

Intro to Programming

Scratch #14 – Pong

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. Both variables are in large readout mode with labels on the Stage.
 - 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. Both variables are in large readout mode with labels on the Stage.

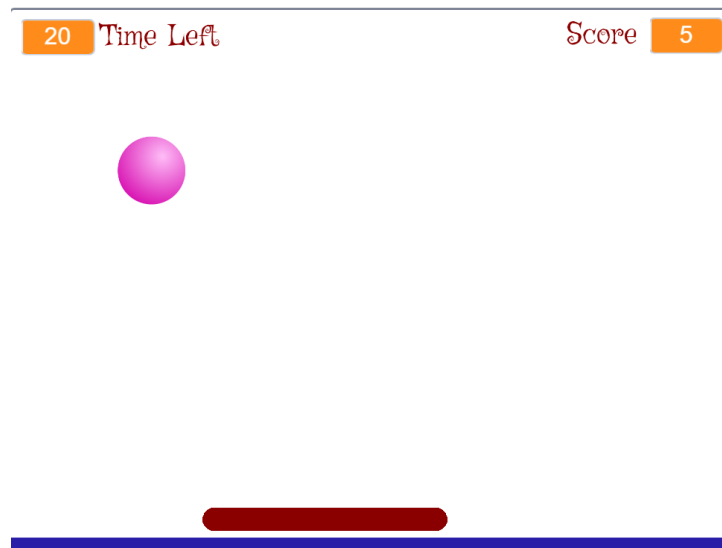
d. **Level 3:**

- i. Both the *Time Left* variable and the *Score* variable hide. Neither variable should appear on the screen. There is no timer in Level 3. Game places until all bricks are gone.
- 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.

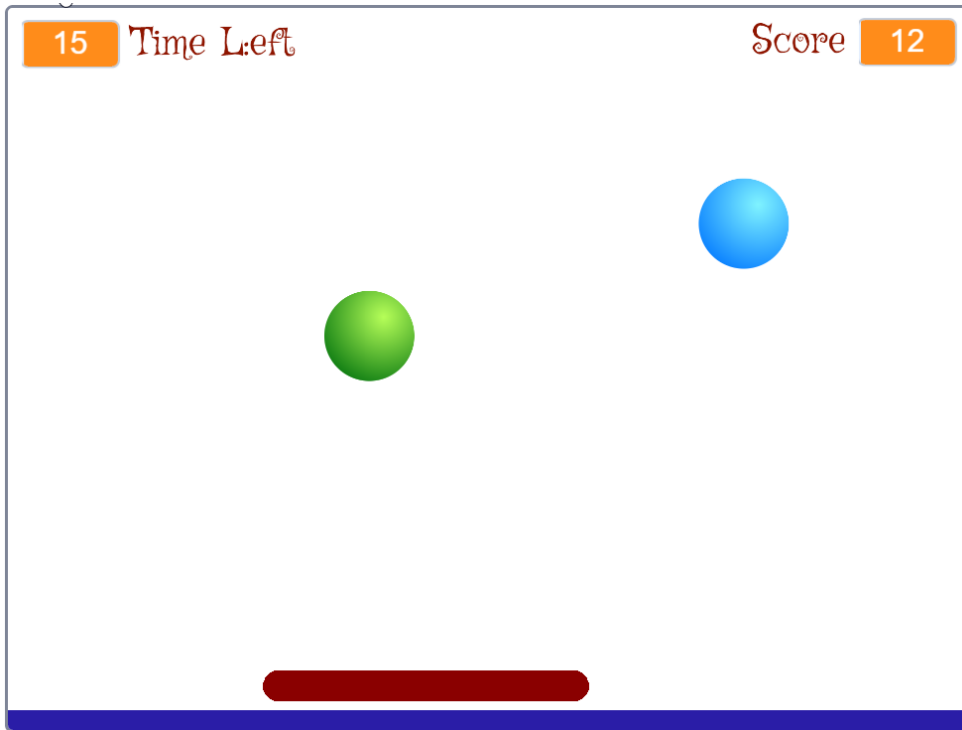
e. **Game Over:**

- 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. It should have a label reading *Final Score*.
 - 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. Turn in your *first_last_scratch_14.sb3* file to *missblomeyer.com* in the usual way.

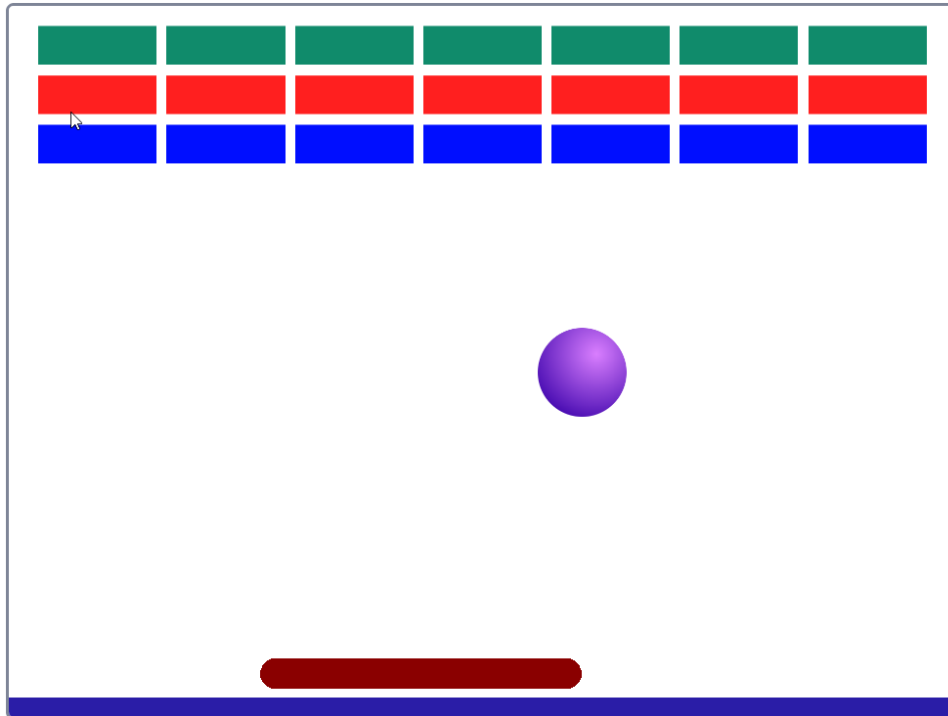
Sample Level 1 Screen



Sample Level 2 Screen



Sample Level 3 Screen



Sample Loser Screen



Sample Winner Screen

