```
#include <iostream>
using namespace std;
class poly{
public:
   int coeff;
   int pow;
   poly *next;
};
class add2poly
{
   poly *poly1, *poly2, *poly3;
public:
   add2poly(){poly1=poly2=poly3=NULL;}
   void addpoly();
   void display();
};
void add2poly :: addpoly(){
   int i,p;
```

```
    poly *newl=NULL,*end=NULL;
    cout<<"Enter highest power for x\n";
    cin>>p;
    //Read first poly
    cout<<"\nFirst Polynomial\n";
    for(i=p;i>=0;i--)
    {
        newl=new poly;
        newl->pow=p;
        cout<<"Enter Co-efficient for
degree"<<i<<":: ";
        cin>>newl->coeff;
        newl->next=NULL;
        if(poly1==NULL)
            poly1=newl;
        else
                end->next=newl;
        end=newl;
```

```
    }
    //Read Second poly
    cout<<"\n\nSecond Polynomial\n";
    end=NULL;
    for(i=p;i>=0;i--)
    {
        newl=new poly;
        newl->pow=p;
        cout<<"Enter Co-efficient for
degree"<<i<<":: ";
        cin>>newl->coeff;
        newl->next=NULL;
        if(poly2==NULL)
            poly2=newl;
        else
                end->next=newl;
        end=newl;
    }
```

```
    //Addition Logic
    poly *p1=poly1,*p2=poly2;
    end=NULL;
    while(p1 !=NULL && p2!=NULL){
        if(p1->pow == p2->pow){
            newl=new poly;
            newl->pow=p--;
            newl->coeff=p1->coeff +
p2->coeff;
            newl->next=NULL;
            if(poly3==NULL)
                poly3=newl;
            else
                        end->next=newl;
            end=newl;
        }
        p1=p1->next;
```

```
        p2=p2->next;
    }
}

void add2poly :: display(){
    poly *t=poly3;
    cout<<"\n\nAnswer after addition is : ";
    while(t!=NULL){
        cout.setf(ios::showpos);
        cout<<t->coeff;
        cout.unsetf(ios::showpos);
        cout<<"X"<<t->pow;
        t=t->next;
    }
}
int main(){
    add2poly obj;
    obj.addpoly();
```

```
    obj.display();
}
```