LAB-5

```
#include <stdio.h>
#include <stdlib.h>
void create();
void display();
void insert-before();
struct node {
    char name[20];
    char id[20];
    int sem;
    struct node *next;
};
struct node *head=NULL;

int main(){
    int ch, ele;
    printf("1. Create\n2. Display\n 3. Insert-before\n 4. Exit");
    do{
        printf("Enter choice");
        scanf("%d", &ch);
        switch (ch){
            case 1: create(); break;
            case 2: display(); break;
            case 3: insert-before(); break;
        }
    } while (ch!=4);
}

void create(){
    struct node *newnode, *temp;
    int item;
    newnode=(struct node*)malloc(sizeof(struct node));
```

```
    printf("Enter name, id, sem:");
    scanf("%s", newnode->name);
    scanf("%s", newnode->id);
    scanf("%d", &newnode->sem);

    if(head == NULL){
        newnode->next = NULL;
        head = newnode;
    }
    else{
        temp = head;
        while(temp->next != NULL)
            temp = temp->next;
        temp->next = newnode;
        newnode->next = NULL;
    }
}

void display(){
    struct node *ptr = NULL;
    ptr = head;
    if(ptr == NULL)
        printf("Empty list");
    else{
        while(ptr != NULL){
            printf("%s %s %d \n", ptr->name, ptr->id, ptr->sem);
            ptr = ptr->next;
        }
    }
}
```

```
void insert_before(){
    struct node *newnode;
    int ele;
    char snm;
    newnode=(struct node *)malloc(sizeof(struct node));
    printf("Enter name, id, sem");
    scanf("%s", newnode -> name);
    scanf("%s", newnode -> id);
    scanf("%d", newnode -> sem);

    newnode -> next = head;
    head = newnode;
}
```