**Exp 10**

**10. Write a C program to implement Linked list operations**

#include <stdio.h>

#include <stdlib.h>

struct Node {

int data;

struct Node\* next;

};

struct Node\* head = NULL;

// Insert at end

void insert(int value) {

struct Node\* newNode = (struct Node\*)malloc(sizeof(struct Node));

newNode->data = value;

newNode->next = NULL;

if (head == NULL) {

head = newNode;

} else {

struct Node\* temp = head;

while (temp->next != NULL)

temp = temp->next;

temp->next = newNode;

}

}

// Delete by value

void delete(int value) {

struct Node \*temp = head, \*prev = NULL;

if (temp != NULL && temp->data == value) {

head = temp->next;

free(temp);

return;

}

while (temp != NULL && temp->data != value) {

prev = temp;

temp = temp->next;

}

if (temp == NULL) return;

prev->next = temp->next;

free(temp);

}

// Display list

void display() {

struct Node\* temp = head;

if (temp == NULL) {

printf("List empty\n");

return;

}

printf("List: ");

while (temp != NULL) {

printf("%d -> ", temp->data);

temp = temp->next;

}

printf("NULL\n");

}

int main() {

insert(10);

insert(20);

insert(30);

display();

delete(20);

display();

insert(40);

display();

return 0;

}

