Questions for Plot Project Day 1

# Part 0: GUI Vocabulary

1. What is model/view separation in GUI programming?
2. What is a component when creating GUIs?
3. What is a container when creating GUIs?
4. What is a window when creating GUIs?
5. GUIs use "event-driven programming" -- what does this mean?
6. What is another context where event-driven programming is the norm?
7. When (in general) might you trigger an event in a GUI? (list 3 different times)
8. The following loop is written in a non-event driven manner. How would we change it so that it was event driven? (feel free to use pseudocode)

while (true) {  
 player.TakeTurn()

}

# Part 2: Visualizing our plotting fields

int x\_adj = FILL ME IN

int y\_adj = FILL ME IN

# Part 4: Qt GUI Basics

1) What object does our PlotWindow inherit?

2) What objects are created in the main.cpp file? What two methods are called? What do these two methods do? Take a look at the documentation for [QWidget](http://doc.qt.io/qt-5/qwidget.html) and [QApplication.](http://doc.qt.io/qt-5/qapplication.html)

3) Write down the lines of code that you would use in the PlotWindow object to access at least 3 different ui elements that you created in your form.

4) What are some differences between a QGraphicsView and a QGraphicsScene? In our example, which one contains the other?

# Part 5: Connecting randomButton to a method

1) What is the name of the method that was created? What object is it a method of? When you look in the header file for that object, what is this method?

2) Write code in this method that prints to qDebug(). When is this code run?

3) Copy & paste your method here.

# Task 6: Connecting a signal to a non-default slot

1) Add a slot void SlotTest() to your PlotWindow. You'll need to add the method declaration in the .h file in the "slots" and the implementation in the .cpp file. Put a print to qDebug() in this slot. Copy + paste your SlotTest method here.

2) Connect the signal of &QAbsractButton::pressed to the slot that you made for number 1. You may find the documentation useful: <https://doc.qt.io/qt-5/signalsandslots.html>

The basic syntax of connecting is: connect(sender, sender signal, receiver, receiver slot)

Copy + paste your working connect statement here.