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

typedef struct sll {
        int data;
        struct sll * link;
}sll;

sll * head = NULL;
int count = 0;

sll * createnode() {
        sll * newnode = (sll *)malloc(sizeof(sll));
        printf("Enter the roll no of student : ");
        scanf("%d" , &newnode->data);
        newnode->link = NULL;
        count++;
        return newnode;
}

void insert() {
        if (head == NULL) {
                printf("Creating the very first node.\n");
                head = createnode();
        }
        else {
                printf("Enter the posistion at which you want to
insert (between 0 and %d) : " , count);
                int pos;
                scanf("%d", &pos);
                if(pos <= count && pos>-1) {
                        sll * temp = createnode();
                        if(pos == 0) {
                                temp->link = head;
                                head = temp;
                        }
                        else {
                                sll * trav = head;
                                for(int i = 0 ; i < pos-1 ; i++ )
                                        trav = trav->link;
                                temp->link = trav->link;
                                trav->link = temp;
                        }
                }
                else
                        printf("Invalid Input.\n");
        }
}

void delete() {
        if(head == NULL)
                printf("Singly Linked List is empty.\n");
        else {
                printf("Enter the posistion at which you want to
insert (between 0 and %d) : " , count-1);
                int pos;
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                scanf("%d", &pos);
                if(pos < count && pos>-1) {
                        if(pos == 0) {
                                printf("Element %d successfully
deleted.\n" , head->data);
                                head = head->link;
                        }
                        else {
                                sll * trav = head;
                                for(int i = 0 ; i < pos-1 ; i++ )
                                        trav = trav->link;
                                sll * temp = trav->link;
                                trav->link = temp->link;
                                printf("Element %d successfully
deleted.\n" , temp->data);
                                free(temp);
                                temp = NULL;
                        }
                        count--;
                }
                else
                        printf("Invalid input.\n");
        }
}

void display() {
        if(head != NULL) {
                sll * strt = head;
                printf("Elements of list are : ");
                while(strt != NULL) {
                        printf("%d " , strt->data);
                        strt = strt->link;
                }
                printf("\n");
        }
        else
                printf("Singly Linked List is empty.\n");
}

void main() {
        printf("-----Singly Linked List-----\n");
        printf("We follow zero based index.\n");
        printf("Enter the operation to be performed.\n");
        int ch , flag  =1;
        while(flag) {
                printf("1.Insert \t 2.Display \t 3.Delete \t 4.Exit :
");
                scanf("%d" , &ch);
                switch(ch) {
                        case 1 : insert();
                                        break;
                        case 2 : display();
                                        break;
                        case 3 : delete();
                                        break;
                        case 4 : flag = 0;
                                        break;
```

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                        default : printf("Invalid Input.\n");
                                  break;
                }
        }
}
```