```
#include <iostream>
using namespace std;



int main(){
	struct poly
	{	int coeff,exp;
	};

	struct poly p1[10],p2[10],p3[20];
	int n1,n2,n3,i,j;

	cout<<"Enter number of terms in 1st and 2nd polynomial:  ";
	cin>>n1>>n2;

	p1[0].coeff=n1;
	p2[0].coeff=n2;
	p1[0].exp=p2[0].exp=0;

	//Inputting the polynomials
	cout<<"Enter the coeficient and exponent of 1st polynomial: \n";
	for(i=1;i<=n1;i++)
		cin>>p1[i].coeff>>p1[i].exp;
	cout<<"Enter the coeficient and exponent of 2nd polynomial: \n";
	for(i=1;i<=n2;i++)
		cin>>p2[i].coeff>>p2[i].exp;
	cout<<"\n\n";
	//Displaying the polynomials
#include <iostream>
using namespace std;



int main(){
	struct poly
	{	int coeff,exp;
	};

	struct poly p1[10],p2[10],p3[20];
	int n1,n2,n3,i,j;

	cout<<"Enter number of terms in 1st and 2nd polynomial:  ";
	cin>>n1>>n2;

	p1[0].coeff=n1;
	p2[0].coeff=n2;
	p1[0].exp=p2[0].exp=0;

	//Inputting the polynomials
	cout<<"Enter the coeficient and exponent of 1st polynomial: \n";
	for(i=1;i<=n1;i++)
		cin>>p1[i].coeff>>p1[i].exp;
	cout<<"Enter the coeficient and exponent of 2nd polynomial: \n";
	for(i=1;i<=n2;i++)
		cin>>p2[i].coeff>>p2[i].exp;
```

```
//Inputting the polynomials
cout<<"Enter the coeficient and exponent of 1st polynomial: \n";
for(i=1;i<=n1;i++)
        cin>>p1[i].coeff>>p1[i].exp;
cout<<"Enter the coeficient and exponent of 2nd polynomial: \n";
for(i=1;i<=n2;i++)
        cin>>p2[i].coeff>>p2[i].exp;
cout<<"\n\n";
//Displaying the polynomials
cout<<"Polynomial 1: \n\n";
for(i=0;i<=n1;i++)
        cout<<p1[i].coeff<<"  "<<p1[i].exp<<"\n";
cout<<"\n\n";

cout<<"Polynomial 2: \n\n";
for(i=0;i<=n2;i++)
        cout<<p2[i].coeff<<"  "<<p2[i].exp<<"\n" ;
cout<<"\n\n";

i=1;j=1;n3=0;
while(i<=n1 && j<=n2)
{       if(p1[i].exp>p2[j].exp)
        {       n3++;
                p3[n3].coeff=p1[i].coeff;
                p3[n3].exp=p1[i].exp;
                i++;
        }
        else if(p1[i].exp<p2[j].exp)
        {       n3++;
                p3[n3].coeff=p2[j].coeff;
                p3[n3].exp=p2[j].exp;
                j++;
        }
        else
        {       int sum=(p1[i].coeff + p2[j].coeff);
                if(sum!=0)
                {       n3++;
                        p3[n3].coeff=sum;
                        p3[n3].exp=p1[i].exp;
                }
                 i++;
                 j++;
        }
}

while(i<=n1)
{       n3++;
        p3[n3].coeff=p1[i].coeff;
        p3[n3].exp=p1[i].exp;
        i++;
}
while(j<=n2)
{
        n3++;
        p3[n3].coeff=p2[j].coeff;
        p3[n3].exp=p2[j].exp;
        j++;

}
p3[0].coeff=n3;
p3[0].exp=0;
```

```
        p3[0].coeff=n3;
        p3[0].exp=0;

        cout<<"Sum of the 2 polynomials as an array of doublets:  \n";
       for(i=0;i<=n3;i++)
        cout<<" ("<<p3[i].coeff<<" , "<<p3[i].exp<<")\n ";

       return 0;
}
```

```
Enter number of terms in 1st and 2nd polynomial:  4 3
Enter the coeficient and exponent of 1st polynomial:
3 6
4 4
3 2
2 0
Enter the coeficient and exponent of 2nd polynomial:
5 5
2 4
3 1


Polynomial 1:

4  0
3  6
4  4
3  2
2  0


Polynomial 2:

3  0
5  5
2  4
3  1


Sum of the 2 polynomials as an array of doublets:
 (6 , 0)
  (3 , 6)
  (5 , 5)
  (6 , 4)
  (3 , 2)
  (3 , 1)
  (2 , 0)
```