Intro to Programming
Scratch #14a – Pong Part I

Objective: Use the techniques you've learned in Scratch to finish a 3-level pong game.

1. Login to the Scratch website. You should already have a project called *scratch_14_example* that we completed in class.

    a. Open the *scratch_14_example* project.

    b. Do *File->Save as a copy*. The name of the project will change *to scratch_14_example copy*.

    c. Rename the project to *first_last_scratch_14*

    d. Do *File->Save now*

2. Get ready.

    a. Add a second **Ball** sprite. This sprite will only be used on level 2

    b. Create a variable called *Score* for **all** sprites. This variable should appear on the Stage when the green flag is clicked.

    c. The winner and loser screens we did in class were lame. Make better versions of these screens.

3. You have these requirements for the project:

    a. **Sounds**:

        i. Make a sound when a ball hits the paddle or a brick. You can use the same sound for the paddle and the brick or different sounds for each one of them. *Boing* is always a good sound.

        ii. If the player wins, play a cheering sound (until done).

        iii. If the player loses, play a sad sound (until done).

        iv. Play music while the game is playing.

    b. **Level 1**:

        i. Timer is set for 30 seconds.

        ii. One ball appears on the screen.

        iii. Speed increases every 3 seconds.

        iv. Score increases when the ball hits the paddle.

        v. Both *Time Left* and *Score* appear on the screen.

    c. **Level 2**:

        i. Timer is set for 40 seconds.

        ii. Two balls appear on the screen. They must have different colors and the colors must be different from the ball on Level 1.

        iii. Speed increases every 5 seconds.

        iv. Score increases when either ball hits the paddle.

   v. Both *Time Left* and *Score* appear on the screen.

d. **Level 3**:

    i. Both the *Time Left* variable and the *Score* variable hide. Neither variable should appear on the screen.

    ii. One ball appears on the screen. It must have a different color from any of the balls on Levels 1 and 2.

    iii. 21 bricks appear on the screen with 3 rows and 7 columns. Each row has a different color brick.

    iv. Speed increases every 6 seconds.

    v. Score increases when the ball hits the paddle and when a brick is hit.

    vi. Level ends when all 21 bricks have been hit.

e. **Game Over**:

    i. The game is over if the player either loses or wins.

    ii. The *Score* variable appears on the screen when the game is over.

    iii. The *Time Left* variable does not appear on the screen when the game is over.

    iv. The player loses the game if any ball hits the **Death Line** in Level 1, 2, or 3

    v. The player wins the game if all 3 levels are completed successfully.

4. **All** sprites need to receive winner and loser broadcasts. When the game is over, all scripts should stop.

5. Always do *File->Save now* before you log out of the Scratch website.

6. Now do *File->Save to your computer*.

7. If you have not been assigned Scratch #14b, turn in your *first_last_scratch_14.sb3* file to *missblomeyer.com* in the usual way.
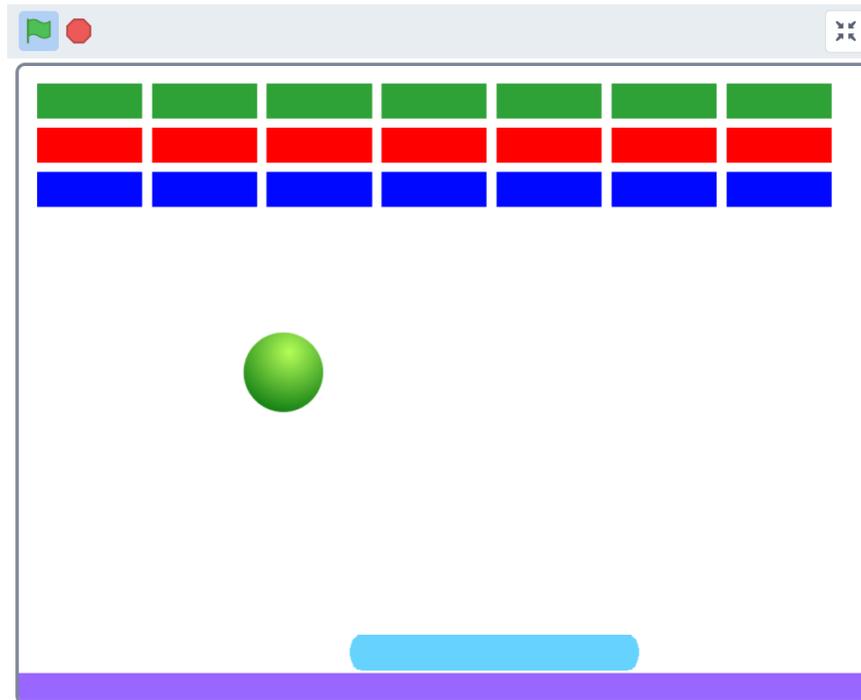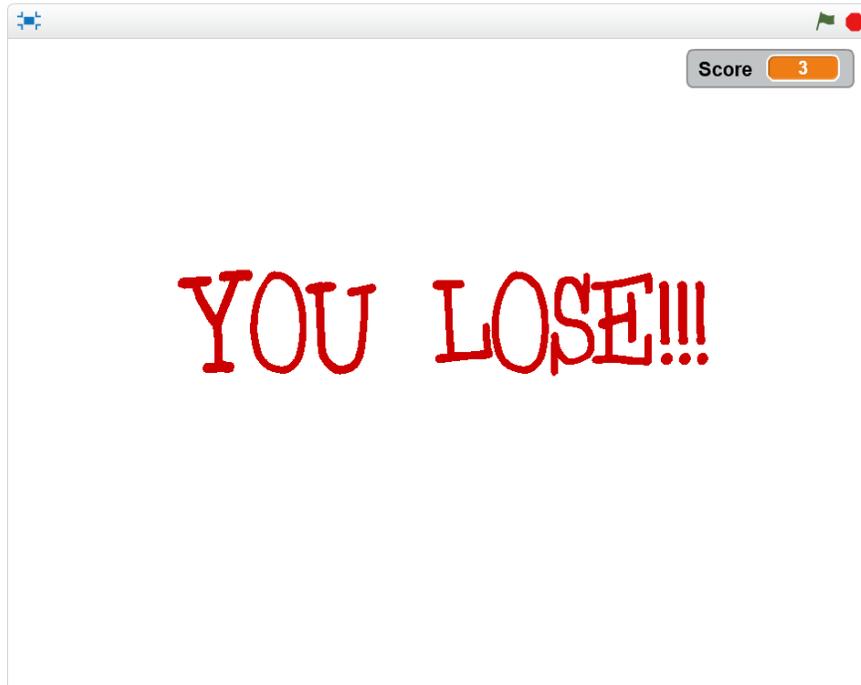
Sample Level 1 Screen
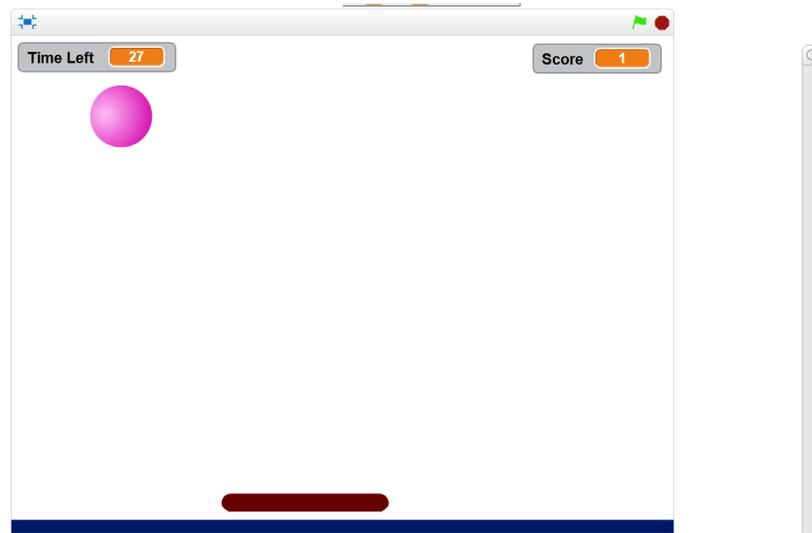
Sample Level 2 Screen
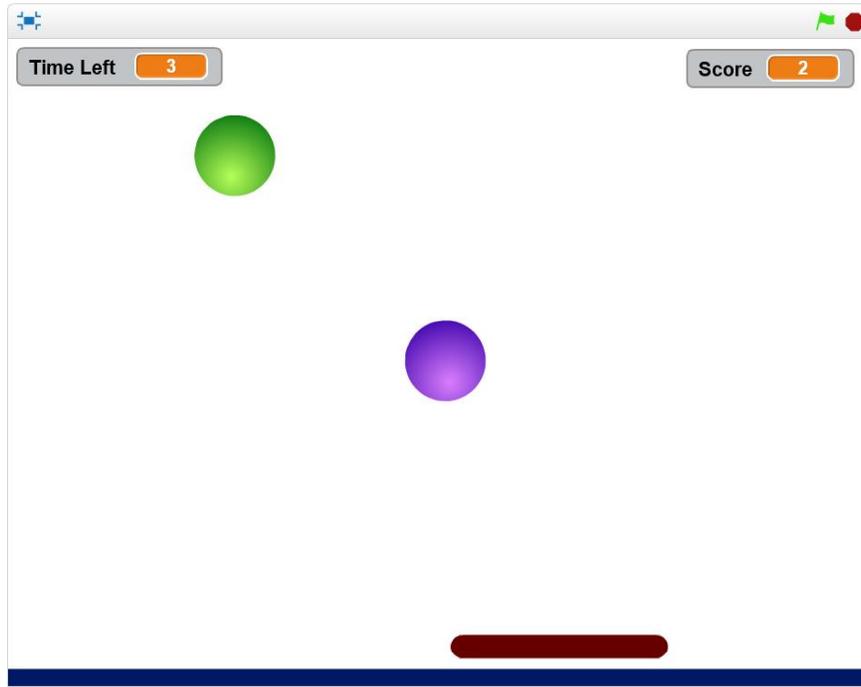
Sample Level 3 Screen

Sample Loser Screen

Score 3

YOU LOSE!!!

Sample Winner Screen

Score 3

YOU WIN!!!!