Lab 2 – Python Programs with Turtle Graphics

Task 0 - Get Organised.

- Create a new folder lab7 in your folder labs.

Task 1 – Square theme

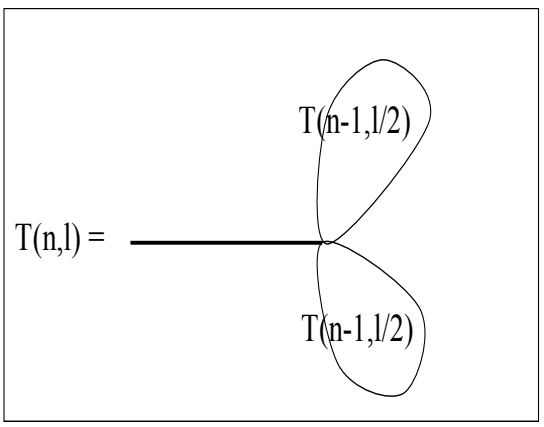
This task requires you to write some functions to draw a square or multiple squares using a turtle.

- Create the turtle pen and set some features for it.
- Write a function square(x1,y1, w) to draw a square from (x1, y1) with the width w.
    - Goto (x1, y1) without drawing
    - For 4 times
        - Forward and turn right 90
- Call the function square and see the first turtle drawing.
- Write a function that draws multiple squares
    - For several times
        - Draw a square
        - Turn left with some angle
- Write a function that draws multiple squares at some random locations
    - For several times
        - Get some random locations
        - Set a random color
        - Draw a square
        - Turn left with some angle

Task 2 – Binary Tree

This task is to draw the binary tree and then perhaps you can attempt the quadratic tree (tree with 4 branches).

- Follow the definition and write the recursive function for the tree as below



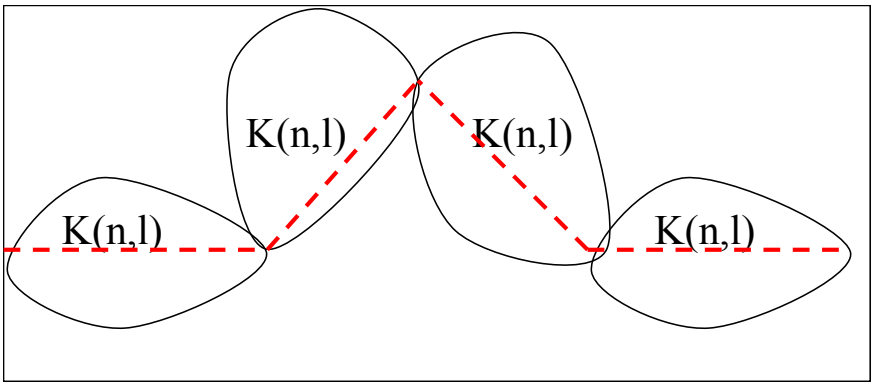
- Create a pen and set some features including the speed(0)

- Set the initial position of the turtle to get benefit of the canvas / screen
- Then call the function for various values of n and l.
- Do similarly for a tree with 4 branches.

Task 3 – Snowflake

This task is to draw the snowflake. Do not forget that the snowflake is made of 3 koch curves.

- Follow the definition and write the recursive function for the Kock curve as below



- Then write the function (not recursive) for the flake
- Create a pen and set some features including the speed(0)
- Set the initial position of the turtle to get benefit of the canvas / screen
- Then call the function for various values of n and l.