

# ECE:5820/22C:5820, SELT

## Fall 2015

### HW 2: More Ruby Programming Fun

Due: Friday, Sept. 18, by 11:59 p.m. Submission instructions are provided at the end of this document

**Before starting this assignment, fork or clone the HW2 repo from GitHub, at:**

**<https://github.com/SELT/hw2fall15>**

**Important Note:** Several of these problems are moderately challenging. Do NOT leave this assignment until the last minute.

In this homework you will complete some simple programming exercises to gain familiarity with the Ruby language. Skeleton code for each part of the assignment is in the `lib/` directory of the repo.

**NOTE:** For all questions involving words or strings, you may assume that the definition of a "word" is: *a sequence of characters whose boundaries are matched by the `\b` construct in Ruby regexps.*

#### Part 1: Strings and Regexp

(a) Write a method that determines whether a given word or phrase is a palindrome — i.e. it reads the same backwards as forwards, ignoring case, punctuation, and non-word characters. (a "non-word character" is defined for our purposes as: *a character that Ruby regexps would treat as a non-word character.*) Your solution should not use loops or iteration of any kind. You will find regular-expression syntax very useful; it is reviewed briefly in the text and the website [rubular.com](http://rubular.com) will allow you to try out Ruby regular expressions "live". Methods you might find useful (which you will need to look up in the Ruby documentation, at [ruby-doc.org](http://ruby-doc.org)) include: `String#downcase`, `String#gsub`, `String#reverse`

Examples: