deletelinked.c > main()

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

struct Node {
    int data;
    struct Node *next;
};
struct Node* createNode(int data) {
    struct Node* newNode = (struct Node*)malloc(sizeof(struct Node));
    newNode->data = data;
    newNode->next = NULL;
    return newNode;
}
struct Node* createList() {
    int n, data;
    struct Node *head = NULL, *temp = NULL, *newNode = NULL;

    printf("Enter number of nodes: ");
    scanf("%d", &n);

    for(int i = 0; i < n; i++) {
        printf("Enter data for node %d: ", i + 1);
        scanf("%d", &data);

        newNode = createNode(data);

        if(head == NULL) {
            head = newNode;
            temp = head;
        } else {
            temp->next = newNode;
            temp = newNode;
        }
    }
    return head;
}
struct Node* deleteFirst(struct Node* head) {
    if(head == NULL) {
        printf("List is empty!\n");
        return head;
    }
    struct Node* temp = head;
    head = head->next;
    free(temp);
    printf("First element deleted.\n");
    return head;
}
struct Node* deleteLast(struct Node* head) {
```

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```c
struct Node* deleteLast(struct Node* head) {
    if(head == NULL) {
        printf("List is empty!\n");
        return head;
    }
    if(head->next == NULL) {
        free(head);
        printf("Last element deleted.\n");
        return NULL;
    }

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

    free(temp->next);
    temp->next = NULL;
    printf("Last element deleted.\n");
    return head;
}
struct Node* deleteSpecific(struct Node* head, int key) {
    if(head == NULL) {
        printf("List is empty!\n");
        return head;
    }

    if(head->data == key) {
        return deleteFirst(head);
    }

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

    while(temp != NULL && temp->data != key) {
        prev = temp;
        temp = temp->next;
    }

    if(temp == NULL) {
        printf("Element %d not found!\n", key);
        return head;
    }

    prev->next = temp->next;
    free(temp);
    printf("Element %d deleted.\n", key);

    return head;
```

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```c
}
void display(struct Node* head) {
    if(head == NULL) {
        printf("List is empty!\n");
        return;
    }

    struct Node* temp = head;
    printf("Linked List: ");
    while(temp != NULL) {
        printf("%d -> ", temp->data);
        temp = temp->next;
    }
    printf("NULL\n");
}
int main() {
    struct Node* head = NULL;
    int choice, key;

    while(1) {
        printf("\n--- Singly Linked List Menu ---\n");
        printf("1.Create List\n2.Delete First Element\n3.Delete Last Element\n");
        printf("4.Delete Specific Element\n5. Display List\n6. Exit\n");
        printf("Enter your choice: ");
        scanf("%d", &choice);

        switch(choice) {
            case 1:
                head = createList();
                break;
            case 2:
                head = deleteFirst(head);
                break;
            case 3:
                head = deleteLast(head);
                break;
            case 4:
                printf("Enter element to delete: ");
                scanf("%d", &key);
                head = deleteSpecific(head, key);
                break;
            case 5:
                display(head);
                break;
            case 6:
                exit(0);
            default:
                printf("Invalid choice!\n");} }
    return 0;
```

PROBLEMS 4 OUTPUT DEBUG CONSOLE TERMINAL PORTS QUERY RESULTS

```
PS C:\Users\gsm22\OneDrive\Documents\DS> cd "c:\Users\gsm22\OneDrive\Documents\DS\" ; if ($?)

--- Singly Linked List Menu ---
1. Create List
2. Delete First Element
3. Delete Last Element
4. Delete Specific Element
5. Display List
6. Exit
Enter your choice: 1
Enter number of nodes: 5
Enter data for node 1: 25
Enter data for node 2: 43
Enter data for node 3: 62
Enter data for node 4: 85
Enter data for node 5: 96

--- Singly Linked List Menu ---
1. Create List
2. Delete First Element
3. Delete Last Element
4. Delete Specific Element
5. Display List
6. Exit
Enter your choice: 4
Enter element to delete: 62
Element 62 deleted.

--- Singly Linked List Menu ---
1. Create List
2. Delete First Element
3. Delete Last Element
4. Delete Specific Element
5. Display List
6. Exit
Enter your choice: 5
Linked List: 25 -> 43 -> 85 -> 96 -> NULL

--- Singly Linked List Menu ---
1. Create List
2. Delete First Element
3. Delete Last Element
4. Delete Specific Element
5. Display List
6. Exit
Enter your choice: 2
First element deleted.

--- Singly Linked List Menu ---
1. Create List
2. Delete First Element
3. Delete Last Element
4. Delete Specific Element
5. Display List
6. Exit
Enter your choice: 3
Last element deleted.

--- Singly Linked List Menu ---
1. Create List
2. Delete First Element
3. Delete Last Element
4. Delete Specific Element
5. Display List
6. Exit
Enter your choice: 5
Linked List: 43 -> 85 -> NULL

--- Singly Linked List Menu ---
1. Create List
2. Delete First Element
3. Delete Last Element
4. Delete Specific Element
5. Display List
6. Exit
Enter your choice: 6
PS C:\Users\gsm22\OneDrive\Documents\DS>
```