



Department of Computer Science and Engineering (Data Science)

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Experiment no. 10

CODE:

```
1  #include <stdio.h>
2
3  void subsetSum(int set[], int n, int sum, int subset[], int index)
4  {
5      if (sum == 0)
6      {
7          printf("{ ");
8          for (int i = 0; i < index; i++)
9          {
10             if (subset[i])
11                 printf("%d ", set[i]);
12             printf("} \n");
13             return;
14         }
15     }
16     if (index == n)
17         return;
18     subset[index] = 1;
19     subsetSum(set, n, sum-set[index], subset, index+1);
20     subset[index] = 0;
21     subsetSum(set, n, sum, subset, index+1);
22 }
23
24 int main()
25 {
26     int n, sum;
27     printf("Enter no. of elements in set: ");
28     scanf("%d",&n);
29     int set[n], subset[n];
30     printf("Enter the elements of set: ");
31     for (int i = 0; i < n; i++)
32         scanf("%d",&set[i]);
33     printf("Enter the required sum: ");
34     scanf("%d",&sum);
35     for (int i = 0; i < n; i++)
36         subset[i] = 0;
37     subsetSum(set, n, sum, subset, 0);
38     return 0;
39 }
40
```



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OUTPUT:

```
Enter no. of elements in set: 6
Enter the elements of set: 5
10
15
12
13
18
Enter the required sum: 30
{ 5 10 15 }
{ 5 12 13 }
{ 12 18 }

...Program finished with exit code 0
Press ENTER to exit console.
```