

MLCP Week 4 Homework

Word Break

#TEBOW IT

T-Talk: throw an exception

What about null or ^{false} empty string?

What if the dictionary is empty? → return false ^{Yes}

Can the same dictionary word appear multiple times in the string?

What about case sensitivity? → Hello & hello are equivalent

E-Examples:

Sample Input	Equivalence class	Output
"", {summer?}	empty string	False
"summernow", {}	empty dictionary	False
"hello", {hello, world?}	one word sequence	True
"youenjoy",	two words sequence	True
{pear, salmon, foot, prints, footprints, leave, you, sun, girl, enjoy?}		
"youleavefootprints"	>two words	True
{pear, salmon, ..., enjoy?}		
"salmonenjoyapples"	Unsuccessful sequence	False
{pear, salmon, ..., enjoy?}		
"mycode", {today?}	No word in dictionary	False

B-Brute Force

- check if the input string is empty or if the dictionary is empty, if yes, return false
- Go through every word in the dictionary
 - check if it is contained in the string
 - if it then replace that word in the string with ""
 - so if the string is composed of words present in the dictionary, it will be "" in the end.
 - so if the string is equal to "" after the iteration, return true, else false

W-Walk Through

First check if input string is empty or dictionary is empty

yes ↙

no ↘

return false

Go through every word in dictionary
check if that word is in string

yes ↙

Replace that word in the string with ""



After the loop check if the string == ""

yes ↙

no ↘

True

False

s = "youenjoy"

d = { pear, salmon, foot, prints, footprints, leave, you, sun, girl, enjoy }

↑
not
present

↑
NO

↑
NO

↑
NO

↑
NO

↑
NO

↑
yes

↑
NO

↑
NO

↑
yes

s = "enjoy"

s = ""
True!

I - Implement

* if s == "" or dictionary == {}: return False

```
def wordBreak(s, dictionary):
```

```
    * for word in dictionary:
```

```
        if word in s:
```

```
            s = s.replace(word, "")
```

```
            if s == "": # if s == "" after the first few
```

```
                return True
```

words, we donot need to check further

```
            if s == "":
```

```
                return True
```

```
            else:
```

```
                return False
```

This can be simplified to -

```
return s == ""
```

T - Test