Lab Program - 5

5) WAP to Implement singly Linked List with the following operation

a) Create a linked list
b) Insertion of a node at first position, at any position and at end of list.
c) Display the contents of the linked list.

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

struct node{
    int data;
    struct node * next;
};

struct node *head=NULL;

void create(){
    struct node *newnode;
    struct node *temp;
    int item;

    newnode=(struct node *)malloc(sizeof
                (struct node));
    printf("Enter the data\n");
    scanf("%d",&item);

    newnode->data=item;
    newnode->next=NULL;

    if(head==NULL){
        head=newnode;
    }
```

```
    else{
        temp = head;

        while (temp->next != NULL){
          temp = temp->next;
        }

        temp->next = newnode;
    }
}

void insert_front(){

    struct node *newnode;
    int element;
    printf("Enter the element\n");
    scanf("%d", &element);

    newnode = (struct node *) malloc
              (sizeof (struct node));

    newnode -> data = element;
    newnode -> next = head;

    head = newnode;
}

void insert_atpos(int pos){

    struct node *ptr = head;
    struct node *ptr2 = (struct node *)
                malloc(sizeof(struct node));
    int ele;
```

```
        printf("Enter the element to be
                inserted\n");
        scanf("%d", &ele);

        ptr2->data = ele;
        ptr2->next = NULL;

        pos--;
        while (pos!=1){
            ptr = ptr->next;
            ptr->next = ptr2; pos--;
        }

        ptr2->next = ptr->next;
        ptr->next = ptr2;
    }

    void display(){

        struct node *p;
        p = head;

        if (p==NULL){
            printf("There's no node in the
                    list\n");
        }
        else{
            while (p!=NULL){
                printf("%d\t", p->data);
                p = p->next;
            }
        }
    }
```