

POTD20.1. Problem of the Day #20

Download and Extract

An initial setup of files is provided to you via a shell script: [Download potd-q20](#)

Using a terminal, extract the initial files by running the shell script you just downloaded (you will need to navigate to the directory where you saved the file):

```
sh potd-q20.sh
```

Your files for this problem will be in the potd-q20 directory.

The Problem

Complete the function `isValid` that is an advanced version of the one you finished in lab_quack last week.

The function `isValid` takes a `string` as input, which may contain three kinds of brackets: `'('`, `')'`, `'{'`, `'}'`, `'['`, `']'`. A valid input should not contain any unmatched, extra or hanging brackets of any kind. And they must close in the correct order. Your function should ignore any characters other than these three types of brackets.

Example

```
"()[{}]"      // valid
"([cs225])"   // invalid
```

Testing Your Code

A `main.cpp` has been provided to you with very limited test cases. You are encouraged to add your own!

Motivation

There has been some discussions for the function `isBalanced` in lab_quack. Some of you may have solved the problem without using a stack and think that using a stack in that case is overcomplicated.

In order to let you understand our intention of using a stack in `isBalanced`, we decided to let you try on this problem, where (hopefully) using a stack makes more sense.

Can I also solve this problem without using a stack as well?

Yes! We encourage you to think of different solutions and compare them in terms of time, space complexity and code elegance. If you come up with an algorithm that does not require a stack, feel free to share it on Piazza with your peers! (general algorithm, not your code)

Upload Solution

Drop files here or click to upload.

Only the files listed below will be accepted—others will be ignored.

Files

isValid.cpp

not uploaded

Save & Grade

Save only

POTD 20

Total points:

0/1

Score:

0%

Question

Value:

1

History:

Awarded points:

0/1

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