

Step-by-Step Explanation of the Number Guessing Game Code

Import

```
“python
import random
“
```

* Imports the ‘random’ module which is used to generate random numbers.

Function Definition

```
“python
def main():
“
```

* Defines a main function to encapsulate the game logic.

Variable Initialization

```
“python
high = 0
low = 0
win = 0
“
```

* Initializes three counters: ‘high’ to track guesses that are too high, ‘low’ for guesses too low, and ‘win’ to indicate a correct guess.

Generate Random Number

```
“python
number = random.randint(1, 100)
“
```

* Generates a random integer between 1 and 100 and stores it in the ‘number’ variable. This is the secret number the player needs to guess.

Game Loop

```
“python
while win == 0:
“
```

* Starts a ‘while’ loop that continues as long as ‘win’ is 0 (meaning the player hasn’t guessed correctly yet).

User Input

```
“python
userNum = int(input("Please guess a number between 1 and 100: "))
“
```

* Prompts the user to enter a guess, converts it to an integer, and stores it in ‘userNum’.

Check Guess

```
“python
if userNum > number:
    # ...
elif userNum == number:
    # ...
else:
    # ...
“
```

* Checks the user’s guess against the secret number:

- * If ‘userNum’ is greater than ‘number’, the guess is too high.
- * If ‘userNum’ is equal to ‘number’, the player has won.

- * Otherwise, the guess is too low.

Provide Feedback and Update Counters

- * Inside each 'if' condition, an appropriate message is printed, and the corresponding counter ('high', 'low', or 'win') is incremented.

Display Results

```
"""python
print("Number of times too high:", high)
print("Number of times too low:", low)
print("Total number of guesses:", high + low + win)
"""
```

- * After the game ends, prints the total number of high, low, and overall guesses.

Call Main Function

```
"""python
main()
"""
```

- * Calls the 'main' function to start the game.