4a ds

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

struct node
{
  int info;
  struct node* llink,*rlink;
};
struct node *root=NULL;
void insfront()
{
  struct node *temp;
        temp=(struct node*)malloc(sizeof(struct node));
        printf("Enter the item\n");
        scanf("%d",&temp->info);
        temp->llink=NULL;
        temp->rlink=NULL;
  if(root==NULL)
    root=temp;

  else
  {
   temp->rlink=root;
   root->llink=temp;
   root=temp;
  }
}
```

```c
void display()
{
  struct node* temp;
  if(root==NULL)
  printf("list empty\n");
  else
  {
   temp=root;
   while(temp!=NULL)
   {
     printf("%d\t",temp->info);
     temp=temp->rlink;
   }
  }
}
void delkey()
{
        struct node *cur, *prev;
        int key,flag=0;
        if(root==NULL)
        printf("empty\n");
        else
        {
                printf("enter item\n");
                scanf("%d",&key);
                cur=root;
                while(cur!=NULL)
                {
                   if(cur->info==key)
```

```c
    {
                    flag=1;
        if(cur==root)
        {
            printf("item deleted is %d\n", root->info);
                root=root->rlink;
                cur->rlink->llink=NULL;
                cur->rlink=NULL;
                free(cur);
        }
        else if(cur->rlink!=NULL)
        {
            printf("item deleted is %d\n", cur->info);
            prev->rlink= cur->rlink;
            cur->rlink->llink=prev;
            free(cur);
        }
        else
        {
            printf("item deleted is %d\n", cur->info);
            prev->rlink=cur->rlink;
            free(cur);

        }
    }
    prev=cur;
    cur=cur->rlink;
}
if(flag==0)
```

```c
                printf("Key not found\n");
            }
        }



int main()
{
 int ch;
 for(;;)
 {
        printf("\n1.insert front\n2.delete key\n3.display\n");
        printf("enter ur choice\n");
        scanf("%d",&ch);
        switch(ch)
        {
          case 1: insfront();
                    break;
          case 2: delkey();
                    break;
          case 3: display();
                    break;
    default: exit(0);

        }
 }
}
```