

Lab Exercises Week 4

1 Recursion

A palindrome is a string that reads the same forward as well as backward. For example, Taco cat and dont nod are palindromes. When determining if a string is a palindrome, we ignore characters that are not letters and the case.

- (a) Give a recursive definition of a palindrome.
- (b) Write a recursive program based on your definition that repeatedly prompts the user for a string and reports whether the string is a palindrome or not.
- (c) Write an iterative program that does the same thing.
- (d) Compute the Big-O efficiency on both cases assuming the input strings contain only lowercase characters (that is you may ignore in your count the steps needed to remove non-letter characters and convert to lowercase).