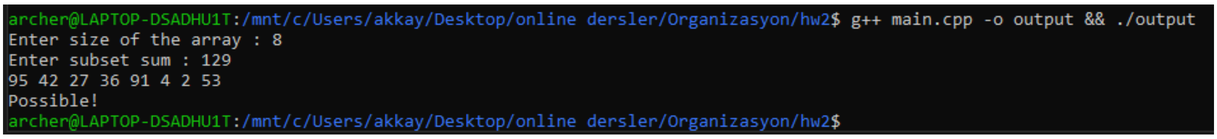
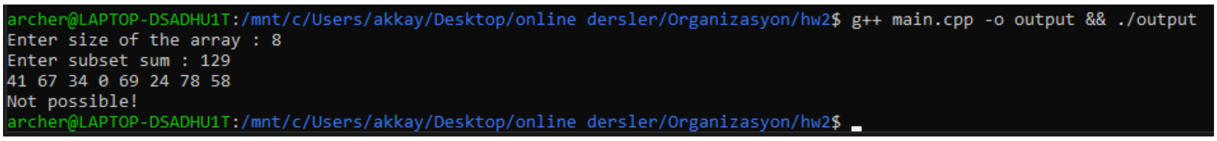
## Part 1:

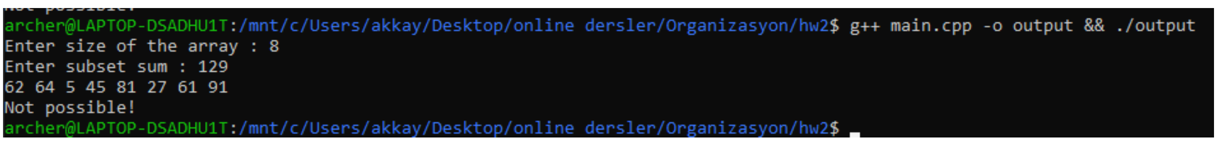
The array can take up to 40 elements. This value is defined by MAX_SIZE variable. CheckSumPossibility returns the output by checking two paremeters we have on two different statements. If our num variable reaches 0 it means it is possible to have a subset that sums up to that value. If num is negative or size equals to zero there no possibility. If these statements are not satisfied we return CheckSumPossibility function with “num – arr[size -1 ], arr, size – 1” parameters or “num, arr, size - 1” parameters. Depending on their context their trees will end or go on. On the main side we check for valid values nothing more.



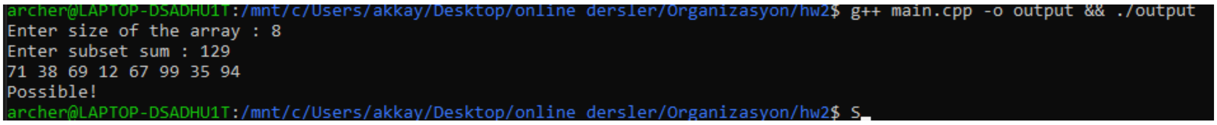
```
archer@LAPTOP-DSADHU1T:/mnt/c/Users/akkay/Desktop/online dersler/Organizasyon/hw2$ g++ main.cpp -o output && ./output
Enter size of the array : 8
Enter subset sum : 129
95 42 27 36 91 4 2 53
Possible!
archer@LAPTOP-DSADHU1T:/mnt/c/Users/akkay/Desktop/online dersler/Organizasyon/hw2$
```



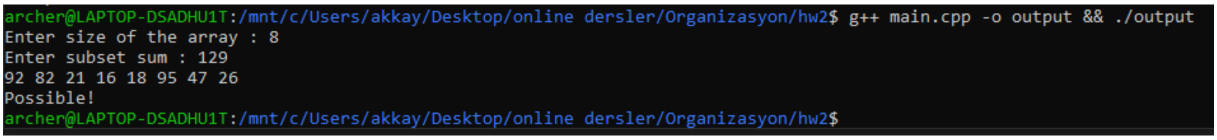
```
archer@LAPTOP-DSADHU1T:/mnt/c/Users/akkay/Desktop/online dersler/Organizasyon/hw2$ g++ main.cpp -o output && ./output
Enter size of the array : 8
Enter subset sum : 129
41 67 34 0 69 24 78 58
Not possible!
archer@LAPTOP-DSADHU1T:/mnt/c/Users/akkay/Desktop/online dersler/Organizasyon/hw2$
```



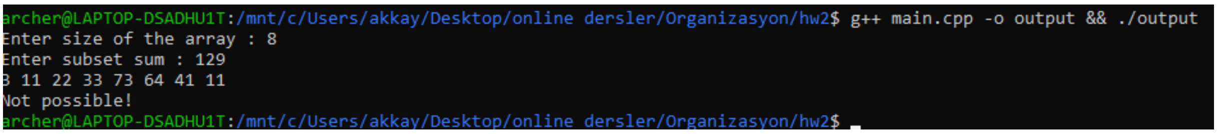
```
Not possible!
archer@LAPTOP-DSADHU1T:/mnt/c/Users/akkay/Desktop/online dersler/Organizasyon/hw2$ g++ main.cpp -o output && ./output
Enter size of the array : 8
Enter subset sum : 129
62 64 5 45 81 27 61 91
Not possible!
archer@LAPTOP-DSADHU1T:/mnt/c/Users/akkay/Desktop/online dersler/Organizasyon/hw2$
```



```
archer@LAPTOP-DSADHU1T:/mnt/c/Users/akkay/Desktop/online dersler/Organizasyon/hw2$ g++ main.cpp -o output && ./output
Enter size of the array : 8
Enter subset sum : 129
71 38 69 12 67 99 35 94
Possible!
archer@LAPTOP-DSADHU1T:/mnt/c/Users/akkay/Desktop/online dersler/Organizasyon/hw2$ S
```



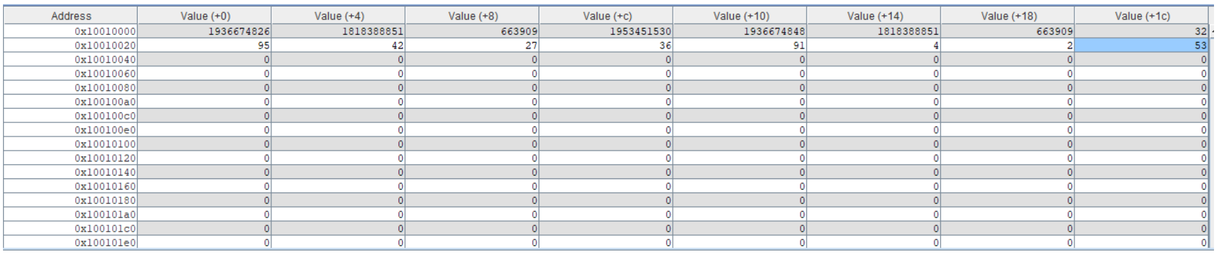
```
archer@LAPTOP-DSADHU1T:/mnt/c/Users/akkay/Desktop/online dersler/Organizasyon/hw2$ g++ main.cpp -o output && ./output
Enter size of the array : 8
Enter subset sum : 129
92 82 21 16 18 95 47 26
Possible!
archer@LAPTOP-DSADHU1T:/mnt/c/Users/akkay/Desktop/online dersler/Organizasyon/hw2$
```



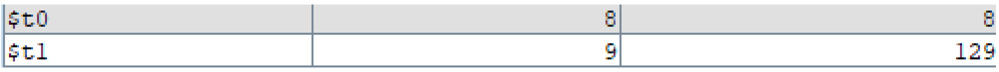
```
archer@LAPTOP-DSADHU1T:/mnt/c/Users/akkay/Desktop/online dersler/Organizasyon/hw2$ g++ main.cpp -o output && ./output
Enter size of the array : 8
Enter subset sum : 129
3 11 22 33 73 64 41 11
Not possible!
archer@LAPTOP-DSADHU1T:/mnt/c/Users/akkay/Desktop/online dersler/Organizasyon/hw2$
```

## Part 2:

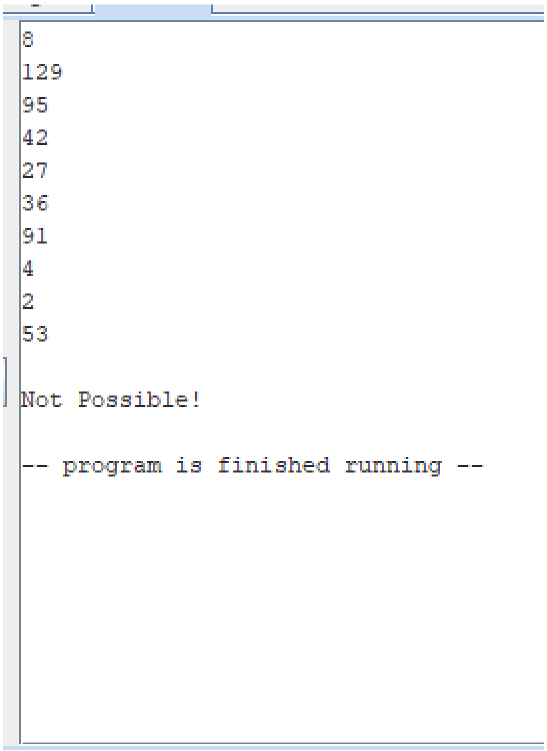
In this I was managed to get the array elements from use but my function calculates good result under some conditions but not the others. Here are my test results.



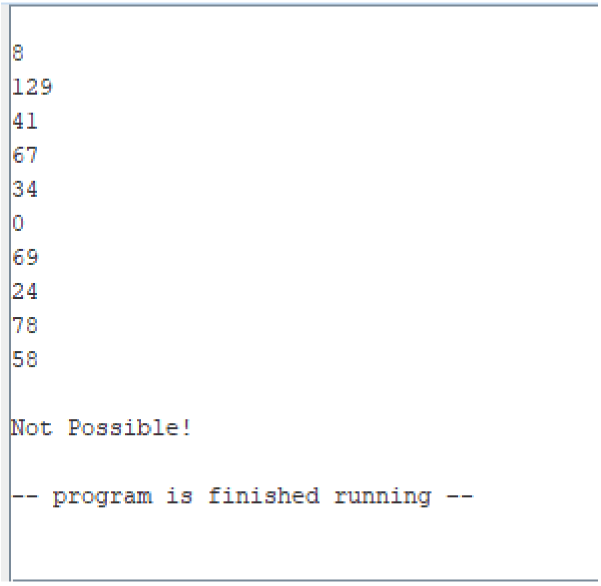
| Address | Value (+0) | Value (+4) | Value (+8) | Value (+c) | Value (+10) | Value (+14) | Value (+18) | Value (+1c) |
|---|---|---|---|---|---|---|---|---|
| 0x10010000 | 1936674826 | 1818388851 | 663909 | 1953451530 | 1936674848 | 1818388851 | 663909 | 32 |
| 0x10010020 | 95 | 42 | 27 | 36 | 91 | 4 | 2 | 53 |
| 0x10010040 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0x10010060 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0x10010080 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0x100100a0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0x100100c0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0x100100e0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0x10010100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0x10010120 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0x10010140 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0x10010160 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0x10010180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0x100101a0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0x100101c0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0x100101e0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



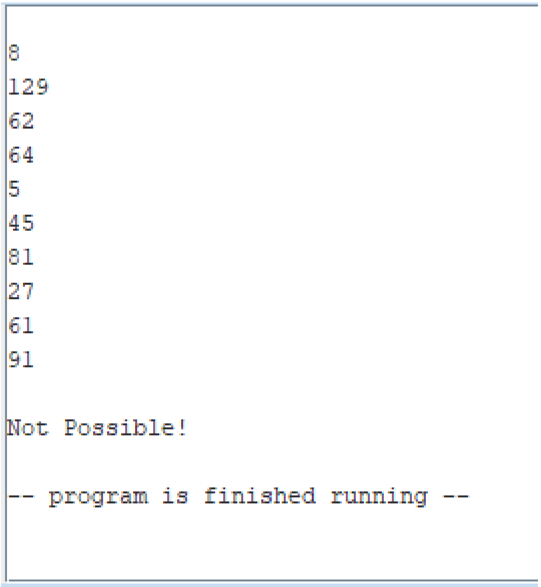
| | | |
|---|---|---|
| $t0 | 8 | 8 |
| $t1 | 9 | 129 |



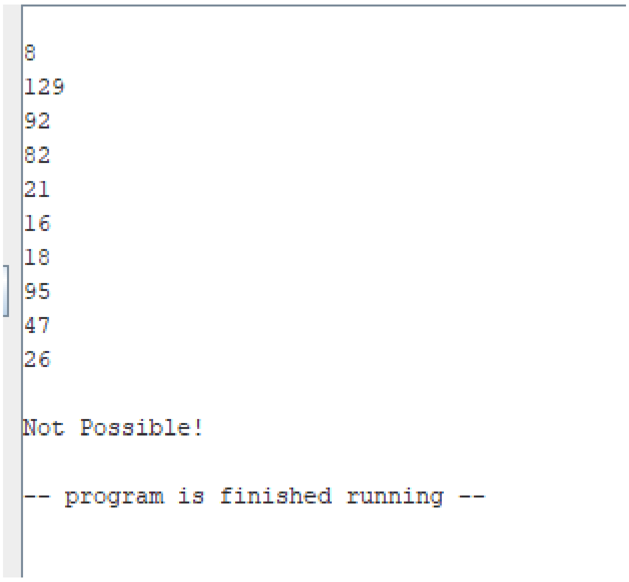
```
8
129
95
42
27
36
91
4
2
53

Not Possible!

-- program is finished running --
```



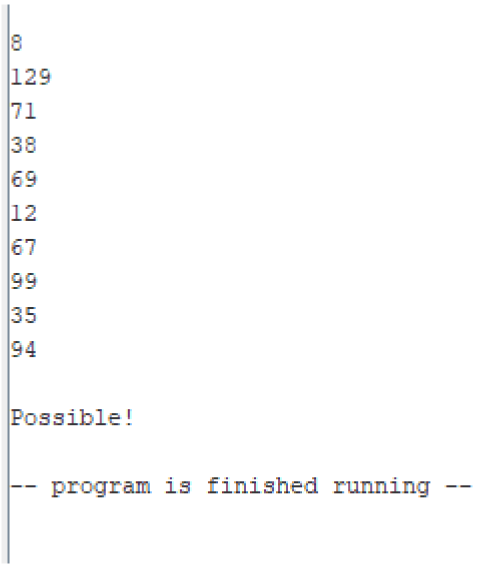
```
8
129
41
67
34
0
69
24
78
58

Not Possible!

-- program is finished running --
```



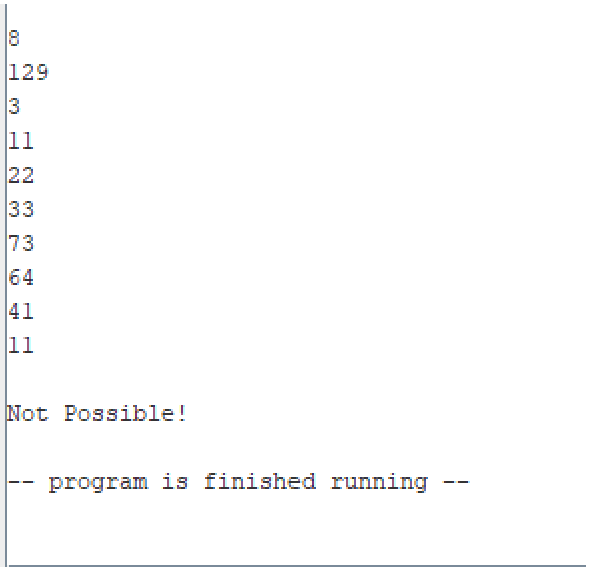
```
8
129
62
64
5
45
81
27
61
91

Not Possible!

-- program is finished running --
```



```
8
129
92
82
21
16
18
95
47
26

Not Possible!

-- program is finished running --
```

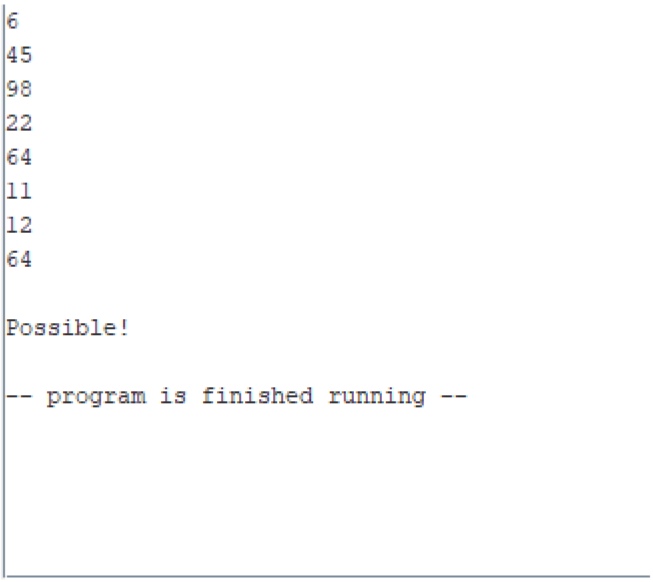


```
8
129
71
38
69
12
67
99
35
94

Possible!

-- program is finished running --
```



```
8
129
3
11
22
33
73
64
41
11

Not Possible!

-- program is finished running --
```

Out 3 working cases i managed find one of them true. Here is an another example that finds correct output.



```
6
45
98
22
64
11
12
64

Possible!

-- program is finished running --
```

Aziz Can Akkaya

1801042250