## CECS 174 - Assignment 10

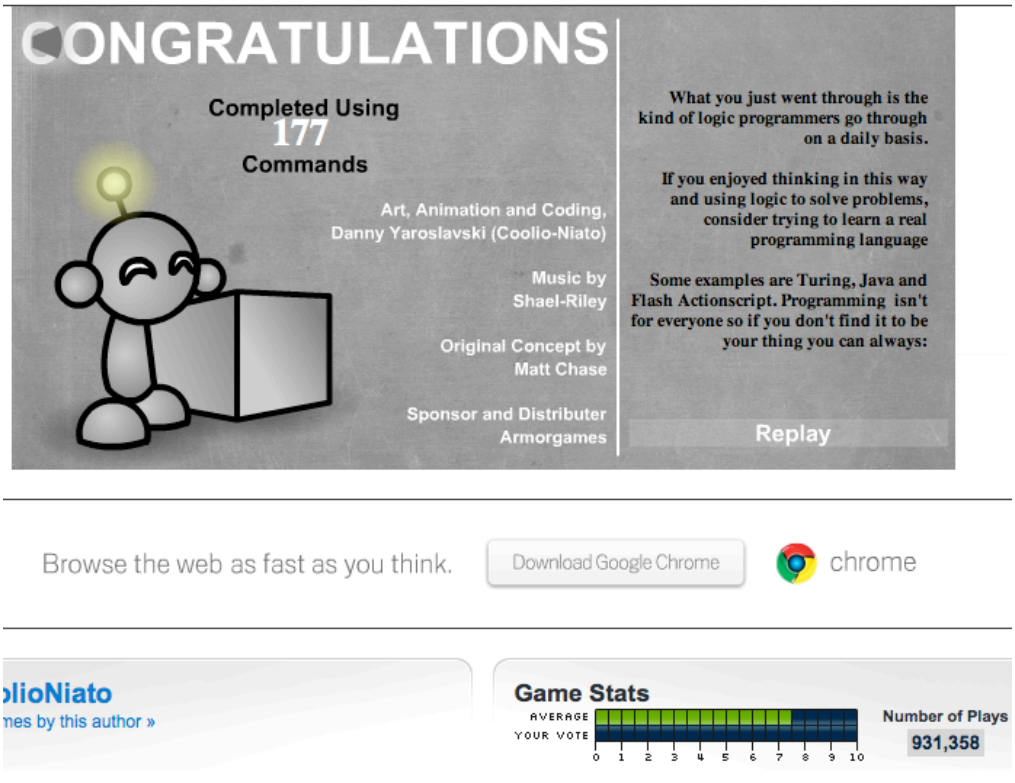
## Part A – Light-Bot - [http://armorgames.com/play/2205/light-bot](http://armorgames.com/play/2205/light-bot)

Play the game Light-Bot. Finish all 12 levels of the game. Print out a screenshot (Windows: Alt-PrintScreen, Mac: CMD-Shift-4) of the congratulatory screen with final number of commands you used along with the game stats that are displayed right below the game.

**Tips:**

1. The bot will stay on the same block if he is told to move forward into a wall or off of a raised block (he will jump off of one of any height however).
2. Lighting up a gray block will do nothing. Lighting up a blue block an odd number of times will turn it on, an even number of times will turn it off.
3. Try breaking down the problems into smaller tasks. Test them before moving on to the next part. Your command counter is not changed until you solve a level, so try experimenting.
4. If you don't seem to have enough room for all of your commands, try writing out all of the necessary steps to do everything. Then try to find chunks of commands that can be repeated.
5. If you still can't seem to solve it, try coming up with alternate routes.

**Example Screenshot**:



## Part B – Void Functions

Write a program, using static void methods, that allows the user to choose from different options for displaying a string. Allow the user to repeat the program until they choose to quit. Check all inputs for validity.

**Write methods to:**

1. Display the menu.
2. Display the string.
3. Display the string backwards.
4. Have the user input a number *n*. Use method 2 to display the string *n* times.
5. Have the user input a number *n*. Display the string vertically *n* times.
6. Display whether the string is a palindrome (a string that is spelled the same forwards and backwards.

**Example Output:**

```
Enter a string
Hello
Menu:
1.  Display String
2.  Display String Backwards
3.  Repeat String
4.  Vertically Repeat String
5.  Check for Palindrome
6.  -Quit-
1
Hello
Menu:
1.  Display String
2.  Display String Backwards
3.  Repeat String
4.  Vertically Repeat String
5.  Check for Palindrome
6.  -Quit-
2
olleH
Menu:
1.  Display String
2.  Display String Backwards
3.  Repeat String
4.  Vertically Repeat String
5.  Check for Palindrome
6.  -Quit-
3
Enter # of repeats: 3
Hello
Hello
Hello
Menu:
1.  Display String
2.  Display String Backwards
3.  Repeat String
4.  Vertically Repeat String
5.  Check for Palindrome
6.  -Quit-
4
Enter # of repeats: 5
H H H H H
e e e e e
l l l l l
l l l l l
o o o o o
Menu:
1.  Display String
2.  Display String Backwards
3.  Repeat String
4.  Vertically Repeat String
5.  Check for Palindrome
6.  -Quit-
5
Hello is not a palindrome.
Menu:
1.  Display String
2.  Display String Backwards
3.  Repeat String
4.  Vertically Repeat String
5.  Check for Palindrome
6.  -Quit-
6
Quitting Program...
```