

Programming Assignment

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 $m = \text{len} / 2$ 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 `BinarySearchStr` and your recursive search method `search`.

```
public boolean search(String s, char c) {  
    // implement  
    return false;  
}
```

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 and another test in which the input character is *not* in the input string.