```c
#include<stdio.h>
#include<stdlib.h>

struct node
{
    int data;
    struct node *next;
};
struct node *head=NULL,*q=NULL,*r=NULL;
int count=0;
void createCircularLL()
{

    int i;
    for (i=1;i<=10;i++)
    {
        struct node *p=(struct node *)malloc(sizeof(struct node));
        p->data=i*10;
        if(head==NULL)
        {
            p->next=NULL;
            head=p;
            q=p;

        }
        else
        {
            q->next=p;
            p->next=NULL;
            q=q->next;

            if(i==4)
            {
                r=p;
            }
        }

        printf("%d",p->data);
        printf("--->");
    }
    q->next=r;
    q=NULL;r=NULL;
}


int CheckCirleExistence()
{
    q=head;r=head;
    do
    {
        if(q->next==NULL)
            printf("NO LOOP EXISTS");

        q=q->next->next;

        if(q==r)

            printf("\n\nLOOP detected  at position %d",q->data/10);
         r=r->next;



    }while(q!=r||q->next==NULL);


// calculate the origin of
```

```
loop//////////////////////////////////////////////////////////
 67  r=head;
 68      while(q!=r)
 69      {
 70          r=r->next;
 71          q=q->next;
 72      }
 73
 74      if(q==r)
 75      printf("\n\nloop exists at node %d",q->data );
 76
 77   /////// calculate length of
loop//////////////////////////////////////////////////////////
 78
 79      do
 80      {
 81          q=q->next;
 82          count++;
 83      }while(q!=r);
 84
 85  printf("\n\nlength of loop is %d",count);
 86
 87
 88
 89  }
 90
 91
 92  void main()
 93  {
 94      createCircularLL();
 95      //checkCircle();
 96      CheckCirleExistence();
 97
 98
 99  }
```