

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

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

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

```
struct node
```

```
{
```

```
    char usn[20],name[20],branch[10],phone[11];
```

```
    int sem;
```

```
    struct node *next;
```

```
};
```

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

```
NODE temp, head=NULL;
```

```
NODE getnode()
```

```
{
```

```
    NODE temp;
```

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

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

```
    printf("\n Enter USN, Name, branch, phone number and semester :");
```

```
    scanf("%s%s%s%s%d",temp->usn,temp->name, temp->branch, temp->phone, &temp->sem);
```

```
    return temp;
```

```
}
```

```
void insert_beg()
```

```
{
```

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

```
    if(head != NULL)
```

```
        temp->next=head;
```

```
    head=temp;
```

```
}
```

```
void create()
{
    int n,i=0;

    printf("Enter the number of students \n");
    scanf("%d",&n);

    for(i=1;i<=n;i++)
        insert_beg();
}
```

```
void del_beg()
{
    NODE tt=head;

    if(head==NULL)
        printf("\n No nodes to delete ");
    else
    {
        if(head->next==NULL)
            head=NULL;
        else
        {
            head=head->next;
            free(tt);
        }
    }
}
```

```
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;
}

```

```

void del_end()
{
    NODE tt,p;

    if(head==NULL)
        printf("\n No Nodes to delete \n");
    else
    {
        if(head->next==NULL)
            head=NULL;
        else
        {
            for(tt=head;tt->next->next!=NULL;tt=tt->next)
                {
                }
            p=tt->next;
            tt->next=NULL;
            free(p);
        }
    }
}

```

```

    }
}

void disp()
{
    NODE tt;
    int c=0;

    if(head==NULL)
        printf("the student detail is NULL and count is ZERO");
    else
    {
        printf("\n USN\t Name\t Branch\t Ph.No \tSem \n");
        printf("\n*****\n");

        for(tt=head;tt!=NULL;tt=tt->next)
        {
            c++;
            printf("\n %s\t%s\t%s\t%s\t%d",tt->usn,tt->name,tt->branch,tt->phone,tt->sem);
        }
        printf("\n Student count is %d\n",c);
    }
}

void main()
{
    int ch;

    while(1)
    {

```

```
printf("\n1.create 2.insert_beg 3.insert_end 4.del_beg 5.del_end 6.Display Any other key to  
exit\n");
```

```
printf("\n\nEnter Your Choice: ");
```

```
scanf("%d",&ch);
```

```
    switch(ch)
    {
    case 1:create();
        break;
    case 2:insert_beg();
        break;
    case 3: insert_end();
        break;
    case 4: del_beg();
        break;
    case 5:del_end();
        break;
    case 6:disp();
        break;
    default: exit(0);
    }
}
```