

89. Coin Change Problem

Code:

```
def coinChange(coins, amount):  
    dp = [amount + 1] * (amount + 1)  
    dp[0] = 0  
    for coin in coins:  
        for x in range(coin, amount + 1):  
            dp[x] = min(dp[x], dp[x - coin] + 1)  
    return dp[amount] if dp[amount] <= amount else -1  
print(coinChange([1, 2, 5], 11))  
print(coinChange([2], 3))  
print(coinChange([1], 0))
```

Output:

```
3  
-1  
0
```

Time Complexity:

- $T(n) = O(n.m)$