lab 5: Name : AMIT.A USN : 1BM19CS016

```
#include <stdio.h>
#include <string.h>
#include <stdlib.h>
void create();
void del(char*);
void display();
void insertbead();
struct node
{
    char name[20];
    char id[10];
    int sem;
    struct node *next;
};
struct node *head = NULL;
void main()
{
    int c; char ele[10];
    do
    {   printf("enter choice : 1. create 2. display 3. delete
                                4. insertbefore 5. exit\n");
        scanf("%d", &c);
        switch(c)
        {
            case 1 : create(); break;
            case 2 : display(); break;
            case 3 : printf("Enter element to be deleted\n");
                     scanf("%s", ele);
                     del(ele); break;
            case 4 : insertbead(); break;
            case 5 : exit(0); break;
        }
    } while(1);
}
```

```
void create()
{
    struct node *newnode, *temp;
    char n[20], id[10]; int s;
    newnode = (struct node *)malloc(sizeof(struct node));
    printf("Enter data: name id & sem \n");
    scanf("%s", n);
    scanf("%s%d", id, &s);
    strcpy(newnode->name, n);
    strcpy(newnode->id, id);
    newnode->sem = s;
    if (head == NULL)
    {
        newnode->next = NULL;
        head = newnode;
        printf("Node is created\n");
    }
    else
    {
        temp = head;
        while (temp->next != NULL)
            temp = temp->next;
        temp->next = newnode;
        newnode->next = NULL;
        printf("Node created\n");
    }
}
void display()
{
    struct node *ptr = NULL;
    ptr = head;
    if (ptr == NULL)
        printf("No element to print\n");
    else
    {
        while (ptr != NULL)
        {
```

```
            puts (ptr->name);
            puts (ptr->id);
            printf ("%d\n", ptr->sem);
            printf ("....\n");
            ptr = ptr->next;
        }
    }
}
void del (char id[10])
{
    struct node *temp, *del = NULL;
    if (head == NULL)
    { printf ("Empty list\n"); return;
    }
    temp = head;
    if (strcmp (head->id, id) == 0)
    {
        head = head->next;
        return;
    }
    while (temp->next != NULL)
    {
        if (strcmp (temp->next->id, id) == 0)
        {
            del = temp->next;
            if (del->next == NULL)
                temp->next = NULL;
            else
                temp->next = del->next;
        }
        else
            temp = temp->next;
    }
    if (del == NULL) {
        printf ("Element not found\n"); return;
    }
}
```

```
void insertathead()
{
    struct node *newnode;
    char n[20], id1[10]; int s;
    printf("Enter element : name, id & semhead\n");
    scanf("%s%s%d", n, id1, &s);
    newnode = (struct node*) malloc(sizeof(struct node));
    strcpy(newnode->name, n);
    strcpy(newnode->id, id1);
    scanf("%d", &s);
    newnode->next = head;
    head = newnode;
}
```