1. Ultimately the software aims at cognitive rehabilitation
    a. Memory
    b. Attention
    c. Decision-making
    d. Logical reasoning
2. Basic rule of Mahjong
    a. In this function, explain to the users how to play mahjong. Introduce it as 3n+2 (i.e., for the purpose of this software, the users do not need to have 14 or 17 tiles to win)
3. 和牌 (带清一色练习)
    a. Function: Ultimately, ask users to judge what tile is the winning tile
    b. Give the user an amount of tiles and have the users judge what the waits are (by having all tiles available for them to select from)
        i. If they selected the wrong tile, tell the user that it was wrong and the tile turn “dark”
    c. Have a toolbar to allow the users to modify:
        i. Let users pick how many tiles they want to try
            1. Easy: 7 tiles
            2. Medium: 13 tiles
            3. Hard: 16 tiles
        ii. Let the users pick the challenge level
            1. Hard: at least 4 types of winning tiles
            2. Medium: 2-3

3. Easy: 1-2

iii. Let the user pick the number of suits they want to practice with

d. Measurements

i. time spent figuring out the waits

ii. Number of correct/incorrect selections

e. 可以参考https://mj888.cc/calculator & https://mj888.cc/full-flush

4. 上听

a. Function: Ultimately, ask users to judge what tile has the best “efficiency.” essentially, this is different from 和牌 because this is like having the client choose from 7+1, 13+1, 16+1 tiles.

b. Give the user an amount of tiles that is 2 away from winning and have the users judge what is the best tile to discard to maximize number of tiles that they are waiting

i. E.g., for 13-tile game: a hand with: 1s 3s 5s 5s 6s 1p 1p 2p 3p 7m 8m E E E

ii. The user is expected to play 6s because the waits will be: 4*2s, 2*5s, 4*6m, 4*9m to get to 1 away from winning

iii. If they play 1p, then the waits will be: 4*2s, 4*6m, 4*9m to get to 1 away from winning

iv. If they play other tiles, then they may not get to 1 away from winning

v. Consequently, they are expected to play 6s for highest efficiency

vi. 然后做 X away from winning, 如果能做的话

c. Have a toolbar to allow the users to modify:

i. Let users pick how many tiles they want to try
    1. Easy: 8 tiles
    2. Medium: 14 tiles
    3. Hard: 17 tiles
ii. Let the user pick the number of suits they want to practice with

d. Measurements
    i. time spent figuring out the tile to discard
    ii. Number of correct/incorrect selections
e. 可以参考https://mj888.cc/calculator这个, 然后多一步, 比如舍1s听2s4m达到x-1向听

5. 记牌+移动
    a. Function: Ultimately want the users to memorize the tiles
    b. Give the users some tiles in a horizontal row and have the users memorize the tiles, after x tiles moving positions
        i. Ask the user to select each tile and identify what it is
        ii. When moving tile, have the users look
    c. Have a toolbar to allow the users to modify:
        i. Number of tiles
        ii. Number of times the tiles move position (can be 0)
        iii. Whether to show hints
            1. Show the initial tiles (randomly)
            2. Show the initial tiles at original position

3. Show what tiles moved (with arrows, point at what position each tile moved)

d. Measurements

i. time spent figuring out the tiles

ii. Number of correct/incorrect guesses and percentage

6. 记牌 二维

a. Similar to the previous one, except that this time align tiles in a matrix, default to 3*4

b. Have a toolbar to allow the users to modify:

i. Change to number of tiles on each axis

7. 打牌--最后这个可能很难弄, 但是你可以找一下有没有现有的模型

a. 两种

i. 一种做成那种切什么牌的牌效比较高(做成假设场上没出过任何牌)

1. 我估计日本会有那种考虑分数的, 那种也行

ii. 一种做成对家在仅追求牌效的情况下连续进行切牌, 然后用户猜对家胡什么牌

1. Default to start with 10 tiles but allow users to change the number of tiles at the initial tile

2. For every wrong guess, the opponent cut 3 more tiles, seeking only efficiency