Due: in class 9/24
Out of class 10/1

In black board we are not allowed to attach java files, therefore we must zip all files before submitting. Use only one project in BlueJay and zip the folder that contains the files. You may then attach the zipped folder. We will demonstrate how to zip in class. If you don't have a zip program on your computer there are several free versions available. I use 7-zip.

1. Create a program that draws a face similar to the following or create one of your own.

///// | 0 0 | (| ^ |) | [ ] |

(In class)

- 2. Run example P1.9 and P1.10 on page 29 in your text. Combine the 2 examples and write a java program that should
  - read the user's name
  - read an action that they would like to perform such as "ride a bike"
  - Using the JOptionPane.showMessageDialog, display a message that says: "I'm sorry, (the name), I'm afraid I can't do (the action)." Java uses the "+" sign to put the different parts together rather than the & in Visual Logic. For example:

## JOptionPane.showMessageDialog(null, "hello" + name); (in class)

3. In Visual Logic you were asked to create a program that calculate and display the sum, difference, quotient, products and average of the two numbers. Create a java program that has two variables, one that contains the number 10 and one that contains the number 5. Have the program calculate and print the sum, difference, quotient, product, and average of the two numbers. (out of class)

4. The API (Application Programming Interface) documentation lists the classes and methods of the Java library. Go to http://java.sun.com/j2se/1.5/docs/api/index.html and find out what the method concat of the class String does. The purpose of this problem is to familiarize yourself with the api and concat so you may not use the "+" symbol to join the sentences. Use concat to complete the following program so that it computes a string with the contents "the quick brown fox jumps over the lazy dog", and then prints that string and its length. Do not alter the variables to include an extra space. You must use the concat method and not the +.

```
public class ConcatTester
{
    public static void main(String[] args)
    {
        String animal1 = "quick brown fox";
        String animal2 = "lazy dog";
        String article = "the";
        String action = "jumps over";

        /* Your work goes here */
    }
}
(out of class)
```

- 5. Write an AreaTester program that constructs a Rectangle object and then computes and prints its area. Use the getWidth and getHeight methods of the rectangle class. Print the computed answer and the expected answer.
  (in class)
- 6. Write an PerimeterTester program that constructs a Rectangle object and then computes and prints its perimeter. Use the getWidth and getHeight methods of the rectangle class. Print the computed answer and the expected answer. (out of class)
- 7. Using the code on pages 58 and 62, draw two rectangles. Each rectangle should be a different color and they should touch one another but not overlap. (10 points extra credit)