Find pair of numbers with given sum X

#include<iostream>

using namespace std;

int main()

{

int sum;

int a[10],n;

int num1,num2,flag = 0;

cout<<"Enter the number of elements in the array\n";

cin>>n;

cout<<"Enter the elements of the array\n";

for(int i=0;i<n;i++)

cin>>a[i];

cout<<"Enter the sum\n";

cin>>sum;

for(int i = 0;i<n-1;i++)

{

num1 = a[i];

for(int j=i+1;j<n;j++)

{

num2 = a[j];

if(num1+num2 == sum)

{

flag = 1;

cout<<num1<<" "<<num2<<endl;

}

}

}

if(flag == 0)

cout<<"No such pairs exist";

return 0;

}