

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

```
#include<conio.h>
```

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

```
struct node
```

```
{
```

```
    char ssn[20],name[20],dept[20],desig[20],phno[10];
```

```
    long int sal;
```

```
    struct node *next,*prev;
```

```
};
```

```
typedef struct node *NODE;
```

```
NODE head=NULL;
```

```
NODE getnode()
```

```
{
```

```
    NODE temp;
```

```
    temp=(NODE)malloc(sizeof(struct node));
```

```
    temp->next=NULL;
```

```
    temp->prev=NULL;
```

```
    puts("\n enter SSN, NAME, DEPT., DESIGNATION, PHONE NUMBER");
```

```
    scanf("%s%s%s%s%s",temp->ssn,temp->name,temp->dept,temp->desig,temp->phno);
```

```
    puts("enter salary");
```

```
    scanf("%ld",&temp->sal);
```

```
    return temp;
```

```
}
```

```
void Insert_beg()
```

```
{
```

```
    NODE temp=getnode();
```

```
if(head!=NULL)
{
    temp->next=head;
    head->prev=temp;
}
head=temp;
}
```

```
void Insert_end()
{
    NODE temp=getnode();
    NODE tt;
    if(head==NULL)
        head=temp;
    else
    {
        for(tt=head;tt->next!=NULL;tt=tt->next)
            { }
        tt->next=temp;
        temp->prev=tt;
    }
}
```

```
void Create()
{
    int n,i;
    printf("enter the n\n");
    scanf("%d",&n);
    for(i=0;i<n;i++)
        Insert_end();
}
```

```

void Delete_beg()
{
    NODE temp=head;
    if(head==NULL)
        printf("List is empty\n");
    else
    {
        head=head->next;
        head->prev=NULL;
    }
    free(temp);
}

```

```

void Delete_end()
{
    NODE tt,temp;
    if(head==NULL)
        printf("List is empty\n");

    else if(head->next==NULL)
        head=NULL;
    else
    {
        for(tt=head;tt->next->next!=NULL;tt=tt->next)
            { }
        tt->next=NULL;
    }
    free(temp);
}

```

```

void display()
{
    NODE temp;
    int count=0;
    if(head==NULL)
    {
        printf("no node to display\n");
        return;
    }

    printf("\n SSN\t NAME\t, DEPT\t, DESIG\t, SAL\t, PH.NO\t");
    printf("\n-----\n");
    for(temp=head;temp!=NULL;temp=temp->next)
    {
        count++;
        printf("%s\t %s\t %s\t %s\t %ld\t %s\n", temp->ssn, temp->name, temp-> dept,temp->desig,
temp->sal, temp->phno);
    }
    printf("\n-----\n");
    printf("\n the total number of nodes in list is %d\n", count);
    printf("\n-----\n");
}

void main()
{
    int ch;

    while(1)
    {
        printf("\n\n\n\t 1.create DLL...\t 2.Display DLL..\t 3.Insertion at front...\t 4.Insertion at end...\t
5.deletion at front...\t 6. Deletion at end....\t presss any key to exit\n");

        printf("\n\n\n\tEnter Your Choice: ");
    }
}

```

```
scanf("%d",&ch);
switch(ch)
{
    case 1: Create();
            display();
            break;
    case 2: display();
            break;
    case 3: Insert_beg();
            display();
            break;
    case 4: Insert_end();
            display();
            break;
    case 5: Delete_beg();
            display();
            break;
    case 6:Delete_end();break;
    default: exit(0);
}
}
```