Student Name : 胡景竑

Student ID: 109550020

Email address: henryhu.cs09@nycu.edu.tw

Problem 1.4 is to plot the curve of the division and multiply of three equation z1, z2, and sin(x).

Step 1 Ask the user to input d, check if the input is valid.

Step 2 Use the input and a number s in a for-loop to construct equation of z1, z2

Step 3 Find singular points in the equation (where z2 = 0), plot four parts of line respectively.

Step 4 Pause for 0.2 second, draw the segments for another s value. Until s reach the end of the loop.

Problem 1.5 is to read a png file and draw on it or manipulate its intensity.

Step 1 Input an option and check if it is valid, if not then ask again.

Step 2 Reset the image to 320x320.

Step 3 If option is 0 then quit the program, and show student ID and name.

Step 4 If option is 1 or 2, set ten pixels of the image to white from left or right to another side.

Step 5 If option is 3 or 4, clear the red intensity of ten pixels of the image from left or right to another side.

Step 6 If option is 5, reduce the intensity of a disk region by using patch function, the region is defined by polar coordinate. And toggle the color value of the region by 0.1 and 0.9 every calling time.