

Objectives	Grow with Google Test Answer, <a href="mailto:b.hogan@shnu.edu">b.hogan@shnu.edu</a>
<p><b>Program / operating parameters:</b></p> <ol style="list-style-type: none"> <li>1. Demonstrate how to create a small Python program, called a script, and generate speech to text and text to audio results.</li> <li>2. Challenge a user to replicate proper syntax, indenting, and other coding idioms to ensure programs run as intended.</li> <li>3. Educate on basic data encoding where binary (1 or 0) is used for pictures/voice and nonbinary (byte/collations) is for text.</li> <li>4. Educate on how libraries simplify program feature engineering making the art of the possible a far less daunting task.</li> </ol> <p><b>Scenario 1:</b> Generate a working program in a Python integrated development environment (IDE) such as Anaconda. The following example uses the Jupyter notebook program as part of the Anaconda Install.</p> <p><b>Scenario 2:</b> Expand code requiring 2 audio requests but deliver a single audio outcome file Hint: The trick of this scenario is to create 2 separate myWords variables.</p> <ul style="list-style-type: none"> <li>• In Python variables are either implicitly or explicitly declared.</li> <li>• Code line 7 “my Words” is an implicit declaration as its type is not declared, such a character (char) or number</li> <li>• Add a “_1” to the variable and then duplicate code lines 5-8 with a second variable myWords_2</li> <li>• Finally, combine the myWords_1 with myWords_2 into myWords to deliver the audio output</li> </ul>	<pre> """ Part 1: Set Computer File Directory os=operating system""" import os os.chdir('C:\\Users\\17574\\Desktop')  """ Part 2: Set Google Speech Recognition and Microphone Library Functions import speech_recognition as sr import pyaudio  """ Part 3: Ask user to same something use Google speech to parse words""" with sr.Microphone() as source:     print("Ready? Say something quick")     myWords = sr.Recognizer().listen(source)     print("You Said...: " + sr.Recognizer().recognize_google(myWords))  &gt;&gt;&gt; Ready? Say something quick &gt;&gt;&gt; You Said...: Nacho  """Part 4: Encode words into audio file audio data is binary so add 'wb'                                 for 'write binary data (1 or 0)""" with open("myAudio.wav", "wb") as file_:     file_.write(myWords.get_wav_data())  """Part 5: Import a generic microphone module """ from playsound import playsound playsound('myAudio.wav')  import os os.chdir('C:\\Users\\17574\\Desktop') import speech_recognition as sr import pyaudio with sr.Microphone() as source:     print("Ready? Say something quick")     myWords_1 = sr.Recognizer().listen(source)     print("You Said...: " + sr.Recognizer().recognize_google(myWords)) with sr.Microphone() as source:     print("Ready? Say something quick")     myWords_2 = sr.Recognizer().listen(source)     print("You Said...: " + sr.Recognizer().recognize_google(myWords)) myWords = myWords_1 + myWords_2 with open("myAudio.wav", "wb") as file_:     file_.write(myWords.get_wav_data()) from playsound import playsound playsound('myAudio.wav')  &gt;&gt;&gt; Ready? Say something quick &gt;&gt;&gt; You Said...: Nacho &gt;&gt;&gt; Ready? Say something quick &gt;&gt;&gt; You Said...: Nacho  """ Run like a Pro """ import os os.chdir('C:\\Users\\17574\\Desktop') import speech_recognition as sr import pyaudio with sr.Microphone() as source:     print("Ready? Say something quick")     myWords = sr.Recognizer().listen(source)     print("You Said...: " + sr.Recognizer().recognize_google(myWords)) with open("myAudio.wav", "wb") as file_:     file_.write(myWords.get_wav_data()) from playsound import playsound playsound('myAudio.wav')  &gt;&gt;&gt; Ready? Say something quick &gt;&gt;&gt; You Said...: I like cake </pre>