Crack The Code

Matthew is developing a "Crack the Code" game. The computer generates a random 4 digit code. Each of the digits should be picked randomly from 0 to 9. For instance, 0361.

The user will then need to guess what the code is. The rules of the game are:

- The user must input 4 digits each round.
- After each guess the computer will tell them if each digit is too high, too low or correct for example:

<pre>
Digit 1 is too high
Digit 2 is correct
Digit 3 is too high
Digit 4 is too low
</pre>

- This will be repeated until the user inputs the 4 digits correctly when it should display a suitable message.
- After they have cracked the code, they should enter their name and this will be stored in an external file along with the number of attempts they took to crack the code.
- The user should then have the option of seeing the list showing all the previous names and the number of attempts they took.

Where appropriate the user input should be validated.

Design, develop and test a program that:

1. Automatically generates a 4 digit code

2. Allows the user to input a 4 digit number

3. Tells the user if each digit is too high, too low or correct

4. Asks the user to keep trying until they guess correctly

5. Keeps track of how many attempts they made

6. Allows the user to input their name

7. Save the name and number of attempts in an external file

8. Allows the user to see the contents of the external file.

Save the program with the name **CrackTheCode**.