

```
1: //Checking for Loop Linked List
2:
3: #include <stdio.h>
4: #include <stdlib.h>
5:
6: struct Node
7: {
8:     int data;
9:     struct Node *next;
10: }
11: *first=NULL,*second=NULL,*third=NULL;
12:
13: void Display(struct Node *p)
14: {
15:     while(p!=NULL)
16:     {
17:         printf("%d ",p->data);
18:         p=p->next;
19:     }
20: }
21:
22: void create(int A[],int n)
23: {
24:     int i;
25:     struct Node *t,*last;
26:     first=(struct Node *)malloc(sizeof(struct Node));
27:     first->data=A[0];
28:     first->next=NULL;
29:     last=first;
30:
31:     for(i=1;i<n;i++)
32:     {
33:         t=(struct Node*)malloc(sizeof(struct Node));
34:         t->data=A[i];
35:         t->next=NULL;
36:         last->next=t;
37:         last=t;
38:     }
39: }
```

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40:
41: int isLoop(struct Node *f)
42: {
43:     struct Node *p,*q;
44:     p=q=f;
45:
46:     do
47:     {
48:         p=p->next;
49:         q=q->next;
50:         q=q?q->next:q;
51:     }while(p && q && p!=q);
52:
53:     if(p==q)
54:         return 1;
55:     else
56:         return 0;
57: }
58:
59: int main()
60: {
61:     struct Node *t1,*t2;
62:
63:     int A[]={10,20,30,40,50};
64:     create(A,5);
65:
66:     t1=first->next->next;
67:     t2=first->next->next->next->next;
68:     t2->next=t1;
69:
70:     printf("%d\n",isLoop(first));
71:
72:
73:     return 0;
74: }
```