F28HS2 Hardware Software Interface
Laboratory 2

A) write a function:

```
int getLine(FILE * fin,char a[],int n)
```

which reads a line of characters ending with '\n' from file pointer `fin` into array `a` of length `n`. If there are more than `n` characters on the line, the function prints a warning message and skips characters to the '\n'. The function returns the length of the line for success and `EOF` at end of file.

Use the function to write a program to display a specified file on numbered lines:

```
$ show story.txt
1 Once upon a time, there were three little
2 computers called linux00, linux01 and linux02.
3 One day, the nice computer manager came into
4 the Linux Laboratory. "Hello nice computer
5 manager," said linux00. "Hello linux00," said
6 the nice computer manager. "What brings you
7 here to see us?" said linux01. "Well," said the
8 nice computer manager, "I've got bad news and
9 I've got good news." "What's the bad news?" said
10 linux02. "You're all going to be unplugged," said
11 the nice computer manager. "What's the
12 gooooooooooooo..." said linux00.
```

B) write a function:

```
int contains(char target[],int m,char source[],int n)
```

which returns `1` if array `source` of length `n` contains array `target` of length `m`, and `0` if not.

Use the function, and `getLine` above, to write a program to display all the lines in a specified file that contain a specified character sequence:

```
$ find $ find linux story.txt
2 computers called linux00, linux01 and linux02.
5 manager," said linux00. "Hello linux00," said
7 here to see us?" said linux01. "Well," said the
10 linux02. "You're all going to be unplugged," said
12 gooooooooooooo..." said linux00.
```