Regular Expressions ECE 684

## $\mathbf{Q}\mathbf{1}$

Write a regular expression that matches people's full names. Here are some example names:

- Quan Hongchan
- Philip Seymour Hoffman
- Dr. Nicki Washington
- Joseph Gordon-Levitt
- Ken Griffey, Jr.
- John von Neumann

It should *not* match single names like "Cher", or non-name strings:

- Cher
- not a name
- happy feet
- The end

Run the provided tests (see README.md). You should be able to do perfectly with a regular expression < 72 characters.

You are not expected to solve this problem generally; it is impossible. Describe in what situations your solution will fail.

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## $\mathbf{Q2}$

## Develop a regular expression that matches all gerunds within a text.

For example, from the text harry loves to sing while showering. your expression should match only showering.

You may assume that:

- the input contains only lowercase letters, punctuation, and whitespace
- any non-letter character is not part of a word

(there will be no contractions, hyphenated words, etc.).

State any other assumptions that you would like to make.

Generate your own test cases and write a script testing your expression, in the style of test\_name\_matching.py. Describe in what situations your solution will fail.

You should turn in a document (.txt, .md, or .pdf) answering all of the red items above. You should also turn in Python scripts (.py) for each of the blue items.