

String Lab

- 1) Consider the following method. What value is returned by the call `eval("jamjarjax", "ja")`?

```
int eval(String str, String check) {  
    int m = str.length()/2;  
    String a = str.substring(0, m);  
    String b = str.substring(m);  
    return a.indexOf(check) + b.indexOf(check);  
}
```

2) Consider the following code. What will be printed?

```
void mystery(String str) {
    if (str.length() < 4) {
        println("D");
    }
    else {
        print(str.substring(0, 1));
        mystery(str.substring(1));
        print(str.substring(0, 1));
    }
}

mystery("BELLE");
```

- 3) Write a function `int lastIndexOf(String str, String substr)`, which returns the starting index of the last occurrence of `substr` in `str`.
- 4) Write a program that splits the numbers in the given `myNums` string, converts them to floats, and prints them to the console. You may assume that all the numbers are comma+single-space separated and they are all floats. However, your code should work for arbitrary many numbers and numbers with an arbitrary number of integer and floating-point positions.

```
void setup() {  
String myNums = "1.2345, 2.3, .345, 4.0, 5.123345678";  
  
    // Add your code here  
  
}
```

- 5) Finish the following program, which was designed to count and print the number of duplicate strings in the `myArray` string array.

```
// Count and print the number of duplicates in myArray  
String[] myArray = {"A", "B", "C", "D", "A", "F", "C"};  
void setup() {  
    int count = 0;  
  
    // Add code here  
  
    println("There are " + count + " duplicates.");  
}
```

- 6) Write a recursive function `boolean palindrome(String str)` that takes a `String` argument `str` and returns `true` if `str` is a palindrome and `false` otherwise.