List Comprehensions ★



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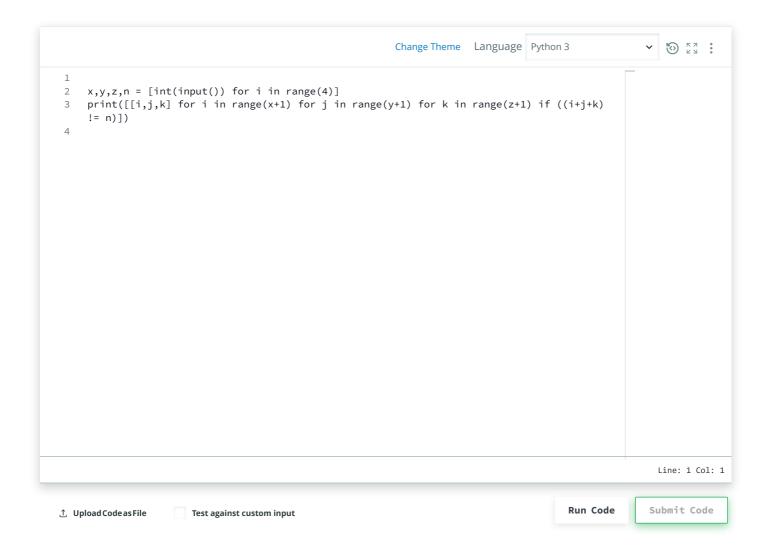
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Problem Submissions Leaderboard Editorial 🖰 Tutorial Let's learn about list comprehensions! You are given three integers $m{x}, m{y}$ and $m{z}$ representing the dimensions of a cuboid along with an integer $m{n}$. Print a list of all possible coordinates given by (i, j, k) on a 3D grid where the sum of i + j + k is not equal to n. Here, $0 \le i \le x$; $0 \le j \le y$; $0 \le k \le z$. Please use list comprehensions rather than multiple loops, as a learning exercise. Example x = 1y = 1z = 2n=3All permutations of [i, j, k] are: [[0,0,0],[0,0,1],[0,0,2],[0,1,0],[0,1,1],[0,1,2],[1,0,0],[1,0,1],[1,0,2],[1,1,0],[1,1,1],[1,1,2]]Print an array of the elements that do not sum to n=3. [[0,0,0],[0,0,1],[0,0,2],[0,1,0],[0,1,1],[1,0,0],[1,0,1],[1,1,0],[1,1,2]]**Input Format** Four integers x, y, z and n, each on a separate line. Constraints Print the list in lexicographic increasing order. Sample Input 0 1 1 1 Sample Output 0 [[0, 0, 0], [0, 0, 1], [0, 1, 0], [1, 0, 0], [1, 1, 1]] **Explanation 0** Each variable x, y and z will have values of 0 or 1. All permutations of lists in the form [i, j, k] = [[0, 0, 0], [0, 0, 1], [0, 1, 0], [0, 1, 1], [1, 0, 0], [1, 0, 1], [1, 1, 0], [1, 1, 1]]Remove all arrays that sum to n=2 to leave only the valid permutations. Sample Input 1 2 2

Sample Output 1

2

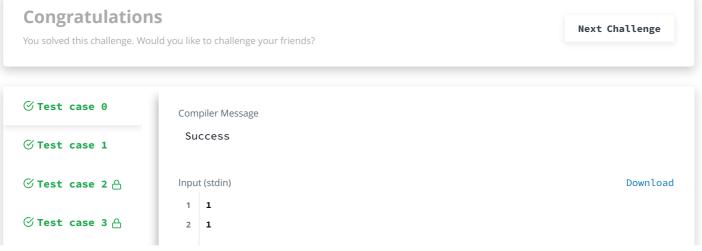
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[[0, 0, 0], [0, 0, 1], [0, 1, 0], [0, 1, 2], [0, 2, 1], [0, 2, 2], [1, 0, 0], [1, 0, 2], [1, 1, 1], [1, 1, 2], [1, 2, 0],
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13%





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