January 2021 CSE204: Data Structures and Algorithms I Sessional

Offline 10

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Given n heterogeneous dices having $f_1, f_2, ... f_n$ faces and an integer s, calculate the number of ways you can get s as the summation of values on the faces of the dices. Print the result modulo (10^9+7). Note that, face j of dice i has a number j $(1 \leq j \leq f_i)$ as usual.

Input/Output:

You will take input from a file and print output to the console.

Input Format:

The first line contains two positive integers n (≤ 100) and s (≤ 10000) indicating the number of dices and the sum. The next line contains n positive integers where the i-th integer, f_i indicates the number of faces of the i-th dice.

Output Format:

A single integer indicating the result (modulo 10^9+7).

Sample I/O:

Input	Output
2 6 4 6	4
3 8 6 6 6	21
4 100 20 30 40 50	10283

Submission Guideline:

1. Create a directory with your 7 digit student id as its name
2. Put the source file(s) only into the directory created in step 1
3. Zip the directory (compress in .zip format; .rar, .7z or any other format is not acceptable)
4. Upload the .zip file on Moodle.

For example, if your student id is 1805xxx, create a directory named 1805xxx. Put only your source files (.c, .cpp, .java, .h, etc.) into 1805xxx. Compress 1805xxx into 1805xxx.zip and upload the 1805xxx.zip on Moodle.

Failure to follow the above-mentioned submission guideline may result in upto 10% penalty.

* Please DO NOT COPY (You should know the consequences by now)

Submission Deadline: July 2, 2021 11:55 PM