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#include <stdio.h>
#include <stdlib.h>
struct Node {
  int data;
  struct Node* prev;
  struct Node* next;
};
struct Node* createList(int data) {
  struct Node* newNode = (struct Node*)malloc(sizeof(struct Node));
  newNode->data = data;
  newNode->prev = NULL;
  newNode->next = NULL;
  return newNode;
}
void insertLeft(struct Node** head, struct Node* target, int data) {
  if (*head == NULL) {
    printf("Error: List is empty!\n");
    return;
  }
  struct Node* newNode = (struct Node*)malloc(sizeof(struct Node));
  newNode->data = data;
  newNode->prev = NULL;
  newNode->next = NULL;
  if (target->prev != NULL) {
    target->prev->next = newNode;
    newNode->prev = target->prev;
  }
  target->prev = newNode;
  newNode->next = target;
  if (target == *head) {
    *head = newNode;
  }
}
void deleteNode(struct Node** head, int value) {
  if (*head == NULL) {
    printf("Error: List is empty!\n");
    return;
  struct Node* current = *head;
```

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while (current != NULL) {
    if (current->data == value) {
      if (current->prev != NULL) {
        current->prev->next = current->next;
      } else {
        *head = current->next;
      if (current->next != NULL) {
        current->next->prev = current->prev;
      free(current);
      printf("Node with value %d deleted successfully.\n", value);
      return;
    }
    current = current->next;
 printf("Node with value %d not found in the list.\n", value);
}
void displayList(struct Node* head) {
  printf("Doubly Linked List: ");
 while (head != NULL) {
    printf("%d <-> ", head->data);
    head = head->next;
  printf("NULL\n");
}
int main() {
  struct Node* list = NULL;
 int n, data;
  printf("Enter the number of elements for the initial list: ");
  scanf("%d", &n);
 if (n > 0) {
    printf("Enter elements for the initial list:\n");
    scanf("%d", &data);
    list = createList(data);
    struct Node* tail = list;
    for (int i = 1; i < n; ++i) {
      scanf("%d", &data);
      tail->next = createList(data);
```

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tail->next->prev = tail;
    tail = tail->next;
}

displayList(list);
int insertValue, deleteValue;

printf("Enter the value to insert to the left: ");
scanf("%d", &insertValue);

printf("Enter the value to delete: ");
scanf("%d", &deleteValue);
insertLeft(&list, list->next, insertValue);
displayList(list);

deleteNode(&list, deleteValue);
displayList(list);
return 0;
}
```

```
Enter the number of elements for the initial list: 5
Enter elements for the initial list:
3
7
3
8
1
Doubly Linked List: 3 <-> 7 <-> 3 <-> 8 <-> 1 <-> NULL
Enter the value to insert to the left: 9
Enter the value to delete: 1
Doubly Linked List: 3 <-> 9 <-> 7 <-> 3 <-> 8 <-> 1 <-> NULL
Node with value 1 deleted successfully.
Doubly Linked List: 3 <-> 9 <-> 7 <-> 3 <-> 8 <-> NULL
```