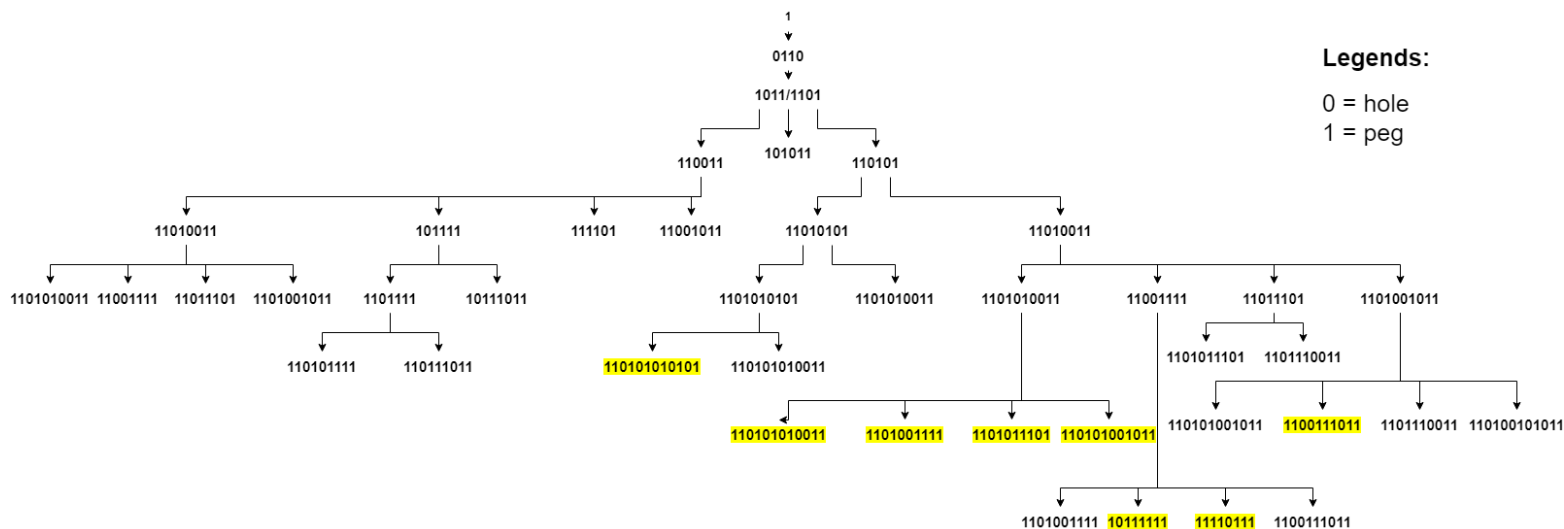# Etude 12 Report : 6991678

Introduction

This report is aiming to report on my findings of Peg jumping games and the methods I took to solve and find all possible starting cases for any given pegs size.

As you can see from the graph above, the method I used to find all the unique starting position is that I "unhopped" from 1 (win position) and constructs all possible paths from there. I found that there are total of 8 starting positions for 7 pegs case that is winnable (highlighted in yellow). I also found that there are many paths that leads to the same position as each other so efficiency and pruning is important here, especially for 20 pegs case. With the program I submitted I took into the consideration of positions that were already "seen" and do not need to go beyond that point so the program will work well with 20 pegs case.