Lab Sheet 5

Lists and strings

1. Write a Python function `to_english(n)` that takes a positive integer value 'n' and that returns a string containing the number expressed in English words. For example, if 'n' is 142, then the function should return the string "one hundred and forty-two". Assume that 'n' is less than 1000.

2. Write a Python function `is_palindrome(s)` that takes a single string parameter `s` and that returns True if the letters within the string read the same left to right as they do right to left. All non-letters (spaces, punctuation etc.) are ignored and no distinction is made between upper and lowercase letters.

```
"Abba" ===> True
"August" ===> False
"" ===> True
"Able was I 'ere I saw Elba." ===> True
"Doc, note: I dissent. A fast never prevents a fatness. I diet on cod"
     ===> True
```

3. Write a function `peaks(numlist))` that takes a numerical list as parameter and that returns the list of elements in `numlist` which exceed all previous elements.

```
peaks([3, 2, 5, 5, 7, 6, 1, 8, 4]) ==> [3, 5, 7, 8]
peaks([1, 2, 3, 4, 5, 6, 7, 8, 9]) ==> [1, 2, 3, 4, 5, 6, 7, 8, 9]
peaks([9, 8, 7, 6, 5, 4, 3, 2, 1]) ==> [9]
peaks( 5, 5, 5, 5, 5, 5, 5, 5, 5]) ==> [5]
peaks([3]) ==> [3]
peaks([]) ==> []
```