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#Assignment 8: Implement isPalindrome and isAnagram methods
#Assignment 8: Test for both positive and negative cases
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# Panlindrome: See
https://en.wikipedia.org/wiki/Palindrome#Characters,\_words,\_or\_lines
# This function returns "TRUE" if the given word is a palindrome
#           else it returns "FALSE"
def isPalindrome(word):
    # reverse the input word using the slicing
    reversed_word = word[::-1]

    #comapre the two. Result will be True or False
    result = (word == reversed_word)

    #return the result
    return result
```

```
# NOTE: This cryptic one line implementation is equivalent to the
above method
# def isPalindrom(word):
#     return (word == word[::-1])
```

```
# Anagram: See https://en.wikipedia.org/wiki/Anagram
# This function returns "TRUE" if the two words are Anagrams
#           else it returns "FALSE"
def areAnagrams(word_1, word_2):
    # convert the inputs to lists
    word_1_list = list(word_1)
    word_2_list = list(word_2)

    # sort those lists
    word_1_list.sort()
    word_2_list.sort()

    #compared the two lists. Result will be True or False
    result = (word_1_list == word_2_list)

    #return the result
    return result
```

```
# NOTE: This cryptic one line implementation is equivalent to the
above method
# def areAnagrams(word_1, word_2):
#     return (list(word_1).sort() == list(word_2).sort())
```

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# Test cases for the two functions
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# Palindrome positive test cases (should return TRUE)
# radar, level, rotor, kayak, racecar, madam
x = isPalindrome("radar")
print("is radar palindrome? = ", x)
```

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# Palindrome positive test cases (should return FALSE)
# python, java, silc
x = isPalindrome("python")
print("is python palindrome? = ", x)
```

```
# Anagram positive test cases (should return TRUE)
# evil=vile, silent=listen, eleven plus two=twelve plus one
word_x = "silent"
word_y = "listen"
result = areAnagrams(word_x, word_y)
print("Are ", word_x, " and ", word_y, " anagrams? = ", result)
```

```
# Anagram positive test cases (should return FALSE)
# python = pxthon, java = lava, a = abcdefghijklmnopqrstuvwxyz
word_x = "python"
word_y = "pxthon"
result = areAnagrams(word_x, word_y)
print("Are ", word_x, " and ", word_y, " anagrams? = ", result)
```