WORKSHEET:1

1. Write a lex program to recognize:
    a) all positive integers starting with a positive sign or without a positive sign (+).
    b) all negative integers.
    c) all fractions (both positive and negative). For other numbers, a proper message that they are invalid should be displayed and control should be returned back to the terminal.
    d) all floating point numbers (both positive and negative) in scientific notation. (Example:-9.8E+10, 8.7E-10.).
    e) the string "Compiler Design" and a message "Compiler Design is fun!!" should be displayed whenever an enter key is pressed.
    f) all C identifiers. Print the valid identifiers using yytext.
    g) all vowels. Count the number of occurrences of the vowels.
    h) all strings with all the vowels in order. Accept only lower case alphabets.
    i) a valid arithmetic expression and to recognize the identifiers and operators present. Print them separately.
    j) to print the hexadecimal value of an input integer.
2. Write a lex program that will convert the string to UPPERCASE letters. Accept only lower case alphabets.
3. Write a lex program to implement a calculator for all the four basic operations i.e addition, subtraction, multiplication and division of integer numbers.
4. Write a lex program that accept binary numbers for the following languages:
    a) The set of all strings containing exactly two 1's.
    b) The set of all strings containing at least two 1's.
    c) The set of all strings containing at most two 1's.
    d) The set of all strings containing substring 11.