```c
//Lab Program 9
//insert,delete,display
#include <stdio.h>
#include <stdlib.h>

struct node{
    int data;
    struct node *next,*prev;
};

void insertend(struct node **headptr){
    struct node *newnode,*temp;
    int value;
    printf("Enter value: ");
    scanf("%d",&value);
    newnode = (struct node*)malloc(sizeof(struct node));
    newnode->data = value;
    newnode->prev = NULL;
    newnode->next = NULL;
    if((*headptr) == NULL){
        (*headptr) = newnode;
    }
    else{
        temp = (*headptr);
        while(temp->next != NULL)
            temp = temp->next;
        temp->next = newnode;
        newnode->prev = temp;
    }
}
void insertbefore(struct node **headptr){
    struct node *newnode,*temp;
    int value,ele;
    printf("Enter value: ");
    scanf("%d",&value);
    newnode = (struct node*)malloc(sizeof(struct node));
    newnode->data = value;
    newnode->next = NULL;
    newnode->prev = NULL;
    if((*headptr) == NULL)
        (*headptr) = newnode;
    else{
        printf("Enter the element before which value is to be inserted: ");
        scanf("%d",&ele);
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        if((*headptr)->data == ele){
            newnode->next = (*headptr);
            (*headptr)->prev = newnode;
            (*headptr) = newnode;
            return;
        }
        temp = (*headptr);
        while(temp->next != NULL){
            if((temp->next)->data == ele){
                newnode->next = temp->next;
                (temp->next)->prev = newnode;
                temp->next = newnode;
                newnode->prev = temp;
                return;
            }
            temp = temp->next;
        }
        printf("No such element found!\n");
    }
}
void deleteend(struct node **headptr){
    struct node *temp;
    if((*headptr) == NULL)
        printf("List is empty\n");
    else{
        temp = (*headptr);
        while((temp->next)->next != NULL)
            temp = temp->next;
        temp->next = NULL;
    }
}
void deleteval(struct node **headptr){
    struct node *temp;
    int value;
    if((*headptr) == NULL)
        printf("List is empty\n");
    else{
        printf("Enter the value to be deleted: ");
        scanf("%d",&value);
        if((*headptr)->data == value){
            (*headptr) = (*headptr)->next;
            (*headptr)->prev = NULL;
            return;
        }
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        while((temp->next)->next != NULL)
            temp = temp->next;
        if((temp->next)->data == value){
            temp->next = NULL;
            return;
        }
        temp = (*headptr);
        while(temp->next != NULL){
            if((temp->next)->data == value){
                temp->next = (temp->next)->next;
                (temp->next)->prev = temp;
                return;
            }
            temp = temp->next;
        }
        printf("No such element found!\n");
    }
}
void display(struct node *temp){
    if(temp == NULL)
        printf("List is empty\n");
    else{
        while(temp != NULL){
            printf("%d\t",temp->data);
            temp = temp->next;
        }
        printf("\n");
    }
}

int main(int charc,char **argv){
    int choice;
    struct node *head=NULL;
    while(choice != 6){
        printf("Enter choice: 1)insertend 2)insertbefore 3)deleteend 4)deleteval 5)display 6)exit : ");
        scanf("%d",&choice);
        switch(choice){
            case 1:insertend(&head);break;
            case 2:insertbefore(&head);break;
            case 3:deleteend(&head);break;
            case 4:deleteval(&head);break;
            case 5:display(head);break;
            case 6:
            default:exit(0);
```