```c
#include<stdio.h>

#include<stdlib.h>

typedef struct node
{
  int data;
  struct node* next;
}NODE;



NODE* insert(NODE *head,int val)
{
   NODE *newnode=(NODE*)(malloc(sizeof(NODE*)));
   newnode->data=val;
   newnode->next=NULL;
   NODE *h=head;

   if(h==NULL)
   {
      head=newnode;
      return(head);
   }
   else
   {
      int opt,m;
      printf("\n1.begin\n2.middle\n3.end\n");
      scanf("%d",&opt);
      switch(opt)
      {
         case 1:newnode->next=head;
                head=newnode;
                return(head);
                break;
         case 2:printf("Enter value to insert after it");
                scanf("%d",&m);
                while(h->data!=m)
                {
                  h=h->next;
                }
                newnode->next=h->next;
                h->next=newnode;
                return(head);
                break;
        case 3:while(h->next!=NULL)
               {
                 h=h->next;
               }
               h->next=newnode;
               return(head);
               break;
       default:printf("enter correct option");



      }
   }
}


NODE* delete(NODE *head)
{
  NODE *h=head;
  if(h==NULL)
  {
```

```
    printf("underflow error");
    return(head);
  }
  else
  {
     int opt,val;
     printf("\n1.begin\n2.middle\n3.end\n");
     scanf("%d",&opt);
     NODE *temp=head;
     NODE *oldptr,*k=NULL;
     switch(opt)
     {
        case 1:head=head->next;
               free(temp);
               return(head);
               break;
        case 2:printf("enter any middle element to delete");
               scanf("%d",&val);
               while(temp->next->data!=val)
               {
                 temp=temp->next;
               }
               //k=temp->next;
               temp->next=temp->next->next;
               //free(k);
               return(head);
               break;
       case 3:
              while(temp->next!=NULL)
              {
                 oldptr=temp;
                 temp=temp->next;
              }
              oldptr->next=NULL;
              free(temp);
              return(head);
              break;
      default:printf("enter correct option");




     }
  }


}
NODE* display(NODE *h)
{
   NODE *temp=h;
   if(temp==NULL)
   {
     printf("underflow error");
     return(h);
   }
   else
   {
      while(temp!=NULL)
      {
         printf("%d->",temp->data);
         temp=temp->next;
      }
   }
   return(h);

}
```

```c
int main()
{
   NODE *head=NULL;
   int opt,val;
   while(1)
   {
      printf("\n1.insert\n2.delete\n3.display\n4.exit\n");
      scanf("%d",&opt);
      switch(opt)
      {
        case 1:printf("enter value");
               scanf("%d:",&val);
               head=insert(head,val);
               break;
        case 2:head=delete(head);
               break;
        case 3:head=display(head);
               break;
        case 4:exit(0);
               break;
        default:printf("enter correct option");


      }
   }
}
```