

Reverse a Linked List

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

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

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

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

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

void Reverse1(struct Node *p)
{
    int *A,i=0;
    struct Node *q=p;
```

```

A=(int *)malloc(sizeof(int)*count(p));

while(q!=NULL)
{
    A[i]=q->data;
    q=q->next;
    i++;
}
q=p;
i--;
while(q!=NULL)
{
    q->data=A[i];
    q=q->next;
    i--;
}
}

void Reverse2(struct Node *p)
{
    struct Node *q=NULL,*r=NULL;

    while(p!=NULL)
    {
        r=q;
        q=p;
        p=p->next;
        q->next=r;
    }
    first=q;
}

void Reverse3(struct Node *q,struct Node *p)
{
    if(p)
    {
        Reverse3(p,p->next);
        p->next=q;
    }
    else
        first=q;
}

int main()
{

```

```
int A[]={10,20,40,50,60};  
create(A,5);
```

```
Reverse1(frist);  
Display(frist);
```

```
return 0;
```

```
}
```