



You are working on problem set: [Project 4](#) ( [Pause](#) )



## ? flipLines

Language/Type: C++ [basics](#) [streams](#) [file input](#)

Related Links: [string](#) [istream](#)

Write a function named **flipLines** that accepts as its parameter a string representing a file name, opens that file and reads its contents as a sequence of lines, and writes to the console the same file's contents with successive pairs of lines reversed in order, with alternating capitalization. For example, if the input file named `carroll.txt` contains the following text:

```
TWAS brillig and the Slithy Toves
did GYRE and gimble in the Wabe.
All mimsey were the Borogroves,
and the mome RATHS outgrabe.
```

```
"Beware the Jabberwock, my Son,
the JAWS that bite, the claws that Catch,
Beware the JubJub bird and SHUN
The Frumious Bandersnatch."
```

Then the call of `flipLines("carroll.txt");` should print the first pair of lines in reverse order, then the second pair in reverse order, then the third pair in reverse order, and so on. It should produce the following console output:

```
DID GYRE AND GIMBLE IN THE WABE.
twas brillig and the slithy toves
AND THE MOME RATHS OUTGRABE.
all mimsey were the borogroves,
"BEWARE THE JABBERWOCK, MY SON,
```

```
BEWARE THE JUBJUB BIRD AND SHUN
the jaws that bite, the claws that catch,
THE FRUMIOUS BANDERSNATCH."
```

Notice the alternation between all-uppercase and all-lowercase. Also note that a line can be blank, as in the third pair. An input file can have an odd number of lines, as in the one above, in which case the last line is printed in its original position. You should not make any assumptions about how many lines are in the file.

If the input file does not exist or is not readable, your function should instead print a message in exactly the following format:

```
Unable to open input file "carroll.txt"!
```

*Constraints:* Your solution should read the file only once, not make multiple passes over the file data.

```

1 void flipLines ( string filename ) {
2
3     ifstream istrm( filename );
4     string line;
5
6     if ( !istrm.is_open() ) {
7         cout << "Unable to open input file " << "'" << filename << "\"!" << endl;
8     } else {
9         bool cap = true;
10        string prevline = " ";
11        for (int i = 1; getline( istrm, line); i++ ) {
12            if(prevline == " "){
13                prevline = line;
14                cap = true;
15            }else{
16                if(cap == true){
17                    transform(line.begin(), line.end(), line.begin(), ::toupper);
18                    cout << line << endl;
19                    cap = false;
20                }
21                transform(prevline.begin(), prevline.end(), prevline.begin(), ::tolower);
22                cout << prevline << endl;
23                prevline = " ";
24            }
25        }
26        if(prevline != " "){
27            if(cap == true){
28                transform(prevline.begin(), prevline.end(), prevline.begin(), ::toupper);
29                cout << prevline << endl;
30                cap = false;
31            }else{
32                cout << prevline << endl;
33            }
34        }
35    }
36    istrm.close();
37 }

```

Function: Write a C++ function as described, not a complete program.



Submit



✓ You passed 3 of 3 tests.



**test #1:** `flipLines("flipLines-test1-data.txt");`

**file input:** flipLines-test1-data.txt:  
TWAS brillig and the Slithy Toves  
did GYRE and gimble in the Wabe.  
All mimsey were the Borogroves,  
and the mome RATHS outgrabe.

"Beware the Jabberwock, my Son,  
the JAWS that bite, the claws that Catch,  
Beware the JubJub bird and SHUN  
The Frumious Bandersnatch."

**console output:** DID GYRE AND GIMBLE IN THE WABE.  
twas brillig and the slithy toves  
AND THE MOME RATHS OUTGRABE.  
all mimsey were the borogroves,  
"BEWARE THE JABBERWOCK, MY SON,  
  
BEWARE THE JUBJUB BIRD AND SHUN  
the jaws that bite, the claws that catch,  
THE FRUMIOUS BANDERSNATCH."

**result:**  pass

**test #2:** `flipLines("flipLines-test2-data.txt");`

**file input:** flipLines-test2-data.txt:  
line 1  
line #2  
the third line  
line number 4  
the fifth line  
el line numero six

**console output:** LINE #2  
line 1  
LINE NUMBER 4  
the third line  
EL LINE NUMERO SIX  
the fifth line

**result:**  pass

**test #3:** `flipLines("bogus.txt");`

**console output:** Unable to open input file "bogus.txt"!

**result:**  pass

### Need help?



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