

## Intro to Programming

### Scratch #13 – Zombie Invasion

Objective: Enhance the Zombie Invasion game started in class

1. Login to the Scratch website. You should already have a project called *scratch\_13\_example* that we completed in class.
  - a. Open the *scratch\_13\_example* project.
  - b. Do *File->Save as a copy*. The name of the project will change to *scratch\_13\_example copy*.
  - c. Rename the project to *first\_last\_scratch\_13*
  - d. Do *File->Save now*
2. Make the following enhancements:
  - a. Add 2 additional kinds of *Zombie*. Duplicate one of the existing costumes, change its color and give the costume a name. How are your zombies different besides color? Lives? Speed? Size?
  - b. A zombie should spawn every 1.0 to 2.0 seconds. You will need to add additional if-then-else blocks where spawning takes place. Your 5 types of zombies should spawn 30%, 15%, 20%, 25% and 10% of the time. You need to figure out how to do this correctly.
  - c. Make a cool Game Over screen. The one we did in class is lame.
  - d. Add a variable called *Score for all sprites*. This variable should appear on the screen. It should be set to zero when the green flag is clicked. It should be in large readout mode and text should be present on the Stage describing the variable.
  - e. Figure out how to change the score. Killing a *Strong* zombie should give more points than killing a *Fast* zombie. Killing a *Fast* zombie should give more points than killing a *Normal* zombie. How do your new zombies rank?  
  
Hint: create a variable called *zombie points* for the zombie sprite only. Before the zombie is cloned, set this variable value to be the number of points that the player receives when that particular type of zombie is killed. Then, when *zombie lives* is zero, change the value of *Score* by *zombie points* and then delete the clone.
  - f. Add a variable called *Player Lives* for all sprites. This variable should appear on the screen. It should be in large readout mode and text should be present on the Stage describing the variable. When the green flag is clicked, the *Player* sets this variable to 5.
  - g. When a *Zombie* touches the *Player*, broadcast *hit* instead of *game over* and then delete the clone.
  - h. When the *Player* receives *hit*, it plays sound *ow*, and then changes *Player Lives* by -1. If *Player Lives* = 0 then the *Player* broadcasts *game over*.
  - i. Choose music to play while the game is playing. The *Stage* should play the music in a forever loop when the green flag is clicked.
3. Always do *File->Save now* before you log out of the Scratch website.
4. Now do *File->Save to your computer*.
5. Turn in your *first\_last\_scratch\_13.sb3* file to *missblomeyer.com* in the usual way.

