

Python ChatBot Guessing Game

Intro

This is a simple game where the ChatBot asks you to guess a fruit!

The ChatBot selects a fruit for a list which is saved in the file "fruits.txt"

It then allows you three chances to guess the fruit.

If you do not guess the fruit on time, then you lose, of course! But after the ChatBot tells you the fruit it was thinking of, it then goes on to ask if you want to know more about the fruit.

If you say yes, then the ChatBot will access Wikipedia for information on the fruit and read it out to you...

Have fun!

Set Up

Let's start by importing the following:

```
import speech_recognition as sr
import pyttsx3
import random
import wikipedia
```

Now let's initialise our audio Recognizer:

```
# Initialize the recognizer
r = sr.Recognizer()
```

Create our SpeakText function

We have used this function before to allow our ChatBot to read out text:

```
# Function to convert text to speech
def SpeakText(command):
    engine = pyttsx3.init()
    voice = engine.getProperty('voices')
    engine.setProperty('voice', voice[2].id)
    engine.say(command)
    engine.runAndWait()
```

Now the real fun starts...

Using the microphone function from the “speech_recognition” library we begin the game:

```
with sr.Microphone() as source:

    f = open("fruits.txt", "r")
    fruits = []
    for line in f:
        fruits.append(line.strip())
    #print(fruits)

    fruit = random.choice(fruits).lower()
    #print(fruit)
    num_guesses = 3

    # Checking background noise....
    r.adjust_for_ambient_noise(source, duration=2)

    SpeakText("I am thinking of a fruit.")
    SpeakText("You have three tries to guess what it is.")
    SpeakText("What is your first guess?")
```

Note: you will find the file “fruits.txt” attached. Please download and save it in the same folder as your python script. This way your script will be able to find and access it.

You’ve got three guesses...

Staying within the above while loop, we now give the player three guesses using a simple for loop:

```
for i in range(num_guesses):

    # Listen for the user's input
    audio = r.listen(source)

    # Using google to recognize audio
    guess = r.recognize_google(audio)

    if guess == fruit:
        SpeakText(guess + " is correct! You win.")
        print(guess + " is correct! You win.")
        break
    elif i < num_guesses-1:
        SpeakText(guess + " is incorrect. Try again.")
        print(guess + " is incorrect. Try again.")
    else:
        SpeakText(guess + " is incorrect. Sorry, you lose. The word I was thinking of was " + fruit)
        print(guess + " is incorrect.\nSorry, you lose. The word I was thinking of was " + fruit)
        break
```

Finally, let’s learn more about fruit!

Use the following section of code to allow the ChatBot ask if you know about the fruit it was thinking about, and if you don't, it will provide some interesting information:

```
with sr.Microphone() as source:

    # Checking background noise....
    #r.adjust_for_ambient_noise(source, duration=1)

    SpeakText(f"Do you know what the fruit {fruit} is?")

    audio = r.listen(source)

    # Using google to recognize audio
    reply = r.recognize_google(audio)

    if "yes" in reply:
        SpeakText('OK, thanks for playing. Good bye!!')
    else:
        # Asking Wikipedia for a definition
        print(wikipedia.summary(f"{fruit} the fruit"))
        SpeakText(wikipedia.summary(f"{fruit} the fruit"))
```

That's it! Have fun guessing...