// Program to create, insert & display (Linked list)

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

void create();
void display();
void insert_at_node(int);
void insert_before();

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

struct node *head = NULL;

int main()
{
    int choice, ele;
    do
    {
        printf("1. Create\n 2. Display\n 3. Insert before\n 4. Insert at particular pos.\n
                                    5. Exit\n");
        printf("\nEnter your choice \n");
        scanf("%d", &choice);
        switch (choice)
            {
                case 1: create();
                        break;
                case 2: display();
                        break;
                case 3: insert_before();
                        break;
                case 4: printf("enter the position \n");
                        scanf("%d", &ele);
                        insert_at_node(ele);
                        break;
                default: exit(0);
            }
    } while (choice==1 || choice==2 || choice==3 || choice==4);
return 0;
}
```

```
void create()
{
    struct node *newnode, *temp;
    int item;
    newnode = (struct node*) malloc (sizeof(struct node));
    printf("enter the data: ");
    scanf("%d", &item);
    newnode->data = item;
    if(head==NULL)
    {
        newnode->next = NULL;
        head = newnode;
        printf("Node created\n");
    }
    else
    {
        temp=head;
        while(temp->next!=NULL)
        {
            temp = temp->next;
        }
        temp->next = newnode;
        newnode->next = NULL;
        printf("Node created\n");
    }
}

void insert_before()
{
    struct node *newnode;
    int ele;
    printf("enter the element: ");
    scanf("%d", &ele);
    newnode = (struct node*) malloc(sizeof(struct node));
    newnode->data = ele;
    newnode->next = head;
    head = newnode;
}
```

```
void insert_at_node(int ele)
{
    struct node *newnode, *temp;
    int i=1; ele;
    printf("enter the element :");
    scanf("%d", &ele);
    temp = head;
    newnode = (struct node*) malloc(sizeof(struct node));
    newnode->data = ele;
    while (i<(a-1))
        {
          temp = temp->next;
          i++;
        }
        newnode->next = temp->next;
        temp->next = newnode;
}
void display()
{
        struct node *ptr = NULL;
        ptr = head;
        if (ptr == NULL)
        { printf("list empty!\n");
        else {
                while (ptr != NULL)
                { printf("%d", ptr->data);
                  ptr = ptr->next;
                }
        }
        printf("\n");
}
```