

```

1  #include <stdio.h>
2  #include <malloc.h>
3  #include <stdlib.h>
4  #include <math.h>
5  struct Node
6  {
7      int data;
8      struct Node *next;
9  };
10
11 void Insert (struct Node *l, int x);
12 void Destory (struct Node *l);
13 void Print (struct Node *l);
14 void Split(struct Node* l);
15 struct Node * NewNode()
16 {
17     struct Node *p;
18     p = (struct Node *) malloc (sizeof (struct Node));
19     if (p == NULL) {
20         printf ("Error : out of memory\n");
21         exit (-1);
22     }
23     return p;
24 }
25
26 int main ()
27 {
28     struct Node *la = NewNode();
29
30     la->next = NULL;
31     int x;
32     printf("请输入数字，以0结束，以空格或回车间隔");
33     scanf ("%d", &x);
34     while(x!=0){
35         Insert(la,x);
36         scanf ("%d", &x);
37     }
38     //Print(la);
39     Split(la);
40     Destory(la);
41     return 0;
42 }
43 void Insert (struct Node *l, int x)
44 {
45     struct Node *q= NewNode ();
46     q->data = x;
47     struct Node *p = l;
48     while (p->next && x > p->next ->data)
49         p = p->next;
50     q->next = p ->next ;
51     p->next = q;
52 }
53 void Destory (struct Node *l)
54 {
55     while (l)

```

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56     {
57         struct Node *q = l->next;
58         free (l);
59         l = q;
60     }
61 }
62 void Print (struct Node *l)
63 {
64     l = l ->next;
65     if (l)
66     {
67         printf ("%d", l->data);
68         l = l->next;
69     }
70     while (l)
71     {
72         printf ("->%d", l->data);
73         l = l->next;
74     }
75     printf ("\n");
76 }
77 void Split(struct Node* l)
78 {
79     struct Node* p=l;
80     struct Node* ra=l;
81
82     struct Node* q = NewNode();
83     q->next=NULL;
84     struct Node* ql = q;
85     p=l->next;
86     l->next=NULL;
87     while(p){
88         if(abs(p->data) %2 == 0){
89             ql->next=p;
90             ql=ql->next;
91         }else{
92             l->next=p;
93             l=l->next;
94         }
95         p=p->next;
96     }
97     l->next=NULL;
98     ql->next=NULL;
99     Print(ra);
100    Print(q);
101 }
102

```

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PS D:\csjjg\程序设计综合实践> cd "d:\csjjg\程序设计综合实践\" ; if ($?)
) { gcc fourth.c -o fourth } ; if ($?) { .\fourth }
请输入数字，以0结束，以空格或回车间隔1 2 3 4 5 6 7 -32 -3 -1 0
-3->-1->1->3->5->7
-32->2->4->6

```