

Project Documentation

Overview

This project is a simple Number Guessing Game written in Python. The game generates a random number between 1 and 100, and the user is prompted to guess the correct number. The code tells the user on whether the guess is too low or too high and congratulates the user upon a correct guess.

Question

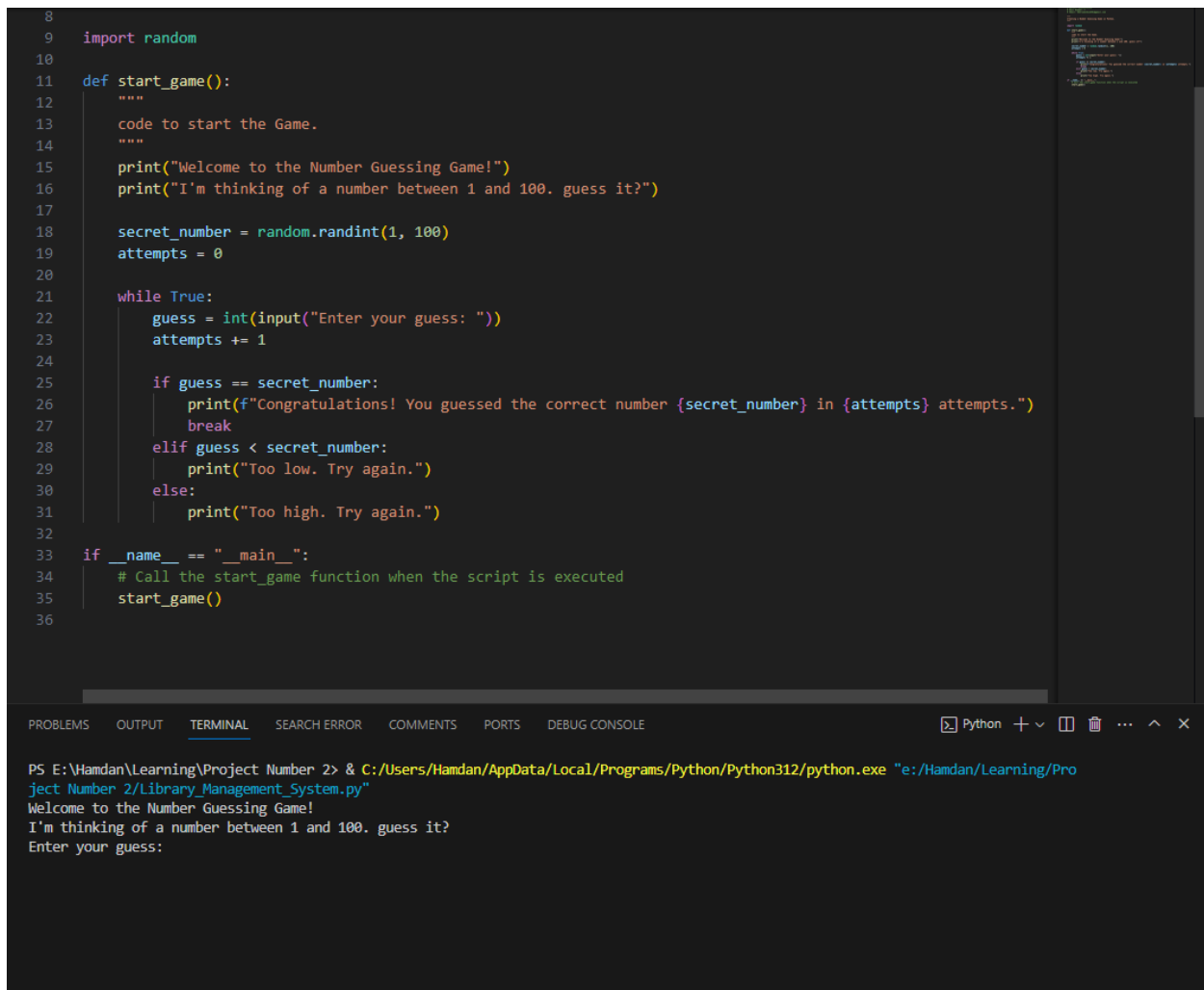
Create a Number Guessing Game in Python.

Code Logic and Design

The code is structured into a function called `start_game`, "Putting the rules of the Number Guessing Game inside." The game generates a random number, takes user input for guesses, and provides feedback until the correct number is guessed. The script promotes readability through clear variable names and well-commented sections.

Screenshots with Explanations

Game Start:



The screenshot shows a Python script in a code editor and its execution in a terminal. The script defines a `start_game()` function that generates a random number between 1 and 100 and prompts the user to guess it. The terminal output shows the program running and displaying the welcome message and the first prompt.

```
8
9 import random
10
11 def start_game():
12     """
13     code to start the Game.
14     """
15     print("Welcome to the Number Guessing Game!")
16     print("I'm thinking of a number between 1 and 100. guess it?")
17
18     secret_number = random.randint(1, 100)
19     attempts = 0
20
21     while True:
22         guess = int(input("Enter your guess: "))
23         attempts += 1
24
25         if guess == secret_number:
26             print(f"Congratulations! You guessed the correct number {secret_number} in {attempts} attempts.")
27             break
28         elif guess < secret_number:
29             print("Too low. Try again.")
30         else:
31             print("Too high. Try again.")
32
33 if __name__ == "__main__":
34     # Call the start_game function when the script is executed
35     start_game()
36
```

PS E:\Hamdan\Learning\Project Number 2> & C:\Users\Hamdan\AppData\Local\Programs\Python\Python312\python.exe "e:/Hamdan/Learning/Project Number 2/Library_Management_System.py"
Welcome to the Number Guessing Game!
I'm thinking of a number between 1 and 100. guess it?
Enter your guess:

Explanation: In this screen-shot 'The game welcome you and ask a question to guess a number between 100 to 1 or 1 to 100.

Correct Guess:

```
11 def start_game():
12     """
13     code to start the Game.
14     """
15     print("Welcome to the Number Guessing Game!")
16     print("I'm thinking of a number between 1 and 100. guess it?")
17
18     secret_number = random.randint(1, 100)
19     attempts = 0
20
21     while True:
22         guess = int(input("Enter your guess: "))
23         attempts += 1
24
25         if guess == secret_number:
26             print(f"Congratulations! You guessed the correct number {secret_number} in {attempts} attempts.")
27             break
28         elif guess < secret_number:
29             print("Too low. Try again.")
30         else:
31             print("Too high. Try again.")
32
33 if __name__ == "__main__":
34     # Call the start_game function when the script is executed
35     start_game()
36
```

PROBLEMS OUTPUT **TERMINAL** SEARCH ERROR COMMENTS PORTS DEBUG CONSOLE Python + - [] [] ... ^ x

```
Too low. Try again.
Enter your guess: 70
Too high. Try again.
Enter your guess: 69
Too high. Try again.
Enter your guess: 68
Too high. Try again.
Enter your guess: 66
Too low. Try again.
Enter your guess: 67
Congratulations! You guessed the correct number 67 in 15 attempts.
PS E:\Hamdan\Learning\Project Number 2>
```

Explanation: You correctly guessed the number, and the game congratulates you.

Too Low Guess:

```
9 import random
10
11 def start_game():
12     """
13     code to start the Game.
14     """
15     print("Welcome to the Number Guessing Game!")
16     print("I'm thinking of a number between 1 and 100. guess it?")
17
18     secret_number = random.randint(1, 100)
19     attempts = 0
20
21     while True:
22         guess = int(input("Enter your guess: "))
23         attempts += 1
24
25         if guess == secret_number:
26             print(f"Congratulations! You guessed the correct number {secret_number} in {attempts} attempts.")
27             break
28         elif guess < secret_number:
29             print("Too low. Try again.")
30         else:
31             print("Too high. Try again.")
32
33 if __name__ == "__main__":
34     # Call the start_game function when the script is executed
35     start_game()
36
```

PROBLEMS OUTPUT **TERMINAL** SEARCH ERROR COMMENTS PORTS DEBUG CONSOLE Python + - [] [] ... ^ X

PS E:\Hamdan\Learning\Project Number 2> & C:/Users/Hamdan/AppData/Local/Programs/Python/Python312/python.exe "e:/Hamdan/Learning/Project Number 2/Library_Management_System.py"

Welcome to the Number Guessing Game!
I'm thinking of a number between 1 and 100. guess it?
Enter your guess: 0
Too low. Try again.
Enter your guess: |

Explanation: Your guess is too low, and the game gives you another attempt to try, guessing correctly.

Too High Guess:

```
9  import random
10
11  def start_game():
12      """
13      code to start the Game.
14      """
15      print("Welcome to the Number Guessing Game!")
16      print("I'm thinking of a number between 1 and 100. guess it?")
17
18      secret_number = random.randint(1, 100)
19      attempts = 0
20
21      while True:
22          guess = int(input("Enter your guess: "))
23          attempts += 1
24
25          if guess == secret_number:
26              print(f"Congratulations! You guessed the correct number {secret_number} in {attempts} attempts.")
27              break
28          elif guess < secret_number:
29              print("Too low. Try again.")
30          else:
31              print("Too high. Try again.")
32
33  if __name__ == "__main__":
34      # Call the start_game function when the script is executed
35      start_game()
36
```

PROBLEMS OUTPUT TERMINAL SEARCH ERROR COMMENTS PORTS DEBUG CONSOLE Python + -

```
PS E:\Hamdan\Learning\Project Number 2> & C:/Users/Hamdan/AppData/Local/Programs/Python/Python312/python.exe "e:/Hamdan/Learning/Project Number 2/Library_Management_System.py"
Welcome to the Number Guessing Game!
I'm thinking of a number between 1 and 100. guess it?
Enter your guess: 100
Too high. Try again.
Enter your guess: █
```

Explanation: Your guess is too high, and the game guides You to try again.

GitHub Repository

<https://github.com/Umerjamshaid/BanoQabil-2.0-Python-Course.git>