Evaluation of functional requirements

For this project I was tasked with creating a snakes and ladders game that achieves the following requirements:

1. Allow two users to play the game
2. Display a board of 100 tiles
3. Roll two dice and generate a random number between 2-12
4. Calculate each players current position.
5. If a player lands on a tile with a ladder or a snake adjust their position accordingly
6. If a player scores over 99 declare them the winner

Requirement 1

For this requirement, I had to make sure that the program would be able to support two players playing the game. I believe I fully met this requirement. This is because the programs lets two players play the game and it allows them to enter their name and they are both able to win.

Requirement 2

For this requirement I had to create a board that displayed 100 tiles so that it reassembled a snakes and ladders board. I technically met the requirement, this is because I do have a board of 100 tiles. However, the board does basically nothing apart from just existing. It has no dynamic effect and it doesn't display the special tiles (the snakes and ladders). If I could go back and change something in the code I would change the board to make it more interactive.

Requirement 3

For this requirement I had to implement a dice rolling feature. I have achieved this requirement. I have done this by creating two dice rolling variables and then adding them together so that the maximum roll number I get is 12 and the lowes roll is 2.

Requirement 4

For this requirement you had to make sure that the player's position is calculated. I have fully achieved this because the program calculates the player's position in real time and updates the player as to where they are on the board.

Requirement 5

For this requirement you had to make sure that the special tiles (snakes and ladders) adjusted the player's positions. I have achieved this, because in my program when a player lands on either snakes or ladders it calculates their new position and updates it. In addition, it also displays the amount of tiles the player went up or down by.

Requirement 6

For this requirement you had to make sure that when a player goes past tile 99 they win. I have achieved this, because when either player goes past tile 99 they are congratulated and the game ends.

Evaluation of non-functional requirements

Quality

Overall, I think the quality of my program is good but it is not great.

I believe that some advantages of my code is how easy it is to be modified and changed. This is because I have used functions and if statements that are easily editable. Furthermore, the program is quite good when it comes to the reliability. This is because the actual game has no errors and simulates a snakes and ladders game perfectly.

However, I feel that the program takes a loss in quality when it comes to robustness. This is because that some of the earlier inputs do not have the necessary checks needed to make it more trustworthy. For example, it lacks presence checks which is not very good because it may cause problems.

Performance

I think the performance of my program is satisfactory.

I believe this because program itself does not use many resources and the use of functions makes it quite efficient. However, the program does have a lot if statements that could be optimized a bit more to make the program even more efficient.

The usability of the program is also quite good. This is because it is easy to understand and easy to use. In addition, I have added time.sleep commands in order to ensure that the program is user friendly.