

listIsPalindromic

Your task is to write a function, `listIsPalindromic`, that determines whether the sequence of values in a given **doubly** linked list is palindromic. A sequence of values is palindromic if it reads the same backwards as forwards. For example, the sequence [1, 2, 3, 2, 1] is palindromic, whereas the sequence [1, 2, 3, 4] is not. The function should return true if the sequence of values in the linked list is palindromic, and false otherwise. Your function should **not** modify the list.

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The Files

list.c	Contains the implementation of basic list functions
list.h	Contains the definition of the list data structure and function prototypes
testListIsPalindromic.c	Contains the main function, which reads in a list from standard input, calls <code>listIsPalindromic</code> , and prints out the result.
listIsPalindromic.c	Contains <code>listIsPalindromic</code> , the function you must implement
Makefile	A makefile to compile your code
tests/	A directory containing the inputs and expected outputs for some basic tests
autotest	A script that uses the tests in the tests directory to autotest your solution. You should only run this after you have tested your solution manually.

Examples

Your program should behave like these examples:

<pre>\$./testListIsPalindromic Enter list: 1 2 3 2 1 listIsPalindromic returned TRUE</pre>
<pre>\$./testListIsPalindromic Enter list: 1 2 3 4 listIsPalindromic returned FALSE</pre>
<pre>\$./testListIsPalindromic Enter list: 9 4 7 1 1 7 4 9 listIsPalindromic returned TRUE</pre>
<pre>\$./testListIsPalindromic Enter list: 1 8 2 7 7 2 9 1 listIsPalindromic returned FALSE</pre>
<pre>\$./testListIsPalindromic Enter list: listIsPalindromic returned TRUE</pre>

Testing

You can test your program manually by compiling your code using `make`, and then running `./testListIsPalindromic`, as shown above. After you are satisfied with your solution, you can autotest it by running `./autotest`. This will run some basic tests on your program.