

## Homework 4 (due Friday, 4/11 at 12pm)

This homework assignment is for individual work.

1. In a text data file that contains phone number in the same format that was given in class (see example 16 in Rlog for lectures 15-16), write code to find all types of phone numbers. For example, in a sequence “work: 212-542-8930”, “work” is the type.

Keep in mind

- a) Some numbers may not have a type;
- b) You may encounter new lines, so a type may be separated from the number by the new line delimiter “\n”;

Extra credit: no parenthesis are expected but you could attempt to find numbers with area code in parenthesis. Please provide separate code for extra credit and clearly mark it as such.

2. Write code to replace all expression of type “ $a \pm b$ ”, where a and b are whole numbers with the evaluated number. For example, if the file contains “-2+5”, replace it with “3”; replace “2-7” with “-5”, etc. Sums that involve fractional decimals, e.g. “2.57+3” may be left unchanged. However, you could attempt to replace those with evaluated number for extra credit. Again, please provide separate code, clearly marked “extra credit for problem 2”.