1. Change the name Jon to Jonathan.

I used -E option to use the ERE extended regular expression and then I used s for the substation and then slash and then the name that we want to change then slash and the name we want to change too and then slash and g stand for globule mean changing every single word in the file that have the name ‘Jan’.

sed -E 's/Jon/Jonathan/g' /home/ahmed/datebook2

1. Delete the first four lines.

Here I used -E option and I set the range of line that I want to delete ‘1,3’ and then I added the option d at the end inside the single quotation marks to delete the lines.

Sed -E ‘1,4d’ /home/ahmed/datebook2

1. Print lines 7 through 11.

Here I used -E option and I set the range of line that I want to print ‘1,3’ and then I added the option p at the end inside the single quotation marks to print the lines and the n option the display only the range of lines.

Sed -E -n ‘7,11p’ /home/ahmed/datebook2

1. Delete lines containing Lane.

I used -E option to use the ERE, then I put the word that we looking for between two slash inside single quotation marks with the option d at the end to delete every single line that containing Lane

Sed - E ‘/Lane/d’ /home/ahmed/datebook2

1. Print all lines where the birthdays are in October or December.

Here I used the -E for using the ERE then -n option to display the result, and then I used the special character to set a number sets 2[10] for months that mean looking only for month 10 and 12, and then slash to separate the months from the days but we need to escape the slash with a backslash because slash is an option in sed, and then I set a range of numbers for days [0-9] and slash with backslash, slash for closing the agreement, p option to print.

Sed -E -n ‘/2[10]\/[0-9]\//p’ /home/ahmed/datebook2

1. Append three asterisks to the end of lines starting with Fred.

I used the -E option for ERE, then I put the name that we are looking for between two slash with special character ^ at the beginning to look only for the line that start with ‘Fred’ with the option ‘a’ and backslash to append three asterisks.

sed -E '/^Fred/a\asterisks asterisks asterisks' /home/ahmed/datebook2

1. Replace the line containing Jose with JOSE HAS RETIRED.

Here too I used the -E option and then I open my single quotation and I put s option for the substation, and I put the word that I want to change inside to slash with the special character .\* at the beginning and the end to substitute zero or more character after and before the word ‘Jose’, and then I put the phrase that I want to substitute with global option ‘g’.

sed -E 's/.\*Jose.\*/JOSE HAS RETIRED/g' /home/ahmed/datebook2

1. Change Popeye 's birthday to 11/14/99. Assume you don't know Popeye's original birthday. Use a regular expression to search for it.

Here I used the -E option, and to find the name I am looking for I used to two slash /Popeye/.

Next part of the command I used the ‘s’ option the substitute the birthday with 11/14/99

; character to escape the slash between the month, date, and year

[0-9][-0-9]\* here we match number in the range of 0-99 for more than one occurrence

So I set the date [0-9][0-9]\*/[0-9][0-9]\*/[0-9][0-9]\* and then ; and the date that I want to change too, at the end I put the g option to change for every single line.

sed -E '/Popeye/s;[0-9][0-9]\*/[0-9][0-9]\*/[0-9][0-9]\*;11/14/99;g' /home/ahmed/datebook2

we can also use the range of number [0-99]:

sed -E '/Popeye/s;[0-99]\*/[0-99]\*/[0-99]\*;11/14/99;g' /home/ahmed/datebook2

or we can also use the ? to match the number for one or more occurrence.

sed -E '/Popeye/s;[0-9][0-9]?/[0-9][0-9]?/[0-9][0-9]?;11/14/99;g' /home/ahmed/datebook2

1. Delete all blank lines.

Here I used again the -E option, then I used the special character ^$ to delete every line that from the beginning tell the end of line is empty.

Sed -E ‘/^$/d’ /home/ahmed/datebook2

10. Write a sed script that will

#!/bin/bash

# Insert above the first line the title PERSONNEL FILE

# i option for inserting and 1 the number of line, and the slash and the word that we want to insert (PERSONNEL FILE).

1i\PERSONNEL FILE

# Remove the salaries ending in 600

#for removing we used the d option and I put the number we want to remove between two slash with .$ singe to look for one occurrence at the end.

/600.$/d

Or

[0-9](.\*) range of numbers for one or more number

/[0-9](.\*)600.$/d

#Print the contents of the file with the last names and first names reversed

#i used the option s for substation and ^ to look in the beginning of the line and [A-Za-z] looking for a rang of letters from A-Za-z upper and lower letter, and the character \* to look for one or more occurrences.

#space between the first name and the last name I put ( ) with a space inside the parentheses.

#([A-Za-z]\*) here I m looking for the last name in the characters range A-Za-z upper and lower letters \* for one or more occurrence.

#\3\2\1 here I used the backreference to recall the first name, space, and the last name then I reverse the first name with the last name.

#g option for global make the change for every single line.

s/(^[A-Za-z]\*)( )([A-Za-z]\*)/\3\2\1/g

# Append at the end of the file THE END

# I used the a option to append the word (THE END) at the end of the file.

$ go to the end of file

a append option

$a\THE END

after that we run the command:

sed -E -f script.bash /home/ahmed/datebook2