Lab 01

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General instructions:

Create a java application project naming the java file as Lab01_2A_ID where ID is your student ID. The example snippets will use the general class name Lab01_2A without the ID portion. If there are multiple tasks, you don't have to create separate projects for each task. A single project file should contain all the .java files that would be necessary to satisfy all the tasks given here.

Tasks:

String is a built-in class in Java. You can declare an object of String class as follows:

```
public class Lab01_2A {

    public static void main(String[] args) {

        String str1 = "Test string";      //here we declared an object of
        String class

        System.out.println(str1);

    }

}
```

You can access a particular character within the string object using charAt() method. And the string can be taken as input rather than assigned manually through code. In order to take input, Java has a built-in Scanner class. We need to import it so as to create an object of the Scanner class. Refer to the example below:

```
import java.util.Scanner;

public class Lab01_2A {

    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);


        System.out.println("Input a string: ");

        String str1 = sc.nextLine();

        int index = 0;

        System.out.println("The whole string is: "+str1);

        System.out.println("The character at position "+index+":
      "+str1.charAt(index));

    }

}
```

1. Now create a Java program that takes as input a string of arbitrary length and passes it as an argument to another function that checks whether the given string is a palindrome or not. Note that we are not considering case-sensitivity for this check. That is, uppercase letter and lowercase letter are considered the same as long as they are the same letter. For example:
    a. Input: “Girafarig”
       Output: It is a palindrome.
    b. Input: “Palindrome”
       Output: It is NOT a palindrome.
2. Create a new string str2 from the original string str1 by putting a ‘*” after every odd position character. Consider the first character to be of position 1 (not position 0 like we address arrays). Print the new string in a separate line.