< Back **Simple Regex One-liner (Java, Python)**

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StefanPochmann ★ 47270 Last Edit: October 17, 2018 8:17 AM 5.7K VIEWS

Update

Much nicer, I just turn an abbreviation like `"i12iz4n"` into a regular expression like `"i.{12}iz.{4}n"` . Duh.

Java:

```java
public boolean validWordAbbreviation(String word, String abbr) {
    return word.matches(abbr.replaceAll("[1-9]\\d*", ".{$0}"));
}
```

Python:

```python
def validWordAbbreviation(self, word, abbr):
    return bool(re.match(re.sub('([1-9]\d*)', r'.{\1}', abbr) + '$', word))
```

Obsolete original

(This now gets a memory error, since the exploding testcase I suggested at the end has been added to the test suite.)

"Clean":

```python
def validWordAbbreviation(self, word, abbr):
    regex = re.sub('\d+', lambda m: '.' * int(m.group()), abbr)
    return bool(re.match(regex + '$', word)) and not re.search('(^|\D)0', abbr)
```

"Dirty" (abusing how Python handles the `>` there):

```python
def validWordAbbreviation(self, word, abbr):
    regex = re.sub('\d+', lambda m: '.' * int(m.group()), abbr)
    return re.match(regex + '$', word) > re.search('(^|\D)0', abbr)
```

I turn each number into that many dots to get a regular expression. For example, when asked whether `"3t2de"` is a valid abbreviation for word `"leetcode"`, I turn `"3t2de"` into `"...t..de"` and check whether that regular expression matches `"leetcode"`, which it does. I also need to rule out the number `"0"` and leading zeros, which I do with another regular expression.

@1337c0d3r I suggest adding test case `"bignumberhahaha"`, `"999999999"` , as that gets me a fully deserved MemoryError :-)

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[Post]

ZackPeng ★ 23 Last Edit: October 16, 2018 3:02 AM

five body on floor.

▲ 23 ▼   ↩ Reply

mania4u ★ 124 July 2, 2019 8:06 AM

This is masterpiece...

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NYZhang ★ 35 August 23, 2018 9:35 AM

@StefanPochmann You are welcome
Time Submitted Status Runtime Language
3 minutes ago Accepted 40 ms python3
5 minutes ago Memory Limit Exceeded N/A python3

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Mix1984 ★ 39 December 10, 2016 9:43 PM

Thanks! I was thinking maybe differences between implementations of the Dinkumware C++ standard library used with visual studio/c++ and libstdc++ used by gcc. I will watch the SO thread.

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Mix1984 ★ 39 December 10, 2016 3:13 AM

For fun, here's a flawed(?) c++ version:

```cpp
bool validWordAbbreviation(string word, string abbr)
{
    regex rx("([1-9][0-9]+)");
    abbr = regex_replace(abbr, rx, ".{$&}");
```