Sample Problem

Your principle has tasked you with creating a program to find just the first instance of a given String B in a given String A. You are required to use an algorithm of at least time complexity O(n) in order to be successful, as the program will be used as a module in a larger system and must not hold up operations. Create such a program using the following specifications:

- Input
    - String A, maximum 10^6 characters
    - String B, smaller or equal to String A
- Output
    - Just the index of the first occurrence of String B
    - -1 if there are no occurrences of String B

Online Judge for the problem: https://dmoj.ca/problem/bf4

Solution for the problem:
https://docs.google.com/document/d/1imB5O4oAwUGqG4Q3TYw2IMl8vi3ym6bXbXMV5KpNcmg/edit?usp=sharing

* If you are getting a TLE error, this most likely means you have not implemented the KMP algorithm properly. However, you may still be getting the correct solution. Try to find what is holding up your program, don't be discouraged!