Programming Assignment 1: Draw Tree

A Christmas tree can be designed as a multi-layer solid isosceles triangle, the uppermost triangle has the smallest side length, and the lower triangle side length is larger. For two adjacent triangles, the apex of the lower triangle will overlap the bottom of the triangle above it. Finally, a rectangular trunk will be immediately adjacent to the bottom of the lowermost triangle. Write a C program to draw a Christmas tree as defined below.

1. A Christmas tree can be 2 to 5 tiers. (layer)
2. The side of the uppermost triangle can be 3 to 6 points long. (side)
3. A lower triangle side may be 1 to 5 points larger than it upper one. (growth)
4. The width of the trunk is an odd integer from 3 to 9. (width)
5. The height of the trunk can be 4 to 9 points. (height)
6. Use '#' to mark the points on the sides of the triangle, '@' to mark the points inside the triangle, and '|' to mark the points of the trunk.

Write comments in your program solution. Also, write a report to explain how you develop your assignment solution. Homework assignment 1 is due by **11:59 pm, Monday, October 3**. Use **assgn1_DXXXXXXX.c** for your source code file and **assgn1_DXXXXXXX.pdf** for your report. where DXXXXXXX is your student ID. Submit the source code and the report to **iLearn2**.

Example of program execution: