The problem

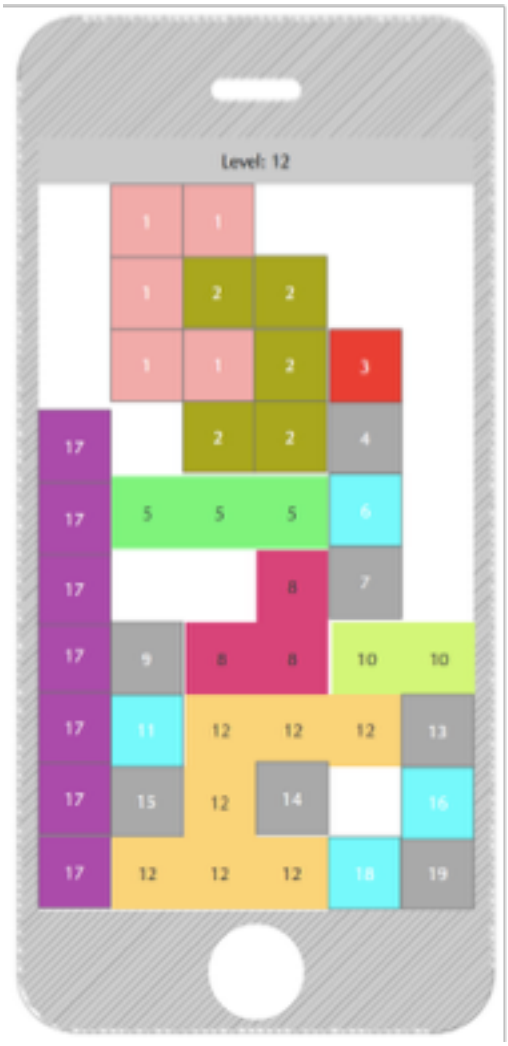
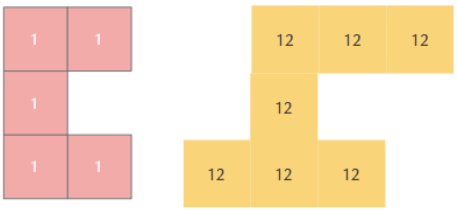
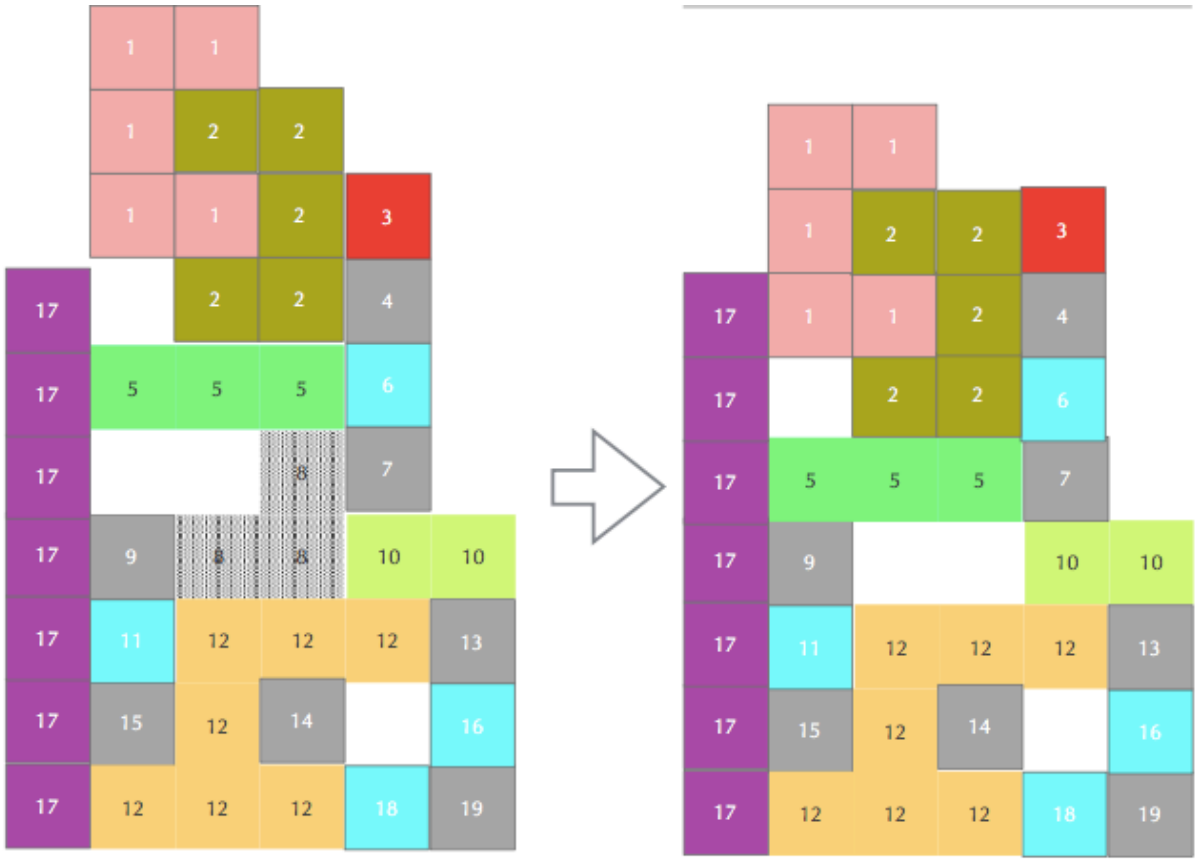


Figure 1

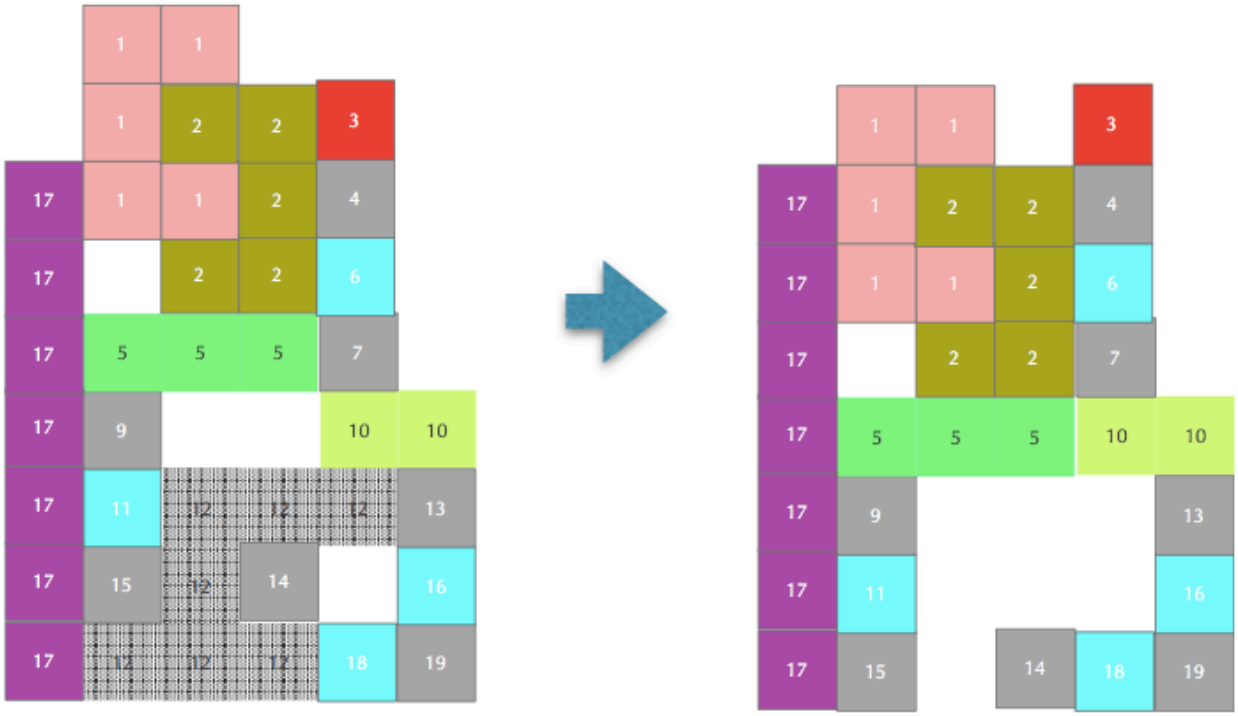
The image above is a screenshot from a Tetris-like game. Blocks of different shapes fall from the top and are stacked one on top of another. In the image above, each block has a unique number, so that all the squares with the same number are part of the same block. For example, block 1 and block 12 are shown below:



Based on user input, a certain block will disappear from time to time, and as a result, blocks may fall to occupy the space freed up by the disappeared block. For example, if block 8 disappears (shown in the figure left below), blocks 1, 2 and 5 will fall down by one row, to fill the space (shown in the figure right below):



Blocks always retain their shape when moving. They can move any number of rows down, so long as the shapes do not change and there is space to move. Now based on the next user input, if block 12 disappears, then blocks 1, 2, 5, 9, 11 and 15 move down by 1 row. Note that block 10 does not move, and neither do blocks 3, 4, 6 and 7.



Your task is to write a one screen mobile app that starts with the configuration shown in Figure 1. It should then take a numerical input from the user, for which block is to be removed. The program should then calculate the configuration that results from the removal of that block. The configuration should be re-drawn on the screen and the user should be asked for the next block to be removed. This cycle should run until all blocks have been removed.

Feel free to hardcode the initial configuration, values as well as arena size (10x6). When redrawing the configuration, use the numbers (with appropriate colors) to identify the blocks, and white space to identify empty areas.

Best of luck!