

Programming Assignment 2

due Sep 10

Deliverables:

- Code
- Sample runs using test cases
- Explanation (typeset)

Problem:

Write a Python (or C) function that recognizes the presence or absence of a substring of the form **a[a-z]b[a-z]a** in a string. The expression **[a-z]** refers to any lower case ASCII letter between a and z, i.e. all lower case ASCII letters.

To solve this problem, you have to find an NFA that recognizes the regular expression. You can then either implement the NFA directly or by using an equivalent DFA. The function should return the index of the last letter of the first occurrence of the expression. It does not need to recognize more than one occurrence of the substring.

For example, given “aaaabaaabaa” a correct answer would be 7. “aabacbaa” would also yield 7.