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1  #include<stdio.h>
2  #include<stdlib.h>
3
4  struct node
5  {
6      int data;
7      struct node *next;
8  }*head=NULL;
9
10 void createLL()
11 {
12
13     int n,i,item;
14     printf("//////////////////LINKED LIST//////////////////");
15     printf("\n Enter the No. of elements in List\n");
16     scanf("%d",&n);
17     struct node *q=head;
18
19     for(i=1;i<=n;i++)
20     {
21         struct node *p=(struct node *)malloc(sizeof(struct node));
22         printf("\n enter the element");
23         scanf ("%d",&item);
24         p->data=item;
25
26         if(head==NULL)
27         {
28             p->next=NULL;
29             head=p;
30             q=p;
31         }
32         else
33         {
34             q->next=p;
35             p->next=NULL;
36             q=q->next;
37         }
38     }
39 }
40
41
42 void display()
43 {
44     struct node *p=head;
45     while(p!=NULL)
46     {
47         printf("%d",p->data);
48         printf("---->");
49         p=p->next;
50     }
51 }
52
53 void ReverseInPair(struct node *h)///// just swapped the
integers////////////////
54 {
55     struct node *p=h,*q=h;
56     if(h==NULL || h->next==NULL)
57         return;
58     else
59     {
60         q=p->next;
61         p->data=p->data+q->data;
62         q->data=p->data-q->data;
63         p->data=p->data-q->data;
64         ReverseInPair(q->next);
65     }

```

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66
67 }
68
69 void ReverseLinks()
//////////IMPORTANT//////////
70 {
71     struct node *p=head,*q=p->next,*r=q->next;
72     head=head->next;
73     while(r->next)
74     {
75         p->next=r->next;
76         q->next=p;
77         p=r;
78         q=p->next;
79         r=q->next;
80         if(r==NULL)
81         {
82             q->next=p;
83             p->next=NULL;
84             return;
85         }
86     }
87
88     if(r->next==NULL)
89     {
90         p->next=r;
91         q->next=p;
92         r->next=NULL;
93     }
94
95 }
96
97 void main()
98 {
99     createLL();
100    display();
101    printf("\n\nreversing by swapping the integers\n\n");
102    // ReverseInPair(head);
103    // display();
104    printf("\n\nreversing by changing the Links\n\n");
105    ReverseLinks();
106    display();
107 }

```