Assignment 2 - 13 March 2023

1	**Write the Lex program for the following :**

Ahil gives Ram an array A of length N. Then he asks him to verify whether the given string of digits is a binary number, octal number, decimal number, hexadecimal number or not a valid number.   (5M)

Test cases:

Sample Input	**Sample Input**
4 01000001 90878 010007 abcz	3 klfw 0109 Abcd
Sample output	**Sample output**
binary hexa octal invalid	invalid decimal hexa

2	Alice reads a string of digits of arbitrary length from a file and verify whether the given string is Negative number, Positive number, Integer, Integer with Exponent form, Real, Real with Exponent form. (5M)

Example : 3.14E2, 3.12e+2, 3.12e14, 3.13E23, 23, 23, +23, 12e3, 12e3, 12e+3, 12e23, 2.3, 2.3

Test cases:

Sample Input	**Sample Input**	**Sample Input**	**Sample Input** 0.2.3
41	0.10	12.2e-3	**Sample output**
Sample output	**Sample output**	**Sample output**	neither integer nor real
positive integer	positive real	positive real in negative exponential form	