

```

1:  /* An implementation of Deque */
2:  #include "deque.h"
3:
4:  int data[SIZE];
5:  int left = -1;
6:  int right = -1;
7:
8:  int insertLeft(int d) {
9:      if (size() == SIZE-1)
10:         return;
11:      if (left == -1) {
12:          left = right = 0;
13:          data[left] = d;
14:          return;
15:      }
16:      left = (left-1+SIZE)%SIZE;
17:      data[left] = d;
18:  }
19:
20: void insertRight(int d) {
21:     // Not implemented
22: }
23:
24: int removeLeft() {
25:     return 0; // Not implemented
26: }
27:
28: int removeRight() {
29:     int d, s;
30:
31:     s = size();
32:
33:     if (s == 0)
34:         return ERR_DATA; // Error value
35:     d = data[right];
36:     right = (right - 1 + SIZE)%SIZE;
37:     if (s == 1)
38:         init();
39:     return d;
40: }
41:
42: int hasWelcome() {
43:     return size() < SIZE;
44: }
45:
46: int isEmpty() {
47:     return size() == 0;
48: }
49:
50: void init() {
51:     left = right = -1;
52: }
53:
54: int size() {
55:     if (left == -1)
56:         return 0;
57:     return (right+SIZE-left)%SIZE+1;
58: }

```