***Dividing coins:***

#include<stdio.h>

int main()

{

int arr[100],coin[100],sum=0,i,j,n,other[100],diff[100];

printf("Enter the number of coin:\n");

scanf("%d",&n);

printf("Enter the coins : \n");

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

{

scanf("%d",&coin[i]);

sum=sum+coin[i];

}

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

{

arr[i]=0;

}

arr[0]=1;

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

{

for(int j=sum; j>=0; j--)

{

if(arr[j]==1)

{

arr[j+coin[i]]=1;

}

}

}

int k=0,no;

for(i=1; i<=sum/2; i++)

{

if(arr[i]==1)

{

other[k]=sum-i;

diff[k]=other[k]-i;

no=k++;

}

}

for(i=0; i<=no; i++)

{

for(j=i+1; j<=no; j++)

{

if(diff[i]>diff[j])

{

int temp=diff[i];

diff[i]=diff[j];

diff[j]=temp;

}

}

}

printf("\n\nMinimum Different : %d \n\n",diff[0]);

return 0;

}