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

struct node
{
int sem;
char name[50];
char usn[50];
struct node *next;
};

struct node *head = NULL;
int c=0;
void Insertbeginning()
{
  struct node *newnode;
  int s;
  char a[50], b[50];
  printf("Enter your name: ");
  scanf("%s", a);
  printf("Enter your usn: ");
  scanf("%s", b);
  printf("Enter your sem: ");
  scanf("%d", &s);
  newnode = (struct node*) malloc(sizeof(struct node));
  newnode->sem = s;
  Strcpy(newnode->name, a);
  Strcpy(newnode->usn, b);
  newnode->next = head;
  head = newnode;
  c++;
  printf("Node created\n");
}
```

```
void Insertany(int p)
{
 struct node * newnode
 int s;
 char a[30], b[30];
 printf("Enter name & usn");
 scanf("%s", a);
 scanf("%s", b);
 print("Enter sem");
 scanf("%d", &s);
 newnode = (struct node *) malloc (sizeof (struct node
 newnode -> sem = s;
 strcpy (newnode -> name, a);
 strcpy (newnode -> usn, b);
 if (p == 1)
 {
 printf("Node of LL is inserted in first pos");
 newnode -> next = head;
 head = newnode;
 ct++;
 }
else if (head == NULL && p > 1)
{
 printf("the list is empty and node cannot be
 created");
 return;
}
else if (p > (ct+1))
{
 printf("Not possible");
 return;
}
```

{
struct node * temp1;
struct node * temp2;
int count = 1;
temp1 = head;
while (count < (p-1))
{
temp1 = temp1 -> next;
count++;
}
temp2 = temp1 -> next;
temp1 -> next = newnode;
newnode -> next = temp2;
c++;
printf ("Node inserted at %d pos is \n", p);
}
}

void InsertAtEnd()
{
struct node * newnode;
struct node * temp;
int s;
char n[30], u[30];
printf ("Enter name, usn, sem resp \n");
scanf ("%s", n);
scanf ("%s", u);
scanf ("%d", &s);
newnode = (struct node *) malloc (sizeof (struct node));
newnode -> sem = s;
strcpy (newnode -> name, n);
strcpy (newnode -> usn, u);

```
if (head == NULL)
{
newnode->next = NULL;
head = newnode;
printf("first node of LL is created \n");
ctr++;
}
else
{
temp = head;
while (temp->next != NULL)
{
temp = temp->next;
}
temp->next = newnode;
newnode->next = NULL;
ctr++;
printf("Node created \n");
}
}

void display()
{
struct node *ptr;
ptr = head;
int i=1;
if (ptr == NULL)
{
Printf("LL is Empty \n");
}
else
{
while (ptr != NULL)
{
```

```
printf("%s", ptr->name);
printf("USN:%s", ptr->usn);
printf("sem:%d", ptr->sem);
printf("\n");
i++;
ptr = ptr->next;
}
}
}

int main()
{
int choice, pos;
do
{
printf("\n1. Insert node at beg
\n2. Insert anywhere
\n3. Insert end
\n4. Display
\n5. Exit \n")
printf("Enter your choice :");
scanf("%d", &choice);
if (choice == 5)
break;
switch (choice)
{
case 1:
Insertbeginning();
break;
case 2:
Printf("Enter in which pos you wouldbeenter
the node \n");
Scanf("%d", &pos);
Insertany(pos);
break;
```

```
        case 3:
        frontend();
        break;

        case 4:
        display();
        break;

        default:
        printf("Wrong choice!\n");
        break;
    }
} while (choice != 5);
    return 0;
}
```