

Experiment:1.1

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**Batch/Sec: 616- A
Coding**

Subject: Competitive

BRANCH :- CSE

Q1)

Aim: Arrays: To implement the concept of Dynamic

Array. Objective: -

To learn about Array Data Structure

To learn different approaches to reverse the elements in

Array. Problem statement:

Example

Print 4 3 2 1. Each integer is separated by one space.

Input Format

The first line contains an integer (the size of our array).

The second line contains space-separated integers that describe array 's elements.

Output Format

Print the elements of array in reverse order as a single line of space-separated numbers.

Sample Input

4

1 4 3 2

Sample Output

2 3 4 1

CODE:

```
#include <iostream>
```

```

using namespace std; int main(){
    int n;
    cin>>n;
    int a[n]; for(int i=0;i<=n;i++){ cin>>a[i];
    } for(int i=n- 1;i>=0;i--){
    cout<<a[i]<<" ";
    }
}

```

Output:

Problem

Given an array of integers, find the sum of its elements.

For example, if the array $ar = [1, 2, 3]$, $1 + 2 + 3 = 6$, so return 6.

Function Description

Complete the `simpleArraySum` function in the editor below. It must return the sum of the array elements as an integer.

`simpleArraySum` has the following parameter(s):

- `ar`: an array of integers

Input Format

The first line contains an integer, n , denoting the size of the array.

The second line contains n space-separated integers representing the array's elements.

Constraints

$0 < n, ar[i] \leq 1000$

Output Format

Print the sum of the array's elements as a single integer.

Submissions

Leaderboard

Code Editor

```

1  #include<bits/stdc++.h>
2  using namespace std;
3
4
5  int main() {
6
7      unsigned long long int N, Sum = 0, i, Num;
8      //Sarthak Gupta
9      //20BCS4854
10     cin>>N;
11
12     for (i = 1 ; i <= N ; i++)
13     {
14         cin>> Num;
15         Sum += Num;
16     }
17
18     cout<<Sum<<endl;

```

Line: 9 Col: 16

Upload Code as File Test against custom input Run Code Submit Code

HackerRank Prepare > Tutorials > 30 Days of Code > Day 7: Arrays

Problem

Objective
Today, we will learn about the Array data structure. Check out the [Tutorial](#) tab for learning materials and an instructional video.

Task
Given an array, A , of N integers, print A 's elements in reverse order as a single line of space-separated numbers.

Example
 $A = [1, 2, 3, 4]$
Print 4 3 2 1. Each integer is separated by one space.

Input Format
The first line contains an integer, N (the size of our array).
The second line contains N space-separated integers that describe array A 's elements.

Constraints

Constraints

- $1 \leq N \leq 1000$
- $1 \leq A[i] \leq 10000$, where $A[i]$ is the i^{th} integer in the array.

Sample Test case 0

input (stdin)

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

Your Output (stdout)

```
1 2 3 4 1
```

Expected Output

```
1 2 3 4 1
```

Congratulations!
You have passed the sample test cases. Click the submit button to run your code against all the test cases.

HackerRank Prepare > Tutorials > 30 Days of Code > Day 7: Arrays

Problem

Objective
Today, we will learn about the Array data structure. Check out the [Tutorial](#) tab for learning materials and an instructional video.

Task
Given an array, A , of N integers, print A 's elements in reverse order as a single line of space-separated numbers.

Example
 $A = [1, 2, 3, 4]$
Print 4 3 2 1. Each integer is separated by one space.

Input Format
The first line contains an integer, N (the size of our array).
The second line contains N space-separated integers that describe array A 's elements.

Constraints

Constraints

- $1 \leq N \leq 1000$
- $1 \leq A[i] \leq 10000$, where $A[i]$ is the i^{th} integer in the array.

Congratulations
You solved this challenge. Would you like to challenge your friends?

Next Challenge

Test case 0

Test case 1

Test case 2

Test case 3

Test case 4

Compiler Message
Success

Hidden Test Case
Unlock this testcase for 5 hacks.

Q2)

Given an array of integers, find the sum of its elements. For example, if the array , , so return .

Function Description

Complete the *simpleArraySum* function in the editor below. It must return the sum of the array elements as an integer.

simpleArraySum has the following parameter(s):

- *ar*: an array of

integers Input Format

The first line contains an integer, n , denoting the size of the array.

The second line contains space-separated integers representing the array's elements.

Constraints

Output Format

Print the sum of the array's elements as a single integer.

Sample Input

```
6
1 2 3 4 10 11
```

Sample Output

```
31
```

CODE:

```

#include <bits/stdc++.h> using

namespace std;

string ltrim(const string &); string
rtrim(const string &);
vector<string> split(const string &);

/*
 * Complete the 'simpleArraySum' function below.
 *
 * The function is expected to return an INTEGER.
 * The function accepts INTEGER_ARRAY ar as parameter.
 */

int simpleArraySum(vector<int> ar) { int sum =
0;
    for(int i=0;i<ar.size();i++){ sum+=ar[i];
    }
    return sum;

}

int main()
{
    ofstream fout(getenv("OUTPUT_PATH"));

    string ar_count_temp; getline(cin,
ar_count_temp);
    int ar_count = stoi(ltrim(rtrim(ar_count_temp))); string

    ar_temp_temp;

    getline(cin, ar_temp_temp);

    vector<string> ar_temp = split(rtrim(ar_temp_temp)); vector<int>

    ar(ar_count);

    for (int i = 0; i < ar_count; i++) { int ar_item =
        stoi(ar_temp[i]);

        ar[i] = ar_item;
    }

```

```

    int result = simpleArraySum(ar); fout <<

    result << "\n"; fout.close();

    return 0;
}

string ltrim(const string &str) { string s(str);

    s.erase(
        s.begin(),
        find_if(s.begin(), s.end(), not1(ptr_fun<int, int>(isspace)))
    );

    return s;
}

string rtrim(const string &str) { string s(str);

    s.erase(
        find_if(s.rbegin(), s.rend(), not1(ptr_fun<int, int>(isspace)))
        .base(),
        s.end()
    );

    return s;
}

vector<string> split(const string &str) { vector<string>
    tokens;

    string::size_type start = 0;
    string::size_type end = 0;

    while ((end = str.find(" ", start)) != string::npos) {
        tokens.push_back(str.substr(start, end - start));

        start = end + 1;
    }

    tokens.push_back(str.substr(start));

```

```

    return tokens;
}

```

OUTPUT:

The image displays two screenshots of the HackerRank 'Simple Array Sum' challenge interface.

Top Screenshot: Problem Statement and Solution

Constraints: $0 < n, ar[i] \leq 1000$

Output Format: Print the sum of the array's elements as a single integer.

Sample Input:

```

6
1 2 3 4 10 11

```

Sample Output:

```

31

```

Explanation: We print the sum of the array's elements:
 $1 + 2 + 3 + 4 + 10 + 11 = 31$.

C++ Solution:

```

5 string ltrim(const string &);
6 string rtrim(const string &);
7 vector<string> split(const string &);
8
9 /*
10  * Complete the 'simpleArraySum' function below.
11  *
12  * The function is expected to return an INT64.
13  * The function accepts INTEGER_ARRAY ar as parameter.
14  */
15
16 int simpleArraySum(vector<int> ar) {
17     int sum = 0;
18     for(int i=0; i<ar.size(); i++){
19         sum+=ar[i];
20     }
21     return sum;
22 }

```

Bottom Screenshot: Test Results

Congratulations
 You solved this challenge. Would you like to challenge your friends?
[Next Challenge](#)

Test case 0 **Test case 1** **Test case 2**

Compiler Message: Success

Input (stdin):

```

1 6
2 1 2 3 4 10 11

```

Expected Output:

```

1 31

```

Learning Outcomes:

- 1) Learn about C++.
 - 2) Learn about Array and how to Reverse Array.
 - 3) Learn About elements of array.
 - 4) How to sum elements of array.
- Learn about functions and vector

