

```

1  #include <stdio.h>
2  #include <string.h>
3  #include <ctype.h>
4  #include <math.h>
5
6  void myStrCpy1(const char *inStr, char * outStr) {
7
8      for(int i = 0;;i++) {
9          outStr[i] = inStr[i];
10
11          if(inStr[i] == '\0') {
12              return;
13          }
14      }
15  }
16
17  void myStrCpy2(const char *inStr, char * outStr) {
18
19      memcpy(outStr, inStr, strlen(inStr) + 1);
20  }
21
22  void myStrCpyOpos(const char *inStr, char * outStr) {
23
24      for(int i = 0;;i++) {
25          if(inStr[i] == '\0') {
26              outStr[i] = inStr[i];
27              return;
28          }
29
30          outStr[strlen(inStr) - i - 1] = inStr[i];
31      }
32  }
33
34  void own_itoa(long long int value_to_be_converted, char * output_string) {
35      sprintf(output_string, "%lli", value_to_be_converted);
36  }
37
38  void own_itoa2(long long int value_to_be_converted, char * output_string) {
39
40      long long int value = value_to_be_converted;
41      int val_size = log10(value);
42      int ret = 0;
43
44
45      char buffer[val_size];
46      buffer[0] = '\0';
47      char buffer2[val_size];
48      buffer2[0] = '\0';
49
50      while(1) {
51          ret = value % 10;
52          value = value / 10;
53
54          buffer[0] = ret + '0';
55          buffer[1] = '\0';
56
57          strcat(buffer, buffer2);
58          strcpy(buffer2, buffer);
59
60          if(value == 0) {
61              strcat(output_string, buffer2);
62              return;
63          }
64      }
65  }
66
67  int main(int argc, const char * argv[]) {
68
69      const char * inString = "This is input string";
70      const char * inString2 = "0123456789";
71      char outString[strlen(inString)];
72      char outString2[strlen(inString)];
73      char outString3[strlen(inString)];

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74     outString[0] = '\0';
75     outString2[0] = '\0';
76     outString3[0] = '\0';
77
78     printf("1)input string: %s\n", inString);
79     printf("2)output buffer: %s\n", outString);
80
81     myStrCpy1(inString, outString);
82
83     printf("3)output string: %s\n", outString);
84
85     myStrCpy2(inString, outString2);
86     printf("4)output string: %s\n", outString2);
87
88     myStrCpyOpos(inString2, outString3);
89     printf("5)output string reordered: %s\n", outString3);
90
91     if(argc <= 1) {
92         return 0;
93     }
94     char outString4[strlen(argv[1])];
95     myStrCpyOpos(argv[1], outString4);
96     printf("6)output string reordered: %s\n", outString4);
97
98     long long int value = 1324657980;
99     int val_size = log10(value);
100
101     char outString5[val_size];
102     outString5[0] = '\0';
103     printf("7)input number is: %lli\n", value);
104     own_itoa(value, outString5);
105     printf("8)output number as a string: %s\n", outString5);
106
107     char outString6[val_size];
108     outString6[0] = '\0';
109     own_itoa2(value, outString6);
110     printf("9)output number as a string: %s\n", outString6);
111
112     return 0;
113 }

```