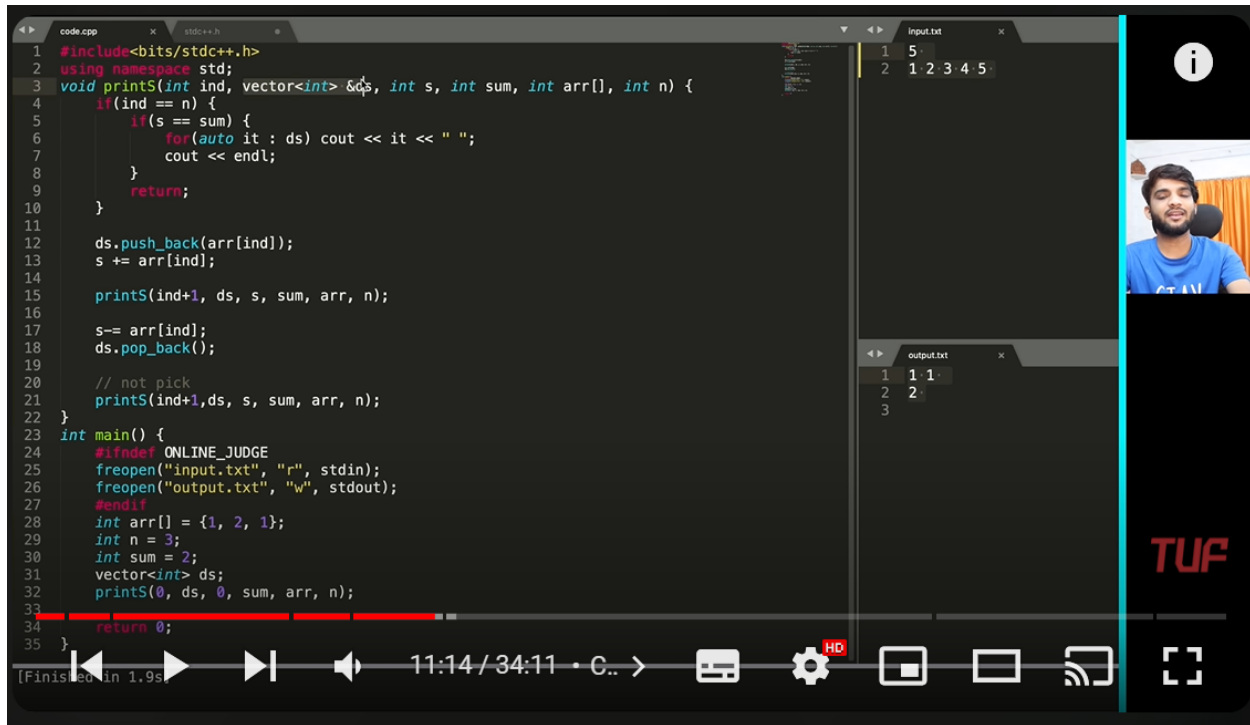


SUBSEQUENCES PATTERNS

PRINT ALL



The screenshot shows a C++ program in a code editor. The program defines a recursive function `printS` that prints all subsequences of an array. The main function initializes an array `arr = {1, 2, 1}` and calls `printS(0, ds, 0, sum, arr, n)`. The output files show the input and output of the program.

```
1 #include<bits/stdc++.h>
2 using namespace std;
3 void printS(int ind, vector<int> &ds, int s, int sum, int arr[], int n) {
4     if(ind == n) {
5         if(s == sum) {
6             for(auto it : ds) cout << it << " ";
7             cout << endl;
8         }
9         return;
10    }
11    ds.push_back(arr[ind]);
12    s += arr[ind];
13    printS(ind+1, ds, s, sum, arr, n);
14    s -= arr[ind];
15    ds.pop_back();
16    // not pick
17    printS(ind+1, ds, s, sum, arr, n);
18 }
19 int main() {
20     #ifndef ONLINE_JUDGE
21     freopen("input.txt", "r", stdin);
22     freopen("output.txt", "w", stdout);
23     #endif
24     int arr[] = {1, 2, 1};
25     int n = 3;
26     int sum = 2;
27     vector<int> ds;
28     printS(0, ds, 0, sum, arr, n);
29     return 0;
30 }
```

input.txt

```
1 5
2 1 2 3 4 5
```

output.txt

```
1 1 1
2 2
3
```

TUF

PRINT ONE

```

3
4
5 bool printS(int ind, vector<int> &ds, int s, int sum, int arr[], int n) {
6     if(ind == n) {
7         // condition satisfied
8         if(s == sum) {
9             for(auto it : ds) cout << it << " ";
10            cout << endl;
11            return true;
12        }
13        // condition not satisfied
14        else return false;
15    }
16    ds.push_back(arr[ind]);
17    s += arr[ind];
18
19    if(printS(ind+1, ds, s, sum, arr, n) == true) {
20        return true;
21    }
22
23    s -= arr[ind];
24    ds.pop_back();
25
26    // not pick
27    if(printS(ind+1, ds, s, sum, arr, n) == true) return true;
28    return false;
29 }
30
31 int main() {
32     #ifndef ONLINE_JUDGE
33     freopen("input.txt", "r", stdin);
34     freopen("output.txt", "w", stdout);
35     #endif
36     int arr[] = {1, 2, 1};
37     int n = 3;
38 }

```

input.txt

```

1 5
2 1 2 3 4 5

```

output.txt

```

1 1 1
2

```

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COUNT ALL

```

4
5 int printS(int ind, int s, int sum, int arr[], int n) {
6     // condition not satisfied
7     // strictly done if array contains positives only
8     if(s > sum) return 0;
9
10    if(ind == n) {
11        // condition satisfied
12        if(s == sum) return 1;
13        // condition not satisfied
14        else return 0;
15    }
16
17    s += arr[ind];
18
19    int l = printS(ind+1, s, sum, arr, n);
20
21    s -= arr[ind];
22
23    // not pick
24    int r = printS(ind+1, s, sum, arr, n);
25
26    return l + r;
27 }
28
29 int main() {
30     #ifndef ONLINE_JUDGE
31     freopen("input.txt", "r", stdin);
32     freopen("output.txt", "w", stdout);
33     #endif
34     int arr[] = {1, 2, 1};
35     int n = 3;
36 }

```

input.txt

```

1

```

output.txt

```

1 2

```

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