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# Import necessary libraries

import ipywidgets as widgets

from IPython.display import display

import random

import matplotlib as mp

# Generate a random number between 1 and 100

number_to_guess = random.randint(1, 100)

# Initialize attempts

attempts = 0

# Create text box for user input

text_box = widgets.Text(

    value='',

    placeholder='Enter your guess',

    description='',

    disabled=False)

# Create label to display result

result_label = widgets.Label(value='')

# Create label to display attempts

attempts_label = widgets.Label(value='Attempts: 0')

# Create button to submit guess

button = widgets.Button(description='Guess')


# Display GUI components

display(text_box)

display(result_label)

display(attempts_label)

display(button)

# Define function to handle button click

def on_button_clicked(b):

    global attempts

    global number_to_guess

    # Get user's guess

    user_guess = text_box.value

  # Validate user input

    try:

        user_guess = int(user_guess)

    except ValueError:

        result_label.value = "Invalid input. Please enter a number."

        return

   # Increment attempts

    attempts += 1

    attempts_label.value = f'Attempts: {attempts}'

    # Check if user guess is correct

    if user_guess == number_to_guess:

        result_label.value = f"Congratulations! You've guessed the number in {attempts} attempts!"

        button.disabled = True  # Disable button after winning

    elif user_guess < number_to_guess:

        result_label.value = "Too low! Try again.
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    else:
        result_label.value = "Too high! Try again."
    # Clear text box
    text_box.value = ''
# Link button click to function
button.on_click(on_button_clicked)
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