Problems that I encountered:

When coding this assignment, the problem that I encountered was that I couldn't correctly use the for loop and if to solve for the roof and house, Maybe because of the misunderstanding of the concepts, sometimes I got stuck with the format too. It is a little bit difficult for a person who has no fundamental ideas to draw the house through coding. And in this assignment, I use three variables: I, k, and t.

Roof of the house:

I divided the roof into three parts. The first line, the middle trapezoid, and the last line of the roof The first for loop was the blank space for the left side of the roof; the shape of the blank space looks like an inverted triangle; the printf("\n") indicates changing to the second line; the second for loop indicates the first line of the roof; from the third one, it contains two for loops: O'Neil and else inside. The outer one controls the line changing; the first inner for loop controls the blank space; the second inner one controls the if and else, which means that if k equals zero or k equals r_roof+1, it will print(#); if not, it will print(*); then we change the lines. The last line of the roof means we will print the (#) on the last line of the roof.

The body of the House:

Same as the roof, the body of the house has been divided into three parts, The first part is the two (@) lines on the top of the body; there is a for loop containing another for loop; in the inner one, it controls the blank space; while the outer one contains an if and else; the if contains a for loop that controls the (@) for the wall of the house. Else controls the windows and the door of the house, which I use lots of else, else if inside the if, and the last else indicates the last two blank-space lines.