

## 322. Coin Change

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You are given an integer array `coins` representing coins of different denominations and an integer `amount` representing a total amount of money.

Return *the fewest number of coins that you need to make up that amount*. If that amount of money cannot be made up by any combination of the coins, return `-1`.

You may assume that you have an infinite number of each kind of coin.

### Example 1:

```
Input: coins = [1,2,5], amount = 11
Output: 3
Explanation: 11 = 5 + 5 + 1
```

### Example 2:

```
Input: coins = [2], amount = 3
Output: -1
```

### Example 3:

```
Input: coins = [1], amount = 0
Output: 0
```

### Example 4:

```
Input: coins = [1], amount = 1
Output: 1
```

### Example 5:

```
Input: coins = [1], amount = 2
Output: 2
```

```
import sys
class Solution:
    def coinChange(self, coins: List[int], amount: int) -> int:
        dp = [0]*(amount+1)
        dp[0] = 0
        if amount == 0:
            return 0
        for i in range(1, len(dp)):
```

```
temp = []
for coin in coins:
    if i==coin:
        temp.append(1)
    else:
        if i-coin>=0:
            if dp[i-coin]!=0:
                temp.append(dp[i-coin]+1)
if len(temp):
    dp[i] = min(temp)
return dp[amount] if dp[amount]!=0 else -1
```