


Number Guessing Game

Write a Python program that allows the user to play a number guessing game with two options:

- ☐ Let the computer choose a random number, and the user guesses it.
- ☐ Let the user choose a number, and the computer tries to guess it.

 Instructions:

- ☐ Use functions to organize your code.
- ☐ Use input validation for integer inputs and choice selection.
- ☐ Handle invalid inputs gracefully.
- ☐ Display a menu with options and run the program until the user chooses to exit.
- ☐ You may use the random module for number generation.

Functional Requirements:

Display this menu:

Choose an option:

1. You guess the number (computer selects)
2. Computer guesses your number
3. Exit

Option 1: (You guess)

- ☐ Computer randomly selects a number between 1 and 100.
- ☐ User tries to guess it. The program gives feedback:
 - o "Too low", "Too high", or "Correct!"
- ☐ Keep asking until the user guesses it correctly.
- ☐ Example:

Guess the number (1 to 100): 50

Too high!

Guess again: 25

Too low!

Guess again: 37

Correct! The number was 37.

Option 2: (Computer guesses)

☐ User thinks of a number between 1 and 100 (input is provided secretly).

☐ Computer guesses, and user gives feedback:

o "H" for too high

o "L" for too low

o "C" for correct

☐ Program keeps guessing using binary search strategy.

☐ Example:

Think of a number between 1 and 100 and enter it (for test): 43

Computer guesses: 50

Your feedback (H/L/C): H

Computer guesses: 25

Your feedback (H/L/C): L

Computer guesses: 43

Your feedback (H/L/C): C

Computer guessed your number in 3 tries!

Option 3: Exit

Display:

Goodluck!