import tkinter as tk

from tkinter import messagebox, scrolledtext, END

import enchant

import random

# Global variable to hold the locked word

\_locked\_word = None

# Dictionary to validate real English words

dictionary = enchant.Dict("en\_US")

# Sample questions for the game

sample\_questions = [

"Is it a living thing?",

"Is it something you can eat?",

"Is it an object?",

"Is it a place?",

"Is it something you can buy?",

"Is it bigger than a loaf of bread?",

"Is it used daily?",

"Is it found indoors?",

"Is it made by humans?",

"Is it a proper noun?",

"Does it have more than one syllable?",

"Is it something you wear?",

"Can it be found in nature?",

"Is it something that makes noise?",

"Is it a feeling or emotion?",

"Is it something you use with your hands?",

"Is it electronic?",

"Is it found in a school?",

"Is it part of your body?",

"Is it related to technology?"

]

# Game state

questions\_asked = 0

guesses\_made = 0

max\_questions = 20

max\_guesses = 3

# ------------------- Step 1: Lock Word GUI -------------------

def lock\_word():

global \_locked\_word

user\_word = entry.get().strip().lower()

if not dictionary.check(user\_word):

messagebox.showerror("Invalid Word", "That is not a valid English word.")

return

\_locked\_word = user\_word

messagebox.showinfo("Word Locked", "Your word has been locked in securely.")

lock\_window.destroy()

start\_game\_gui()

lock\_window = tk.Tk()

lock\_window.title("Enter Secret Word")

lock\_window.geometry("400x150")

label = tk.Label(lock\_window, text="Enter a real English word:")

label.pack(pady=10)

entry = tk.Entry(lock\_window, show="\*", width=30)

entry.pack()

lock\_button = tk.Button(lock\_window, text="Lock Word", command=lock\_word)

lock\_button.pack(pady=10)

lock\_window.mainloop()

# ------------------- Step 2: Game GUI -------------------

def get\_chatbot\_response(user\_input):

global questions\_asked, guesses\_made

user\_input = user\_input.strip().lower()

if questions\_asked < max\_questions:

if user\_input in ['yes', 'no']:

questions\_asked += 1

if questions\_asked < len(sample\_questions):

next\_question = sample\_questions[questions\_asked]

else:

next\_question = f"Custom question {questions\_asked + 1}: Is it helpful?"

return f"Question {questions\_asked + 1}: {next\_question}"

elif "guess" in user\_input and guesses\_made < max\_guesses:

guess\_word = user\_input.replace("guess", "").strip()

guesses\_made += 1

if guess\_word == \_locked\_word:

return "🎉 Correct! The system guessed your word!"

else:

return f"❌ Incorrect guess ({guesses\_made}/{max\_guesses})."

else:

return "Please respond with 'yes', 'no', or allow a guess using 'guess <word>'."

else:

return f"❗ Maximum of {max\_questions} questions reached. The word was: {\_locked\_word}"

def show\_chatbot\_response():

user\_input = user\_input\_box.get("1.0", END).strip()

user\_input\_box.delete("1.0", END)

if user\_input.lower() in ["exit", "quit", "bye"]:

chat\_log.insert(tk.END, "Chatbot: Goodbye!\n")

return

chat\_log.insert(tk.END, "You: " + user\_input + "\n")

chatbot\_response = get\_chatbot\_response(user\_input)

chat\_log.insert(tk.END, "Chatbot: " + chatbot\_response + "\n")

def start\_game\_gui():

global chat\_log, user\_input\_box

game\_root = tk.Tk()

game\_root.title("The 20 Questions Game")

chat\_log = scrolledtext.ScrolledText(game\_root, width=60, height=20, wrap=tk.WORD)

chat\_log.grid(row=0, column=0, columnspan=2, padx=10, pady=10)

user\_input\_box = scrolledtext.ScrolledText(game\_root, width=40, height=4, wrap=tk.WORD)

user\_input\_box.grid(row=1, column=0, padx=10, pady=10)

send\_button = tk.Button(game\_root, text="Send", command=show\_chatbot\_response)

send\_button.grid(row=1, column=1, padx=10, pady=10)

# Start with the first question

chat\_log.insert(tk.END, f"Chatbot: Question 1: {sample\_questions[0]}\n")

game\_root.mainloop()