Coin Change

Try to solve the Coin Change problem.



Statement

You're given an integer total and a list of integers called coins. The variable coins hold a list of coin denominations, and total is the total amount of money.

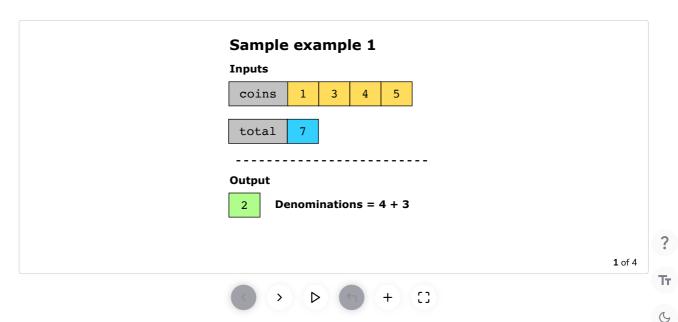
You have to find the minimum number of coins that can make up the total amount by using any combination of the coins. If the amount can't be made up, return -1. If the total amount is 0, return 0.

Note: You may assume that we have an infinite number of each kind of coin.

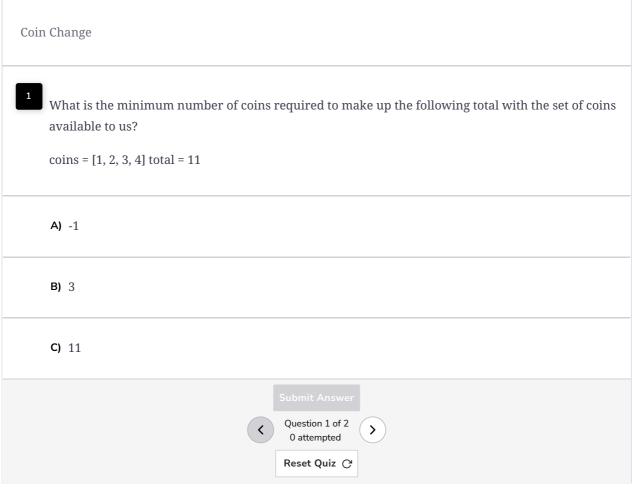
Constraints:

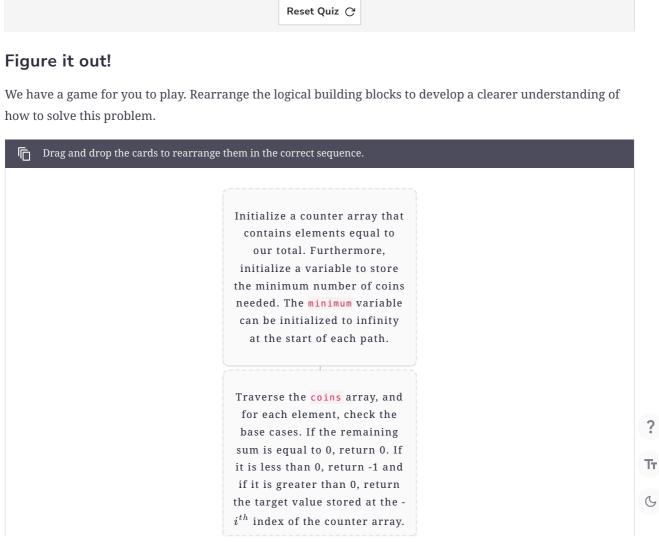
 $1 \leq {\sf coins.length} \leq 12$ $1 \leq {\sf coins[i]} \leq 2^{31} - 1$ $0 \leq {\sf total} \leq 10^3$

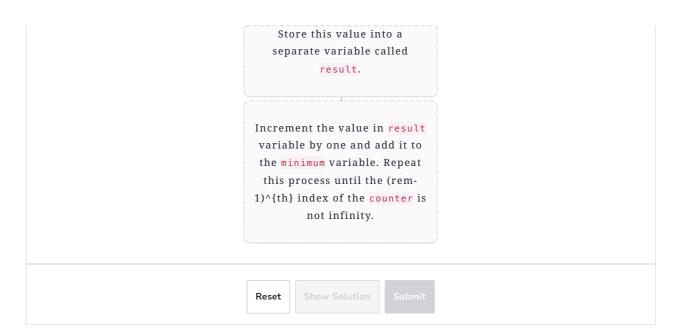
Examples



Let's take a moment to make sure you've correctly understood the problem. The quiz below helps you check if you're solving the correct problem:

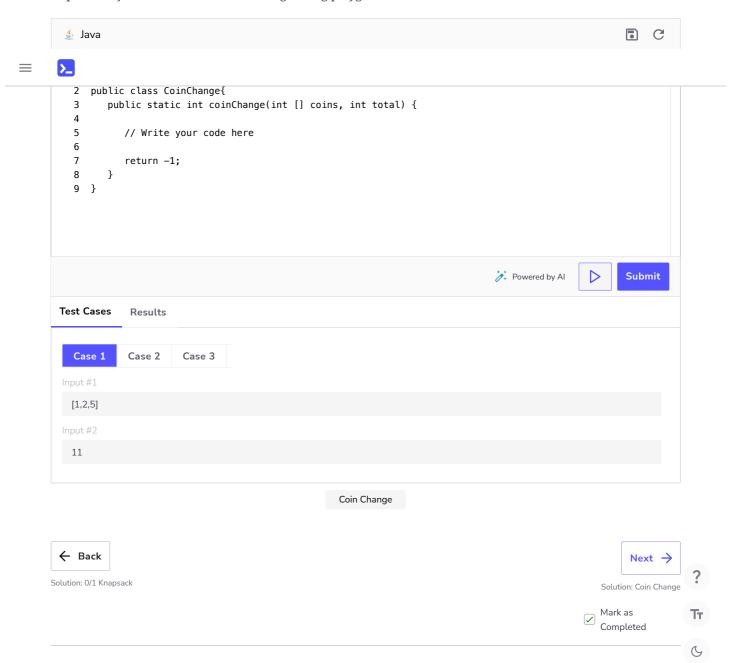






Try it yourself

Implement your solution in the following coding playground:



?

Тт

C