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1.Singly Linked List

```
#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* insert(struct Node* head, int data) {
    struct Node* newNode = createNode(data);
    if (head == NULL) {
        head = newNode;
    } else {
        struct Node* current = head;
        while (current->next != NULL) {
            current = current->next;
        }
        current->next = newNode;
    }
    return head;
}

void display(struct Node* head) {
    struct Node* current = head;
    while (current != NULL) {
        printf("%d -> ", current->data);
        current = current->next;
    }
    printf("NULL\n");
}
struct Node* delete(struct Node* head, int data) {
    if (head == NULL) {
        printf("List has no value.\n");
        return head;
    }

    if (head->data == data) {
        struct Node* temp = head;
        head = head->next;
        free(temp);
        return head;
```

```
    }
    struct Node* current = head;
    struct Node* prev = NULL;
    while (current != NULL && current->data != data) {
        prev = current;
        current = current->next;
    }

    if (current != NULL) {
        prev->next = current->next;
        free(current);
    } else {
        printf("Data not found in the list.\n");
    }

    return head;
}

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

    while (1) {
        printf("1. Insert\n");
        printf("2. Delete\n");
        printf("3. Display\n");
        printf("4. Exit\n");
        printf("Enter your choice: ");
        scanf("%d", &choice);

        switch (choice) {
            case 1:
                printf("Enter data: ");
                scanf("%d", &data);
                head = insert(head, data);
                break;
            case 2:
                printf("Enter data to delete: ");
                scanf("%d", &data);
                head = delete(head, data);
                break;
            case 3:
                display(head);
                break;
            case 4:
                printf("Exiting the program\n");
                exit(0);
            default:
                printf("Please choose a valid option\n");
        }
    }

    return 0;
}
```

Output:

Compile Result

```
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 1
Enter data: 1
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 1
Enter data: 2
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 1
Enter data: 3
Enter your choice: 1
Enter data: 3
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 3
1 -> 2 -> 3 -> NULL
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 2
Enter data to delete: 2
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 3
1 -> 3 -> NULL
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 4
Exiting the program
```

END