The Number Guessing Game

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Abstract

This is a two-person game in which one player picks an integer between 1 and 100, and the other player has to guess that integer within ten guesses while the first player guides him/her if the guess is too high or too low. Finally, if the second player guesses the chosen integer correctly, he/she wins, and his/her score would be the number of the guesses made. Afterward, players switch roles and continue playing.
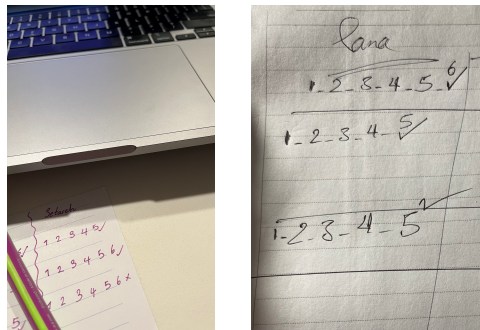
Rules

1. The total number of guesses can be made is 10 in each round.
2. After each guess, the first player should say choose higher or lower to guide the second player and remember the number of guesses made by the second player.
3. The player with a lower number of guesses wins.

Playtesting and Design Process

My first realization during play was that the game is easy to win, as, in each round, the guessing player has ten chances. Suppose the second player starts the game by guessing the number 50. In that case, the numbers 1-100 will split into two halves, and the guidance of the first player will reveal the chosen number range (if 50 is higher than the selected number, the range is [1-50], and if 50 is lower, the range is [50-100]). Afterward, the player should choose 25 or 75 to split the remaining numbers again. Continuing this strategy will help the guessing player simply find the correct number. Having ten chances to guess leaves no room for risk, and he/she would simply just guesses numbers in the last remaining chances to find the correct one.

 So, Limiting the number of attempts in each round will make the game a bit harder and increase the chance of losing, so players must wisely choose the numbers. Playing with the mentioned strategy, I reduced one chance in each round to find the maximum chances needed to win the game and reached six attempts.

Also, the repetition of this game over and over again to have a winner could be tedious if two players tie multiple times in a row. So, I tried designing a new round with more challenging rules. On the first try, I chose two numbers in each round; however, it brought many problems and didn't work out. Finally, I came up with the idea of a round in which the two players choose two numbers simultaneously and guess the intended numbers one by one in each turn. While playing it, I felt the game became more challenging since the players should have to concentrate more in order to remember, guess, and guide their opponents simultaneously. Also, when playtesting this idea, I realized that in most cases, the six chances aren't enough, and players will run out of chances as they will be distracted and forget the selected number range, so they will have to guess the same numbers as their previous guesses. As a result, I tried the ten chances in each turn with the new rules, and this situation was more likely to have a winner in the end.

Modified Rules

1. The chances are reduced to 6.
2. In a tie situation, players must choose their intended numbers, guess and guide the other player at the same time.
3. The chances in a tie situation are 10.