1. Print all lines containing the string San.

I used -E option to use the ERE extended regular expression to look for the string ‘Jan’ in the datebook file.

grep -E ‘San’ /home/ahmed/datebook

1. Print all lines where the person's first name starts with J.

Here to I used -E option and the special character ^ to look for the line that start with ‘J’ because every line starts with the first name.

grep -E ‘^J’ /home/ahmed/datebook

1. Print all lines ending in 700.

Here to I used -E option and the special character $ to look for the line that end with 700.

grep '700$' /home/ahmed/datebook

1. Print all lines that don't contain 834.

Here to I used -E option and the option -v to take off all the file that continue 834.

grep -E -v ‘834' /home/ahmed/datebook

1. Print all lines where birthdays are in January.

Here to I used -E option and the pattern [0-9] + to much one or more digits.

grep -E '[0-9] +/1/[0-9]+' /home/ahmed/datebook

or

we can use the pattern [0-9]\* to much zero or more digits.

grep -E '[0-9] \*/1/[0-9]\*' /home/ahmed/datebook

1. Print all lines where the phone number is in the 408-area code.

Here again I used the -E option and then I start with the phone are that I am looking for then I used the pattern [0-9] to print any number in the range and then I used {3} to use it for three set of number before ‘-‘ and then I did the same thing by using [0-9]{4} for the next part of the phone number that have four set of numbers.

Grep -E '408-[0-9]{3}-[0-9]{4}' /home/ahmed/datebook

Or we can get the same result by using pattern {3,} and {4,} instead of {3}, and {4}

This time we are using the range number for 3 or more set of numbers and for 4 or more set of numbers.

Grep -E '408-[0-9]{3,}-[0-9]{4,}' /home/ahmed/datebook

1. Print all lines containing an uppercase letter, followed by four lowercase letters, a comma, a space, and one uppercase letter.

Here I used -E option and then look in the line for any uppercase letter in range [A-Z], and then looking for any lowercase letters in the range [a-z] for a {4} set of characters and then a comma and space, and uppercase letter in range [A-Z].

Grep -E '[A-Z][a-z]{4}, [A-Z]' /home/ahmed/datebook

1. Print lines where the last name begins with k or , s or S .

Here I used the -E option, and \w to match the whole word and + sing to match one or more character and then \W to match no word I used for the space between the first and last name and + to much one or more no character, then a list of letter that next word will start with.

grep -E '^\w+\W+(S|K|k)' /home/ahmed/datebook

1. Print lines preceded by a line number where the salary is a six-figure number.

I used -E option and looking at the end of line with the $ singe for a set of {6} number in the range [0-9].

grep -E '[0-9]{6}$' /home/ahmed/datebook

1. Print lines containing Lincoln or lincoln (remember that grep is insensitive to case).

Here again I used the -E option and I am looking for a list of characters upper case letter L and lower case letter l [Ll] and with adding the end of the word ‘incoln’ to the list, we are looking for any word that start L or l and end ‘incoln’.

Grep -E '[Ll]incoln' /home/ahmed/datebook