Compsci 230 Assignment 4

Question 1.1

The main problem with the performance of the program would be poor responsiveness. Panning, resetting and zooming in and out is slow (it lags quite hard).

Question 1.2

The methods for panning and zooming both use the Event Dispatch Thread (EDT). Since SwingWorker is running long tasks in EDT which causes the GUI to lock up. This means the entire GUI will be slightly unresponsive (slow responsiveness) which we see when zooming in/out and panning.

Question 3.3

When the iteration number is at 10,000, the rendering speed of the Mandelbrot set has a 1 second lag when zooming in and out, showing big blocks of pixels.
When compared to zooming in and resetting, is when I see the real comparison.
The performance depends on the computer. The more cores on the computer, the faster the rendering speed will be.

Question 4.2

Possible source of thread interference could be when the two threads interfere with each other but act on the same data making them interleave.