

It turns out that Python regular expressions (PREs) are more powerful than textbook regular expressions (TREs). That is, there exists a PRE such that, when you use it in the `matches` function from our Python regular expression tutorial, the strings that it matches do not constitute a regular language.

A. Find such a PRE. Try to make your example as small and simple as possible. (Mine is seven characters.) Work over the alphabet  $\Sigma = \{0, 1\}$ . That is, your PRE should accept no strings that contain any other characters. Submit your answer to this question on paper. Include an explanation of what language it matches, and why that language is not regular.

Want a hint? .egaugnal ralucitrap siht deiduts ton evah ew tub ,raluger-non eb ot ssalc ni devorp evah ew taht segaugnal ot ralimis si fo gnikniht m'I egaugnal ehT .noisserpxe raluger eht nihtiw puorg taht ot refer dna ,puorg a esU