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/*****SUBHAS NATH*****/
/*****
/*****PROGRAM OF CIRCULAR LINKED LIST INSERTION*****/

#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
struct link
{
    int info;
    struct link *next;
};
typedef struct link node;
void main()
{
    node *head1,*head2;
    clrscr();
    void create(node *,node *);
    void show(node *,node *);
    node *insert_fst(node *);
    node *insert_lst(node *);
    node *del_fst(node *);
    node *del_lst(node *);
    head1=(node *)malloc(sizeof(node)); //CREATE STORAGE FOR FIRST NODE
    head2=head1;
    printf("\n\tCreate the linked list:\n");
    create(head1,head2);
    printf("\n\tDisplay the linked list:\n");
    show(head1,head2);
    printf("\n\n\tInsertion at 1st position.\n");
    head1=insert_fst(head1);
    //head2=head1;
    show(head1,head1);
    printf("\n\n\tInsertion at last position.\n");
    head1=insert_lst(head1);
    show(head1,head1);
    getch();
    printf("\n\n\tDeletion at 1st position.\n");
    head1=del_fst(head1);
    show(head1,head1);
    getch();
    printf("\n\n\tDeletion at last position.\n");
    head1=del_lst(head1);
    show(head1,head1);
    getch();
}

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/******CREATE LINKED LIST******/
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```
void create(node *temp1,node *temp2)
{
    char ans;
    printf("\nEnter the info:- ");
    scanf("%d",&temp1->info);
    temp1->next=temp2;
    printf("\nWant Another? ");
    fflush(stdin); //CLEAR THE BUFFER
    ans=getchar();
    if(ans!='y')
        return;
    else
    {
        temp1->next=(node *)malloc(sizeof(node)); //CREATE STORAGE FOR NEXT
        NODE
        create(temp1->next,temp2); //RECURSIVE CALL TO CREATE NEXT NODE
    }
}
```

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/******DISPLAY LINKED LIST******/
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```
void show(node *temp1,node *temp2)
{
    if(temp1->next==temp2)
        printf("%d",temp1->info); //DISPLAY LAST NODE
    else
    {
        printf("%d->",temp1->info); //DISPLAY CURRENT INFO
        show(temp1->next,temp2); //RECURSIVE CALL TO DISPLAY NEXT INFO
    }
}
```

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/******INSERTION AT FIRST POSITION******/
```

```
node *insert_fst(node * temp)
{
    node * list,*first;
    first=temp;
    list=(node *)malloc(sizeof(node));
    printf("\nEnter the element:- ");
    scanf("%d",&list->info);
    list->next=temp;
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while(temp->next!=first)
{
    temp=temp->next;
}
if(temp->next==first)
{
    temp->next=list;
}
temp=list;
return(temp);
}

```

/\*\*\*\*\*\*INSERTION AT LAST POSITION\*\*\*\*\*\*/

```

node *insert_lst(node *temp)
{
    node *last,*first;
    first=temp;
    while(temp->next!=first)
    {
        temp=temp->next;
    }
    if(temp->next==first)
    {
        last=(node *)malloc(sizeof(node));
        printf("\nEnter the element:- ");
        scanf("%d",&last->info);
        temp->next=last;
        last->next=first;
    }
    return(first);
}

```

/\*\*\*\*\*\*DELETION FROM FIRST POSITION\*\*\*\*\*\*/

```

node *del_fst(node * temp)
{
    node * list,*first;
    first=temp;
    temp=temp->next;
    list=temp;
    while(temp->next!=first)
    {

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        temp=temp->next;
    }
    if(temp->next==first)
    {
        temp->next=list;
    }
    free(first);
    return(list);
}

```

/\*\*\*\*\*\*DELETION FROM LAST POSITION\*\*\*\*\*\*/

```

node *del_lst(node *temp)
{
    node *last,*first;
    first=temp;
    while(temp->next->next!=first)
    {
        temp=temp->next;
    }
    if(temp->next->next==first)
    {
        last=temp->next;
        free(last);
        temp->next=first;
    }
    return(first);
}

```