

Lab Program 9:-

#include <stdio.h>

#include <stdlib.h>

struct node {

int data;

struct node *next, *prev;

};

void insert before (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 inserted");

scanf ("%d", &ele);

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 deleteval ( struct node **headptr) {
```

```
    struct node *temp;
```

```
    int value;
```

```
    if ((*headptr) == NULL)
```

```
        printf("List empty\n");
```

```
    else {
```

```
        printf("Enter value to be deleted : ");
```

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

```
        if ((*headptr) -> data == value) {
```

```
            (*headptr) = (*headptr) -> next;
```

```
            (*headptr) -> prev = NULL;
```

```
            return;
```

```
        }
```

```
        temp = (*headptr);
```

```
        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");
```

```
}
```