LET'S UPGRADE: MASTERING DATA STRUCTUES AND AGLORITHMS USING C++ DAY 3 ASSIGNMENT.

```cpp
#include <iostream>

#include<stdlib.h>

using namespace std;


struct Node

{

    int Data;

    Node *next;

};


Node *Delete_from_end(Node *head)

{

    Node *temp=head;

    if(head==NULL)

    {

        cout<<"The list is already empty.";

        return head;

    }

    if(head->next==NULL)

    {

        delete head;

        return NULL;

    }

    while(temp->next->next!=NULL)

    {

        temp=temp->next;
```

```cpp
    }
    temp->next=NULL;
    return head;
}


Node *Delete_from_beg(Node *head)
{
    Node *newhead=NULL;
    if(head==NULL)
    {
        cout<<"Nothing to Delete. The list is already empty.";
        return head;
    }
    else
    {
        newhead=head->next;
        delete(head);
    }
    return newhead;
}


void display(Node *head)
{
    Node *temp=head;
    int count=0;
    if(temp==NULL)
    {
        cout<<"The list is empty.";
```

```cpp
    }
    cout<<"The elements of the list are:"<<endl;
    while(temp!=NULL)
    {
        cout<<temp->Data<< " "<<endl;
        temp=temp->next;
        count++;
    }
    cout<<"The Total Number of elements in the list is:"<< count<<endl;
}


Node *create(int Data)
{
    Node *nptr=new(Node);
    nptr->Data=Data;
    nptr->next=NULL;
    return nptr;
}


Node *insert_end(Node *head, int x)
{
    Node *ptr=create(x);
    Node *temp=head;
    if(head==NULL)
    {
        head=ptr;
        return head;
    }
```

```c
    while(temp->next!=NULL)
    {
        temp=temp->next;
    }
    temp->next=ptr;
    return head;
}


Node *insert_beg(Node *head, int x)
{
    Node *pt=create(x);
    if(head==NULL)
    {
        head=pt;
        return head;
    }
    pt->next=head;
    head= pt;
    return head;
}


int main()
{
    Node *head, *temp;
    head= NULL;
    head=insert_beg(head,8);
    head=insert_beg(head,18);
```

```cpp
    head=insert_beg(head,28);

    head=insert_beg(head,38);

    head=insert_end(head,45);

    head=insert_end(head,24288);

    head=insert_beg(head,1488);

    display(head);

    cout<<"After deleting from beginning ";

    head=Delete_from_beg(head);

    display(head);

    cout<<"After deleting from end ";

    head=Delete_from_end(head);

    display(head);

    return 0;

}
```

OUTPUT:


```
C:\Users\chira\Desktop\Let's Upgrade day 3.exe
The elements of the list are:
1488
38
28
18
8
45
24288
The Total Number of elements in the list is:7
After deleting from beginning The elements of the list are:
38
28
18
8
45
24288
The Total Number of elements in the list is:6
After deleting from end The elements of the list are:
38
28
18
8
45
The Total Number of elements in the list is:5

--------------------------------
Process exited after 0.08825 seconds with return value 0
Press any key to continue . . .
```