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#include <stdio.h>
#include <stdlib.h>

struct Node {
    int data;
    struct Node *prev;
    struct Node *next;
};

struct Node* createNode(int value) {
    struct Node* newNode = (struct Node*)malloc(sizeof(struct Node));
    newNode->data = value;
    newNode->prev = NULL;
    newNode->next = NULL;
    return newNode;
}

void append(struct Node **head, int value) {
    struct Node* newNode = createNode(value);

    if (*head == NULL) {
        *head = newNode;
        return;
    }

    struct Node* temp = *head;
    while (temp->next != NULL)
        temp = temp->next;

    temp->next = newNode;
    newNode->prev = temp;
}

void insertLeft(struct Node **head, int target, int value) {
    struct Node *temp = *head;

    while (temp != NULL && temp->data != target)
        temp = temp->next;

    if (temp == NULL) {
        printf("Node with value %d not found!\n", target);
        return;
    }
}

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    struct Node *newNode = createNode(value);

    newNode->next = temp;
    newNode->prev = temp->prev;

    if (temp->prev != NULL)
        temp->prev->next = newNode;
    else
        *head = newNode;

    temp->prev = newNode;
}

void deleteValue(struct Node **head, int target) {
    struct Node *temp = *head;

    while (temp != NULL && temp->data != target)
        temp = temp->next;

    if (temp == NULL) {
        printf("Value %d not found in list!\n", target);
        return;
    }

    if (temp->prev != NULL)
        temp->prev->next = temp->next;
    else
        *head = temp->next;

    if (temp->next != NULL)
        temp->next->prev = temp->prev;

    free(temp);
}

void displayForward(struct Node *head) {
    printf("List (forward): ");
    while (head != NULL) {
        printf("%d <-> ", head->data);
        head = head->next;
    }
    printf("NULL\n");
}

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void displayBackward(struct Node *head) {
    struct Node *temp = head;

    while (temp && temp->next != NULL)
        temp = temp->next;

    printf("List (backward): ");
    while (temp != NULL) {
        printf("%d <-> ", temp->data);
        temp = temp->prev;
    }
    printf("NULL\n");
}

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int main() {
    struct Node *head = NULL;

    append(&head, 5);
    append(&head, 15);
    append(&head, 25);

    displayForward(head);

    insertLeft(&head, 15, 10);
    displayForward(head);

    deleteValue(&head, 25);
    displayForward(head);

    displayBackward(head);

    return 0;
}

```

```

List (forward): 5 <-> 15 <-> 25 <-> NULL
List (forward): 5 <-> 10 <-> 15 <-> 25 <-> NULL
List (forward): 5 <-> 10 <-> 15 <-> NULL
List (backward): 15 <-> 10 <-> 5 <-> NULL

Process returned 0 (0x0)   execution time : 0.008 s
Press any key to continue.

```