CS 279 - Week 7 Lab Exercise - 10-7-2014

Deadline

Due by the end of lab on 10-7-2014 (unless otherwise stated).

How to submit

Submit your file for this lab using **`~ah270/279submit`** on nrs-labs, with a homework number of `87`

Purpose

More practice with regular expressions.

Important notes

- You are expected to work in **pairs** for this lab; this means **two** students at **one** computer and **one** keyboard, one typing, and the other suggesting what to type. Both are expected to be engaged and involved in what is going on, and **each** file that you create should have **both** of your names in it.

  Students who do not work in pairs may not receive credit for the lab exercise (although if an odd number of students requires it, there may be one authorized trio -- the same guidelines apply).

- If you have a question during lab, and I am helping another pair, add one or both of your names to the "Next:" list on the board, and I will get to you as soon as I can.

Problems

In a file named **`279lab7.txt`**, put:

- your names
- your answers to the following

Write regular expressions for each of the following. (It would be a very good idea to test your answers using **`grep`** -- remember to use quotes as needed around your regular expression when needed during such testing.)

Problem 1

Write a **BRE** pattern that will match any line starting with **`Romeo:`** (this might grab each of Romeo's first lines from a script, for example)

Problem 2

Consider the character class **`[[:blank:]]`** -- it matches (course text, p. 76) "the characters that produce horizontal whitespace" -- this might vary a bit based on the locale, but for POSIX these are

space and tab.

Appropriately using this character class (written as a bracket expression), write a **BRE** pattern that will match any line **ending** with 1 or more instances of horizontal whitespace.

Problem 3

Using an appropriate subexpression, write a **BRE** pattern that will match any line containing a repeated integer.

Problem 4

Using an appropriate interval expression, write a **BRE** pattern that will match **`CS`** followed by a blank followed by a 3-digit number.

Problem 5

Using an appropriate interval expression and an appropriate subexpression, write a **BRE** pattern that will match any line that contains some repeated string of lowercase letters of length 3 or longer.

Problem 6

Write a **BRE** pattern that will match any line ending with a semicolon.

Problem 7

Write an **ERE** pattern that will match any line ending with a semicolon OR a curly brace OR a closing parenthesis. (Test this one using **`egrep`** or **`grep -E`**)

Problem 8

Write an ERE pattern that will match any line ending with an integer (where that integer MAY, but is not required, to start with a + or -). (Test this one using **`egrep`** or **`grep -E`**)

HINT: backquote that + you are trying to match -- + is a special character in **ERE**!

Problem 9

Write an **ERE** pattern that will match any line that starts with an integer (where the integer MAY, but is not required, to start with a + or -).

Problem 10

And now write an **ERE** pattern that will match any line that starts with an integer (where the integer MAY, but it not required, to start with a + or -) followed by at least one non-digit character.