**EX:4 CIRCULAR LINKED LIST-JOSEPHUS PROBLEM**

**PROBLEM:**

#include <stdio.h>

#include <stdlib.h>

struct node

{

int data;

struct node\*next;

};

struct node\*start;

struct node\*temp,\*prev;

struct node\*newnode;

void main()

{

int limit,del,j,i;

printf("Name:R.Sridevi");

printf("\nRoll.No:20UIT021");

printf("\nProgram Name:Circular linked list-Josephus problem");

printf("\nEnter the limit:\n");

scanf("%d",&limit);

if(limit<=0)

{

printf("Limit does not exist");

}

else

{

printf("Enter the divisible number:\n");

scanf("%d",&del);

start = malloc(sizeof(struct node));

start->data=1;

temp=start;

for(i=2;i<=limit;i++)

{

newnode=malloc(sizeof (struct node));

temp->next=newnode;

newnode->data= i;

newnode->next= start;

temp=newnode;

}

for(j=0;j<=limit;j++)

{

for(i=0;i<=del-1;i++)

{

prev=temp;

temp=temp->next;

}

prev->next=temp->next;

}

printf("The last number is %d",temp->data);

}

}

**OUTPUT:**

Name:R.Sridevi

Roll.No:20UIT021

Program Name:Circular linked list-Josephus problem

Enter the limit:

50

Enter the divisible number:

5

The last number is 19