

```

1  #include<stdio.h>
2  #define TRUE 1
3  #define FALSE 0
4  int inc[50],a[50],d;
5  int promising(int i,int wt,int total)
6  {
7      return ((wt+total)>=d)&&((wt==d)|| (wt+a[i+1]<=d));
8  }
9  void main()
10 {
11     int i,j,n,temp,total=0;
12     printf("Enter how many numbers are in a set:\n");
13     scanf("%d",&n);
14     printf("Enter %d numbers to the set:\n",n);
15     for(i=0;i<n;i++)
16     {
17         scanf("%d",&a[i]);
18         total=total+a[i];
19     }
20     printf("Input the d value to create subset sum:\n");
21     scanf("%d",&d);
22     if((total<d))
23         printf("Subset construction is not possible!");
24     else
25     {
26         for(i=0;i<n;i++)
27             inc[i]=0;
28         printf("The solution using backtracking is:\n");
29         sumset(-1,0,total);
30     }
31 }
32 void sumset(int i,int wt,int total)
33 {
34     int j;
35     if(promising(i,wt,total))
36     {
37         if(wt==d)
38         {
39             printf("\n{");
40             for(j=0;j<=i;j++)
41                 if(inc[j])
42                     printf("%d",a[j]);
43             printf(",}\n");
44         }
45         else
46         {
47             inc[i+1]=TRUE;
48             sumset(i+1, wt+a[i+1], total-a[i+1]);
49             inc[i+1]=FALSE;
50             sumset(i+1, wt, total-a[i+1]);
51         }
52     }
53 }
54
55

```