Programming Assignment 4-3

For this exercise, you will create a recursive search routine that behaves as follows: Given a String s in which characters occur in ascending order, and given a character c, it returns true if c occurs in s, false otherwise.

Implement the following strategy: Given String `s` and char `c`: Let `len` denote the length of `s`.

- Let `m = len /2` and let `ch` be the character at position `m` in `s`.
- If `ch == c`, return true
- Else if `c < ch`, return true if `c` is in the left half of `s`, false otherwise
- Else if `c > ch`, return true if `c` is in the right half of `s`, false otherwise

Name your class `BinSearch` and your recursive search method `search`.

Create a JUnit test to test your code. Create one test in which the input character is one of the characters in the input string, Create a second test in which the input character is *not* in the input string.