Assignment: Number Guessing Game

Assignment Description:

Create a simple number guessing game using C#. The program should generate a random number between 1 and 100 and prompt the user to guess the number. The program should provide feedback to the user after each guess, indicating whether the guess is too high, too low, or correct. The game should continue until the user correctly guesses the number.

Requirements:

1. Use a loop (such as a while loop) to allow the user to make multiple guesses until they guess the correct number.
2. Utilize logical operators to determine whether the user's guess is too high, too low, or correct.
3. Implement error handling to handle invalid input (non-numeric values, guesses outside the valid range).
4. Provide appropriate feedback messages after each guess to inform the user of the result.
5. Display the number of attempts taken by the user to guess the correct number after the game ends.
6. Display a winning message

Grading Criteria:

- Proper implementation of the guessing game logic using loops, logical operators, and conditional statements (3%)
- Effective use of error handling to handle invalid input (2%)
- Clear and concise feedback messages to the user (2%)
- Correct determination of the number of attempts taken by the user (2%)
- Code cleanliness, organization, and comments (1%)

Additional Notes:

- Include your name in the program as well
- The program should be well-documented with comments explaining the purpose of each section of code.
- Test their program with various input scenarios to ensure it behaves as expected.
- Challenge: students can add additional features to enhance the game, such as limiting the number of attempts, providing hints, or implementing a scoring system.

- Students should submit their completed C# console application as txt file along with any necessary documentation or instructions for running the program.
- Students will also provide screenshots of the program runs.