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#include<stdio.h>

void main()
{
int a[10], b[10], c[10],m,n,k,k1,i,j,x;
printf("\n\tPolynomial Addition\n");
printf("\t==================\n");
printf("\n\tEnter the no. of terms of the polynomial:");
scanf("%d", &m);
printf("\n\tEnter the degrees and coefficients:");
for (i=0;i<2*m;i++)
scanf("%d", &a[i]);
printf("\n\tFirst polynomial is:");
k1=0;

if(a[k1+1]==1)
      printf("x^%d", a[k1]);
else
      printf("%dx^%d", a[k1+1],a[k1]);
k1+=2;
while (k1<i)
      {
      printf("+%dx^%d", a[k1+1],a[k1]);
      k1+=2;
      }
printf("\n\n\n\tEnter the no. of terms of 2nd polynomial:");
scanf("%d", &n);
printf("\n\tEnter the degrees and co-efficients:");
for(j=0;j<2*n;j++)
scanf("%d", &b[j]);
printf("\n\tSecond polynomial is:");
k1=0;
if(b[k1+1]==1)
      printf("x^%d", b[k1]);
else
      printf("%dx^%d",b[k1+1],b[k1]);
k1+=2;
while (k1<2*n)
      {
      printf("+%dx^%d", b[k1+1],b[k1]);
      k1+=2;
      }
i=0;
j=0;
k=0;
while (m>0 && n>0)
{
      if (a[i]==b[j])
      {
      c[k+1]=a[i+1]+b[j+1];
      c[k]=a[i];
      m--;
      n--;
      i+=2;
      j+=2;
      }
else if (a[i]>b[j])
      {
      c[k+1]=a[i+1];
      c[k]=a[i];
      m--;
      i+=2;
      }
else
```

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      {
      c[k+1]=b[j+1];
      c[k]=b[j];
      n--;
      j+=2;
      }
k+=2;
}
while (m>0)
{
c[k+1]=a[i+1];
c[k]=a[i];
k+=2;
i+=2;
m--;
}
while (n>0)
{
c[k+1]=b[j+1];
c[k]=b[j];
k+=2;
j+=2;
n--;
}
printf("\n\n\n\n\tSum of the two polynomials is:");
k1=0;
if (c[k1+1]==1)
printf("x^%d", c[k1]);
else
printf("%dx^%d", c[k1+1],c[k1]);
k1+=2;
while (k1<k)
{
if (c[k1+1]==1)
      printf("+x^%d", c[k1]);
else
      printf("+%dx^%d", c[k1+1], c[k1]);
k1+=2;
}
return 0;
}
```