

For our extra credit assignment, we did two separate things:

- We added the 'x' keypress, which allows to pause/resume painting. For this, a local variable called **paintingIsPaused** keeps track of the state and painting is done accordingly.
- We changed the brush color to smoothly blend over a list of random colors, creating a nice gradient between them. For this, we used linear interpolation in the RGB space. The implementation is mostly contained within the **interpolateColors** method, which takes in two colors and the ratio at which to interpolate between them. A separate **step** variable tracks at which part of the cycle we're at. So for example, if our colors were (c_1, c_2, c_3) , we would first interpolate c_1 and c_2 , then c_2 and c_3 , and finally c_3 and c_1 . This would repeat cyclically to create a seamless effect.