For lab 1 we where tasked one solving four problems each problem could be an extension of the two source codes we where given. All four problems are about recurssion, the first problem is to recursively make a pattern of squares. The second problem is a series of circles with in the circles. The third probelm is to make a set of trees. Lastly the last problem is to make circles with in circles but filling in all the circles.

For the first problem I had to think of how could I affect every corner of each square, Irembered how we went into a recursive call with in a recursive call and based it off of that, all Ineeded is to think of the points such as where should they be ploted and then the recursive call would shrink them to what Ineeded. The second problem Iwas completly lost due to me not knowing wich where the point for the middle, once Ifigured out how to play around with it Ifound the solution. The third problem Ithought about how to do it, Ithought to my self Ijust need to get both points and then mirror than from there mirror what Igot as it would increase, of course Iwas over thinking that and ended up just going with both points and letting the next recursive call branch out.

On question one the main thing I changed was with in the loop Iadded 4 recursive calls each call would affect a certain coner and would affect it every time to make the image right. On the second Ijust added a modifier so Icould change the center as need be Ialso belive that on W Ichanged that to a two because when it was a decimal the circle would lean towards the right when Ineeded it to lean to the left. Lastly on the tree I used a similar code than the first question just changed it to output the two branches and let the tree grow with every recursion, unfortunatly the more I played with it the more I couldn’t find out how to get it slanted.

Beginning on the project I went ahead and played with the values learning what each one does and how it affects the code, this was vital to doing the lab. Once I under stood what each one did I had to think on how to modify it for it to work, as always I over thought my ideas, worked on them, saw how they wouldnt work and then scrapped them due to how useless they where, but only after I had learned from them, for example on question 1 I thought about hardcoding it first, each recursive level and them seeing a pattern, as Isaw a pattern I wanted to make a formula that would allow me to get the distance between each points, but first I had to think of how many points where needed, so I decided to write a nother formula on how many points are needed for a recursive call, as I progressed , I grew frustated because of all the info and didn’t know how to implament it. At the end I was over whelmed, ready to give up an old classmate of mine reached out, we started talking about how to solve the problem, and he mentioned how four recursive calls can do what I was doing. From there it clicked.

On question two I was mearly playing with the atributes when Ithought about how Icould affect the center, looking at the center object/item Iwent a head and tried to combine W with my added modifier to move the center, which worked well, the last problem Idid Ijust tried on getting a straight line goin both directions. I did this by using the grind to see where Icould plot the points to get what Iwanted, from there Iused the same idead Iused for the draw squares but only two recursive calls.

On this project I learned how difficult this class may be. While learning how to use python the same level as I previously had learned how to use java it adds quiet the challange, which only practice will help, I am assuming that as I go through the labs this will be my worst lab done due to how new I am to the language and new ideas that willbe used, but they will get better