

LINKED LIST:

1] create linked list

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

```
struct Node{
    int data;
    struct Node *next;
}*first = NULL;
```

```
void create(int [], int);
void display(struct Node *);
```

```
int main()
{
    int A[] = {1,2,3,4,5};
    create(A,5);
    display(first);

    return 0;
}
```

```
void create(int A[], int n){
    int i;
    struct Node *temp, *last;
    first = (struct Node*)malloc(sizeof(struct Node));
    first->data = A[0];
    first->next = NULL;
    last = first;

    for(i = 1;i<n;i++){
        temp = (struct Node*)malloc(sizeof(struct Node));
        temp->data = A[i];
        temp->next = NULL;
        last->next = temp;
        last = temp;
    }
}
```

```
}
```

```
}
```

```
void display(struct Node *p){  
    while(p!=NULL){  
        printf("%d -> ",p->data);  
        p = p->next;  
    }  
}
```

```
}
```

2]Insert operation

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

struct Node{
    int data;
    struct Node *next;
}*first = NULL;

void create(int [], int);
void display(struct Node *);
void Insert(struct Node *,int,int);

int main()
{
    int A[] = {1,2,3,4,5};
    //create(A,5);
    //display(first);
    Insert(first,0,1);
    Insert(first,1,2);
    Insert(first,2,3);

    printf("\n");
    display(first);
    return 0;
}

void create(int A[], int n){
    int i;
    struct Node *temp, *last;
    first = (struct Node*)malloc(sizeof(struct Node));
    first->data = A[0];
    first->next = NULL;
    last = first;
    for(i = 1;i<n;i++){
        temp = (struct Node*)malloc(sizeof(struct Node));
        temp->data = A[i];
        temp->next = NULL;
        last->next = temp;
        last = temp;
    }
}

void display(struct Node *p){
    while(p!=NULL){
        printf("%d -> ",p->data);
```

```

        p = p->next;
    }

}

void Insert(struct Node *p,int index,int x){

    struct Node *temp;
    int i;
    temp = (struct Node*)malloc(sizeof(struct Node));
    temp->data = x;
    if(index==0){
        temp->next=first;
        first=temp;
    }
    else{
        for(i=0;i<index-1;i++){
            p=p->next;
        }
        temp->next=p->next;
        p->next=temp;
    }
}

```