

HW 8.3 - DNA Sequence Alignment Part I (25 pts)

Compile

```
shuqiny2@circinus-25 12:28:54 ~/253P/HW8/src  
$ javac DNASquenceAlignment.java  
shuqiny2@circinus-25 12:29:05 ~/253P/HW8/src  
$ java DNASquenceAlignment
```

input:

```
A G C T T G
T G C G A A
```

output:

```
A _ G C T T G
T G C G A A _
```

```
shuqiny2@circinus-25 12:29:54 ~/253P/HW8/src
$ java DNASequenceAlignment
A G C T T G
T G C G A A
A _ G C T T G
T G C G A A _
```

Error detection

Illegal letters or empty string

```
A B C  
Invalid DNA sequence!  
Invalid DNA sequence!  
█
```

HW 8.4 - DNA Sequence Alignment Part II (25 pts)

Compile

```
shuqiny2@circinus-25 12:35:12 ~/253P/HW8/src  
$ javac DNASequenceAlignmentWithInvalidPairs.java  
shuqiny2@circinus-25 12:35:21 ~/253P/HW8/src  
$ java DNASequenceAlignmentWithInvalidPairs
```

Input:

```
T T C G C T
A A G G C T
```

Output:

```
T T C G C _ T
A A G _ G C T  (or equivalent solution)
```

```
shuqiny2@circinus-25 12:35:21 ~/253P/HW8/src
$ java DNASequencAlignmentWithInvalidPairs
T T C G C T
A A G G C T
T T C _ G C T
A A G G C T _
```

(This is an equivalent solution to sample output because T - T, C - C, and T - C are with the same penalty)

Error detection (Same as HW8.3)

Illegal letters or empty string

```
A B C
Invalid DNA sequence!
Invalid DNA sequence!
█
```

Leetcode 322. Coin Change

LeetCode

Explore 26 Problems Mock Contest Discuss Store

Description Solution Discuss (999+) Submissions




Success Details >

Runtime: 10 ms, faster than 94.76% of Java online submissions for Coin Change.

Memory Usage: 38.2 MB, less than 88.31% of Java online submissions for Coin Change.

Next challenges:

Minimum Cost For Tickets

Show off your acceptance:   

Time Submitted	Status	Runtime	Memory	Language
11/29/2020 02:14	Accepted	10 ms	38.2 MB	java
11/29/2020 02:13	Wrong Answer	N/A	N/A	java
11/27/2020 04:00	Wrong Answer	N/A	N/A	java

Java Autocomplete

```
1 class Solution {
2
3 // classic backpack problem
4 // dp[i] means the number of coins that makes $i
5 public int coinChange(int[] coins, int amount) {
6     int[] dp = new int[amount + 1];
7     Arrays.fill(dp, Integer.MAX_VALUE - 1);
8     dp[0] = 0;
9
10    for(int i = 0; i < coins.length; i++){
11        for(int j = 0; j <= amount; j++){
12            if(j - coins[i] >= 0)
13                dp[j] = Math.min(dp[j], dp[j - coins[i]] + 1);
14        }
15    }
16    return dp[amount] > amount ? -1 : dp[amount];
17 }
```

Your previous code was restored from your local storage. [Reset to default](#)

Testcase Run Code Result Debugger

Accepted Runtime: 0 ms

Your input [1,2,5]
11
...

Output 3
-1

Expected 3
-1

Console How to create a testcase

LeetCode 518. Coin Change 2

LeetCode

Explore

Problems

Mock

Contest

Discuss

Store

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🔔

👤

Description

Solution

Discuss (569)

Submissions

Success

Details >

Runtime: **4 ms**, faster than **52.01%** of Java online submissions for Coin Change 2.




Memory Usage: **36.1 MB**, less than **95.66%** of Java online submissions for Coin Change 2.

Next challenges:

Design In-Memory File System

Minimum Add to Make Parentheses Valid

Distribute Candies to People

Show off your acceptance:   

Time Submitted	Status	Runtime	Memory	Language
11/29/2020 03:45	Accepted	4 ms	36.1 MB	java
11/29/2020 02:38	Time Limit Exceeded	N/A	N/A	java

Problems

Pick One

< Prev

518/1666

Next >

Java

Autocomplete

```
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
class Solution {
    // when amount = 0, return 1... it's ridiculous
    public int change(int amount, int[] coins) {
        int[] dp = new int[amount + 1];
        dp[0] = 1;

        // bfs
        for (int i = 0; i < coins.length; i++)
            for (int j = 1; j <= amount; j++)
                if (j - coins[i] >= 0)
                    dp[j] += dp[j - coins[i]];

        return dp[amount];
    }
}
```

Your previous code was restored from your local storage. [Reset to default](#)

Testcase

Run Code Result

Debugger

Accepted

Runtime: 0 ms

Your input

[1,2,5]

0

[1]

Output

4

1

Diff

Expected

4

1

Console

How to create a testcase

Run Code

Submit