Here are several lab projects. Remember that the goal is for you to learn the material by practicing programming. Make sure you understand what you are doing and why. For each project you should first read the description and then predict how long it will take you to complete the project. When finished enter in the actual amount of time required. If you have questions or need help just ask. Try to evolve your programs!

1. Create a program that prompts the user to enter a string, reads in the string, and then outputs the string, its length, the first character of the string (the character at index 0), the last character of the string, the string in all uppercase, the string with all of its e's and E's replaced with 3's.

   For example, if the input string is "Alfred E. Neuman" then the output would be
   
   Alfred E. Neuman
   16
   A
   n
   ALFRED E. NEUMAN
   Alfr3d 3. N3uman

   The list of String class methods on page 119 should help you with this problem.

   Demonstrate your program to your lab instructor and have him/her initial here: ______
   Or create a report if this is not completed in "lab".

   How long (minutes) do you predict this exercise will take? __________

   How long did it actually take? __________

2. Create a program that instantiates a Doodad object d1, sets it so that its name is your name, its number is your age, its color is your favorite color, it likes ice cream and it is not injured. The program should then "print" the Doodad (System.out.println(d1);).

   Demonstrate your program to your lab instructor and have him/her initial here: ______
   Or create a report if this is not completed in "lab".

   How long (minutes) do you predict this exercise will take? __________

   How long did it actually take? __________

3. You are to create a program that instantiates a Doodad object christmas, sets it so that its name is "Holly", its number is 25, its color is "Christmas Green", it likes ice cream and it is not injured. The program should then "print" the Doodad (System.out.println(christmas);). Next the program should include two lines as follows, that print the Doodad's response to the question "Do you like Christmas?".

   System.out.println ("Holly, do you like Christmas?");
   System.out.println (christmas.answer("Holly, do you like Christmas?"));

   Create a report and attach it to this sheet. Include at least two sample runs of the program in your report.

   How long (minutes) do you predict this exercise will take? __________

   How long did it actually take? __________