

//Aim 11: Write a Program in C to delete a node from any position in Doubly Linked List

Code:

```
#include<stdio.h>
typedef struct doubly_linkedlist
{
    int data;
    struct doubly_linkedlist *prev,*next;
}node;
node *temp,*ttemp,*first,*p,*q;

void createfirst()
{
    first=(node*)malloc(sizeof(node));
    printf("Enter the data of node 1: ");
    scanf("%d",&first->data);
    first->prev=first->next=NULL;
}

void addnode(int i)
{
    temp=first;
    while(temp->next!=NULL)
        temp=temp->next;
    ttemp=(node*)malloc(sizeof(node));
    printf("Enter the data of node %d: ",i);
    scanf("%d",&ttemp->data);
    temp->next=ttemp;
    ttemp->next=NULL;
    ttemp->prev=temp;
}

void display()
{
    p=first;
    printf("Values of node of linked list are: ");
    while(p!=NULL)
    {
        printf("%d\t",p->data);
        p=p->next;
    }
}

int delete_at_n(int pos)
{
    int x,i;
    temp=first;
    for(i=1;i<pos;i++)
        temp=temp->next;
```

```

q=temp->prev;
p=temp->next;
q->next=p;
p->prev=q;
temp->next=NULL;
free(temp);
if(pos==1)
first=p;
}
void main()
{
int pos1,n,i;
clrscr();
printf("Enter the total number of nodes: ");
scanf("%d",&n);
createfirst();
for(i=2;i<=n;i++)
addnode(i);
display();
printf("\nEnter the position at which node is to be deleted: ");
scanf("%d",&pos1);
delete_at_n(pos1);
display();
getch();
}

```

OUTPUT 11:

```

DOSBox 0.74, Cpu speed: max 100% cycles, Frameskip 0, Program: TC
Enter the total number of nodes: 7
Enter the data of node 1: 10
Enter the data of node 2: 20
Enter the data of node 3: 30
Enter the data of node 4: 40
Enter the data of node 5: 50
Enter the data of node 6: 60
Enter the data of node 7: 70
Values of node of linked list are: 10    20    30    40    50    60
70
Enter the position at which node is to be deleted: 1
Values of node of linked list are: 20    30    40    50    60    70

```