Source File: ~/1337/51/lab51.(C|CPP|cpp|c++|cc|cxx|cp)
Input: Under control of `main` function
Output: Under control of `main` function
Value: 1

Write a function whose prototype is given by

```
string removePunctuation(string s);
```

The function removes all punctuation characters from `s`. The transformed string is returned to the calling function.

A sample `main` function for testing your function is shown in Figure 1. Commands to compile, link, and run this assignment are shown in Figure 2. To use the `Makefile` as distributed in class, add a target of `lab51` to `targets2srcfiles`.

```
1   #include <iostream>
2   #include <cstdlib>
3   #include <string>
4
5   using namespace std;
6
7   // Function removePunctuation removes all punctuation characters from
8   // string s. The transformed string is returned to the calling function.
9   string removePunctuation(string s);
10
11  int main()
12  {
13    string str, newString;
14
15    while (getline(cin, str))
16    {
17      cout << "Before:  " << str << endl;
18      newString = removePunctuation(str);
19      cout << " After:  " << newString << endl;
20    }
21
22    return EXIT_SUCCESS;
23  }
```

Figure 1. /usr/local/1337/src/lab51main.C

```
1   newuser@csunix ~> cd 1337
2   newuser@csunix ~/1337> mkdir 51
3   newuser@csunix ~/1337> cd 51
4   newuser@csunix ~/1337/51> cp /usr/local/1337/data/51/* .
5   newuser@csunix ~/1337/51> cp /usr/local/1337/src/lab51main.C .
6   newuser@csunix ~/1337/51> cp /usr/local/1337/src/Makefile .
7   newuser@csunix ~/1337/51> touch lab51.cpp
```

Figure 2. Commands to Compile, Link, & Run Lab 51 (Part 1 of 2)

```
 8   newuser@csunix ~/1337/51> # Edit Makefile and lab51.cpp
 9   newuser@csunix ~/1337/51> make lab51
10   g++ -g -Wall -std=c++11 -c lab51main.C -I/usr/local/1337/include -I.
11   g++ -g -Wall -std=c++11 -c lab51.cpp -I/usr/local/1337/include -I.
12   g++ -o lab51 lab51main.o lab51.o -L/usr/local/1337/lib -lm -lbits
13   newuser@csunix ~/1337/51> cat 01.dat
14   supercalifragilisticexpialidocious
15   A nonsense-word used esp. by children, now chiefly expressing excited
16   approbation: fantastic, fabulous.
17     Made popular by the Walt Disney film "Mary Poppins" in 1964. The
18   song containing the word was the subject of a copyright infringement
19   suit brought in 1965 against the makers of the film by Life Music
20   Co. and two song-writers: cf. quots. 1949, 1951. In view of earlier
21   oral uses of the word sworn to in affidavits and dissimilarity between
22   the songs the judge ruled against the plaintiffs.
23
24   Taken from the OED.
25    !"#$%&'()*+,-./:;<=>?@[\]^_'{|}~
26   newuser@csunix ~/1337/51> cat 01.dat | ./lab51
27   Before:  supercalifragilisticexpialidocious
28    After:  supercalifragilisticexpialidocious
29   Before:  A nonsense-word used esp. by children, now chiefly expressing excited
30    After:  A nonsenseword used esp by children now chiefly expressing excited
31   Before:  approbation: fantastic, fabulous.
32    After:  approbation fantastic fabulous
33   Before:    Made popular by the Walt Disney film "Mary Poppins" in 1964. The
34    After:    Made popular by the Walt Disney film Mary Poppins in 1964 The
35   Before:  song containing the word was the subject of a copyright infringement
36    After:  song containing the word was the subject of a copyright infringement
37   Before:  suit brought in 1965 against the makers of the film by Life Music
38    After:  suit brought in 1965 against the makers of the film by Life Music
39   Before:  Co. and two song-writers: cf. quots. 1949, 1951. In view of earlier
40    After:  Co and two songwriters cf quots 1949 1951 In view of earlier
41   Before:  oral uses of the word sworn to in affidavits and dissimilarity between
42    After:  oral uses of the word sworn to in affidavits and dissimilarity between
43   Before:  the songs the judge ruled against the plaintiffs.
44    After:  the songs the judge ruled against the plaintiffs
45   Before:
46    After:
47   Before:  Taken from the OED.
48    After:  Taken from the OED
49   Before:   !"#$%&'()*+,-./:;<=>?@[\]^_'{|}~
50    After:
51   newuser@csunix ~/1337/51> cat 01.dat | ./lab51 > my.out
52   newuser@csunix ~/1337/51> diff 01.out my.out
53   newuser@csunix ~/1337/51> cat 02.dat | ./lab51 > my.out
54   newuser@csunix ~/1337/51> diff 02.out my.out
55   newuser@csunix ~/1337/51>
```

Figure 2. Commands to Compile, Link, & Run Lab 51 (Part 2 of 2)