Q1: Write a program le1q1.c that:

1. Prompts the user to enter an integer 0<N<10
2. Prints 2N+1 lines, where the middle line displays the integers 0 to N, and the line above and the line below displays the integers 0 to N-1 and so on.
   The first line and the last line displays 0 only.

Note: Provided samples are when the user enters N=4, N = 5 and N=6 respectively.

```
0
01
012
0123
01234
0123
012
01
0
```

```
0
01
012
0123
01234
012345
01234
0123
012
01
0
```

```
0
01
012
0123
01234
012345
0123456
012345
01234
0123
012
01
0
```

Q2: Write a program le1q2.c that:

1. Prompts the user to enter a sentence
2. Copies all characters in the read string to a new string, replacing:
   - the tab character with the visible escape sequence \t
   - the single quotation character ' with the visible escape sequence \'
   - the double quotation character " with the visible escape sequence \"
3. Prints the new string to the output
4. Asks the user if he/she wants to enter another sentence. If the user enters 'y' the program repeats until the user enters 'n'.

Note1: remember that you are replacing a character with two characters
Note2: Assume 1000 letters is the maximum length of the sentence and the result.

Sample run:

```
Please enter a sentence:
This is a test to see "the result of replacing" some characters
with "visible escape     sequence" and keeping others intact

This is a test\tto see \"the result of replacing\" some characters
with \"visible escape\tsequence\" and keeping others intact

Do you want to analyse another sentence (y/n):y

Please enter a sentence:
An other 'example to demonstrate' how   to replace tabs, single
quotations and 'double quotations' with visible escape sequences

An other \'example to demonstrate\' how\tto replace tabs, single
quotations and \'double quotations\' with visible escape sequences

Do you want to analyse another sentence (y/n):n
Good bye
```