



**Educational Objectives:**

The goal of this homework is to familiarize the student with object oriented design in Python and the PyQt graphics framework. Students will create the below design and learn about coordinate systems, signals and slots, inheritance, and many other UI tips and tricks.

**Resources:**

PyQt4 tutorial at <http://zetcode.com/gui/pyqt4/>

PySide libraries at <https://srinikom.github.io/pyside-docs/index.html>

**Requirements:**

- Program shall be done in pyqt4
- Program shall make an object bounce within a perimeter border. Very similar to pong, but without the paddles.
  - Bouncing object shall change direction when it hits a wall.
- Program shall have a button to change the bouncing object's color.
- Program shall have a button to increase the bouncing object's speed.
- Program shall have a button to decrease the bouncing object's speed.

**Lab Submission:**

Submit all code to the below URL by 4:40 pm on Jan 25<sup>th</sup>.

<https://www.dropbox.com/request/xUicvxtcNi7BQU5IMVQJ>

**Be prepared to show me a quick demo during lab on Jan 25<sup>th</sup>**