6'01" |235 | 07/02/1979 |3| NorthCarolina

11 | Fitzgerald,Larry |WR6'04" |229| 08/31/1983 |10 |Pittsburgh

63 |Garcia,Frank |G6'02" | 302| 01/28/1972|10|Washington

64 |Grace,Steven |C6'03" |295| 02/13/1979 | 3|Arizona

84 |Hamilton,Lawrence |WR6'03" |205 |08/31/1980 |2|StephenF.Austin

5. Create an awk program which will displays the total number of users in the system.

6. Create an awk program which counts and at the end displays the following data:

No. of Bash Shell users:

No. of Bourne Shell Users:

7. Create an awk program which displays only user name and the corresponding user id as in the following Report Format :

User Name User ID

root 0

daemon 1

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Total Number of users :

8. Create an awk program which prints the alternate lines like 2nd , 4th , 6th etc... from the file /etc/group.

9. Create an awk program which will display the file name and the size of the files in the current directory where the file size is more than 100 bytes

10. Using awk, print the user id, login shell & home directory of the user root.

11. Using awk print the user id, name & login shell of the system users [ System users are those whose uid is less than 500 ]

12. Using awk print the file name, owner and size of all the files in the /etc directory