

datascience_assignment_3.3

July 11, 2018

0.1 Implement a function longestWord which take input as list of words and return the longest word

0.2 Solution:

- Write a function longestWord which takes input as a list of words word_list
- If input word_list is None or not a list or have 0 word, raise an Exception
- If input word_list has one word, return the word
- Else reduce the list by comparing elements by length and taking th word which has longest length

In [8]: `import functools`

```
# function longestWord which takes input as a list of words word_list
# If word_list is None or not of type list or hve 0 word, raise a ValueError
# Else return the word which has longest lenght
def longestWord(word_list):
    #If word_list is None or not of type list or hve 0 word, raise a ValueError
    if word_list is None or isinstance(word_list, list) == False or len(word_list) == 0:
        raise ValueError("Input word_list to function longestWord must be list of words")

    #If input word_list has one word, return the word
    # Else reduce the list and return the word with longest length
    if len(word_list) == 1:
        return word_list[0]
    else:
        return functools.reduce(lambda x,y: x if len(x) >= len(y) else y, word_list)
```

```
In [9]: # Testcase1: Input a list of words with list size more than 1
input_word_list = ["hi", "Hello", "India", "Cat", "Elephant", "Tiger"]
longest_word = longestWord(input_word_list)
print("Longest word: " + longest_word)
```

Longest word: Elephant

```
In [10]: # Testcase2: Input a list of words with list size equal to 1
input_word_list = ["Tiger"]
longest_word = longestWord(input_word_list)
print("Longest word: " + longest_word)
```

Longest word: Tiger

```
In [12]: # Testcase3: Input a list of words with empty list, it should raise an Exception of t
input_word_list = []
longest_word = longestWord(input_word_list)
print("Longest word: " + longest_word)
```

ValueError

Traceback (most recent call last)

```
<ipython-input-12-8797b8aade8c> in <module>()
    1 # Testcase3: Input a list of words with empty list, it should raise an Exception of t
    2 input_word_list = []
----> 3 longest_word = longestWord(input_word_list)
    4 print("Longest word: " + longest_word)

<ipython-input-8-a25b21e4c0ac> in longestWord(word_list)
     7     #If word_list is None or not of type list or hve 0 word, raise a ValueError
     8     if word_list is None or isinstance(word_list, list) == False or len(word_list)
----> 9         raise ValueError("Input word_list to function longestWord must be list of v
    10
    11     #If input word_list has one word, return the word
```

ValueError: Input word_list to function longestWord must be list of words of size at l