Lab #8 - Programming Assignment
Due: 30 minutes prior to the start of your next lab meeting.
5 Points Possible

Collaborative Roles for the Lab Session

Collaborative Teaming. For this lab you will be working in your assigned teams. If you are unable to complete your assignment during the lab then it is expected that your team meet and collaborate outside of class to finish and submit the problem assigned.

Role:	Description: **Every member will rotate roles at every checkpoint.**
Driver	The driver is in charge of the computer which includes **entering code, saving, testing, and submitting**. This individual should be soliciting the other two members for advice.
Navigator	The role of the navigator is to look over the shoulder of the driver for **syntax errors, logical errors, and concerns related to course standards**. With the introduction of user-defined functions the role of Navigator should include tracking function names, return types, and parameters to help the driver as they enter code.
Manager	The manager may not be as close to the driver as the navigator but still plays an important role ensuring that the **algorithm to be implemented is correct,** can be tested using a variety of input to verify correctness, and **complies with the additional requirements of the assignment.**

Problem: Given a number composed of only digits 1 and 2 determine the minimum number of changes you would have to make such that the ending number would be composed of alternating digits 1 and 2.

Example Execution #1:

```
Enter the initial configuration -> 1222121

Fewest # of required changes: 1
```

- Note: the change to `1212121` would necessitate one flip of a 2 digit to a 1 digit.

Example Execution #2:

```
Enter the initial configuration -> 11111

Fewest # of required changes: 2
```

Example Execution #3:

```
Enter the initial configuration -> 12221

Fewest # of required changes: 1
```

Example Execution #4:

```
Enter the initial configuration -> 21212

Fewest # of required changes: 0
```

Example Execution #5:

```
Enter the initial configuration -> 112121212121

Fewest # of required changes: 1
```

Example Execution #6:

```
Enter the initial configuration -> 221212111

Fewest # of required changes: 2
```

Example Execution #7:

```
Enter the initial configuration -> 1112222

Fewest # of required changes: 3
```

Example Execution #8 (validation expectations demonstrated):

```
Enter the initial configuration -> 112113112112

Error! Input must contain only digits 1 and 2!

Enter the initial configuration -> 112112112112

Fewest # of required changes: 6
```

All course programming and documentation standards are in effect for this and each assignment this semester. Please review this document!