

## **Pygame Assignment – Balloon Pop Plus**

### **Original Assignment**

In class you saw the completed Balloon Pop assignment. For this assignment, you fill out the posted framework, **balloonpop framework.py** to complete the assignment.

A summary of the what the game does is as follows:

The user controls their “player” with the left and right arrow keys. The player can only slide left and right at the bottom of the screen.

When the user presses the space button, an arrow gets shot, going up. (In the code, the arrow always exists, but normally it’s off the screen with no velocity. When the user presses the space button, the arrow’s position will change to where the player is and its velocity will be going up (so DY will be set to a negative number).

If the arrow hits a balloon, then the balloon should no longer appear and 1 is added to the count of balloons popped. There is a hitBalloon function provided that does the necessary math. The balloons are numbered 0, 1 and 2, and this is the number you must pass as the first value of the function. The function returns true or false depending on if the appropriate balloon is hit.

When the user hits all 3 balloons, your program should calculate the time it occurred, subtract from the game start time, and print out the number of milliseconds it took the user to pop all the balloons. To get the current time, do:

```
endT = pygame.time.get_ticks()
```

### **Enhancement #1**

Make the three balloons move from left to right on the screen and then have them wrap around, but leaving them at the same height (y value).

### **Enhancement #2**

Create an arbitrary number of balloons instead of three, in addition to enhancement #1

### **Enhancement #3**

Let there always be three balloons scrolling, so if one balloon is shot, spawn a new balloon at a different x location that doesn’t intersect with the other two balloons. Run the game for a fixed amount of time and the user’s score is set to the number of balloons they can shoot in that fixed amount of time.

### **Enhancement #4**

When the balloons scroll, instead of keeping them on the same y value, have them move down the screen (increasing y). If a balloon makes it to the bottom without getting shot, the game ends.

### **Other Potential Enhancements**

Make the balloons different colors or sizes and give each balloon a different amount of points for being shot. Have the balloons move in different ways.