

## Algorithm Explanation

- **Start the game**
  - Display a welcome message to the user.
  - Generate a random number between 1 and 100 using the `generate_random_number` function.
  - Initialize the number of attempts to zero.
- **Prompt for guesses (Loop until correct)**
  - Ask the user to input a guess.
  - Validate the input to ensure it's a number.
  - Increment the attempt count.
- **Check the guess**
  - Use the `check_guess` function to compare the guess with the random number.
  - If the guess is correct then display a success message and the number of attempts.
- **If the guess is incorrect:**
  - Inform the user if the guess is too high or too low.
  - If the user has made 2 incorrect guesses there will be an additional hint:  
Randomly select a hint type (even/odd, multiple of 5, square value comparison).
- **Continue looping until the correct guess is made.**
- **End the game**
  - Display the total number of attempts once the user guesses correctly.
  - Exit the program.