**Text to Speech Converter Using Amazon Polly | Python Tkinter & Boto3**

# pip install aws cli

# aws configure --profile demo\_user

# cd .aws

# dir

# type config

# type credentials

# pip --version

# pip install boto3

# python --version

# 

# 

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# GUI for T2S converter

import tkinter as tk #help to create GUI interface

import boto3 #boto3 is python sdk for aws

import os #as we maybe require some temporary directory or some paths

import sys #to get current working dir and paths

from tempfile import gettempdir #we'll be storing the converted speech to some temporary dir

from contextlib import closing #to extract audio as a stream and close that file

root=tk.Tk()

root.geometry("400x240") #size of window

root.title("T2S-Con Amazon Polly") #root is handler for window

textExample=tk.Text(root,height=10) #to add a text area in my window

textExample.pack()

def getText():

    aws\_mag\_con=boto3.session.Session(profile\_name='demo\_user') #to login aws console by creating a session for it

    client=aws\_mag\_con.client(service\_name='polly',region\_name='us-east-1') #to call polly from aws mag console

    # IAM AND S3 ARE GLOBAL SERVICE SO NO NEED OF SPECIFYING REGION NAME.. BUT FOR OTHERS WE HAVE TO SPECIFY REGION NAME

    result=textExample.get("1.0","end") #1.0 means input is read from 1st point till the end

    print(result)

    response=client.synthesize\_speech(VoiceId='Joanna',OutputFormat='mp3',Text=result, Engine='neural')

    print(response)

    if "AudioStream" in response:

        with closing(response['AudioStream']) as stream:

            output=os.path.join(gettempdir(),"speech.mp3") #extracted audio stream from response and in output I gave complete path of temp dir where this speech is stored along with its name

            try:

               with open(output,"wb") as file: #wb= with binary

                   file.write(stream.read()) # writing output as binary stream

            except IOError as error:

                print(error)

                sys.exit(-1) #exit gracefully if file not able to open

    else:

        print("Could not find the stream!") #if there is no audio stream

        sys.exit(-1)

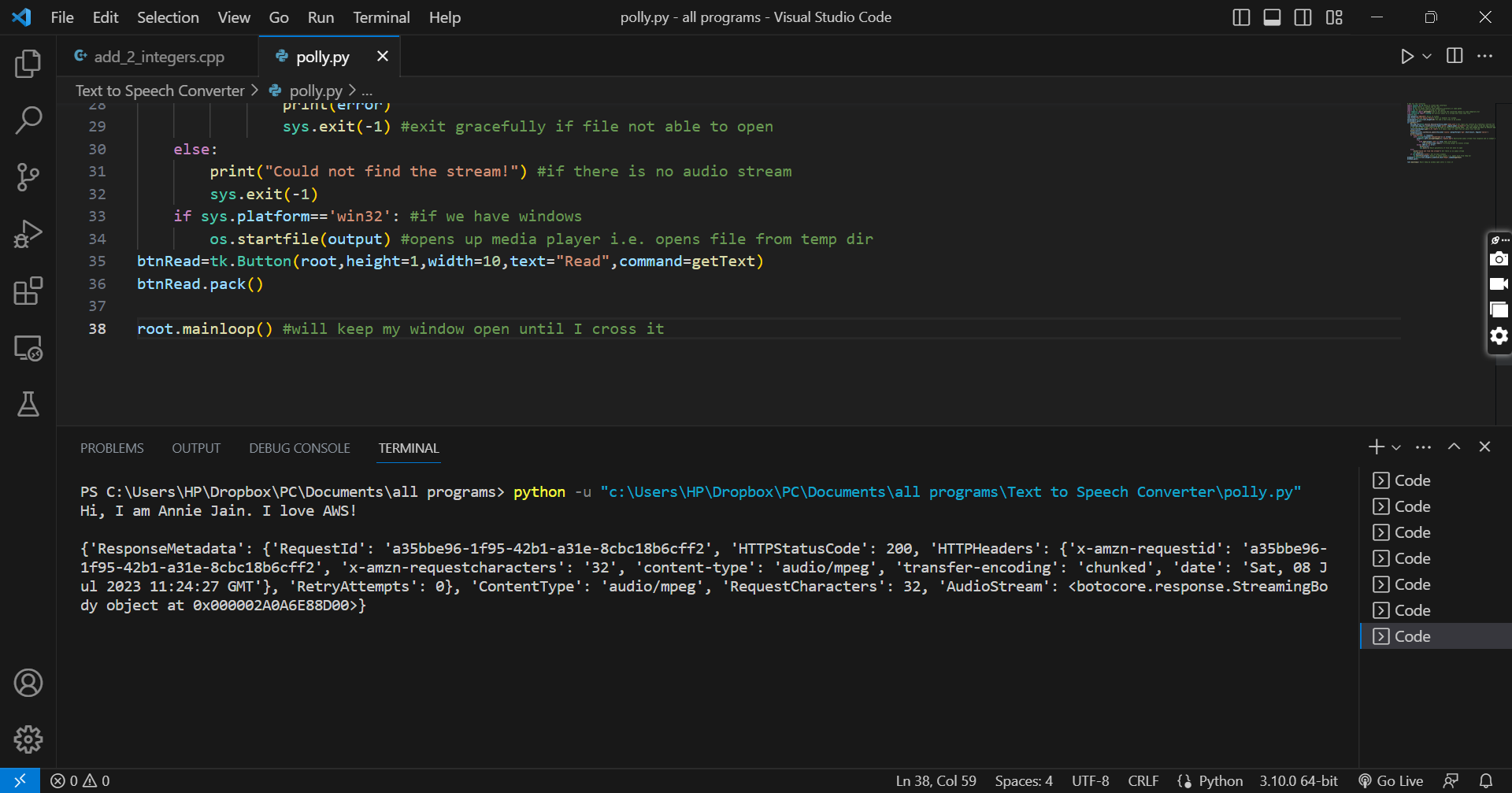
    if sys.platform=='win32': #if we have windows

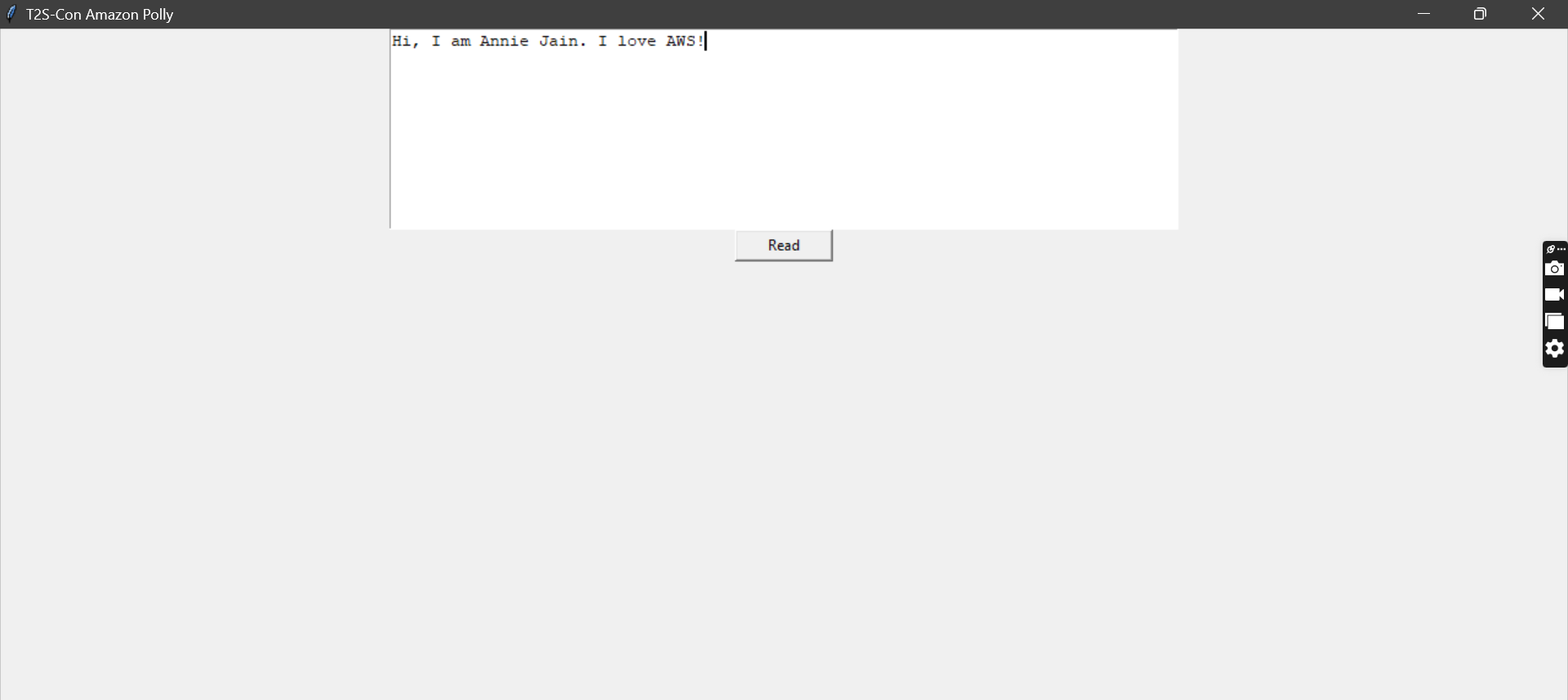
        os.startfile(output) #opens up media player i.e. opens file from temp dir

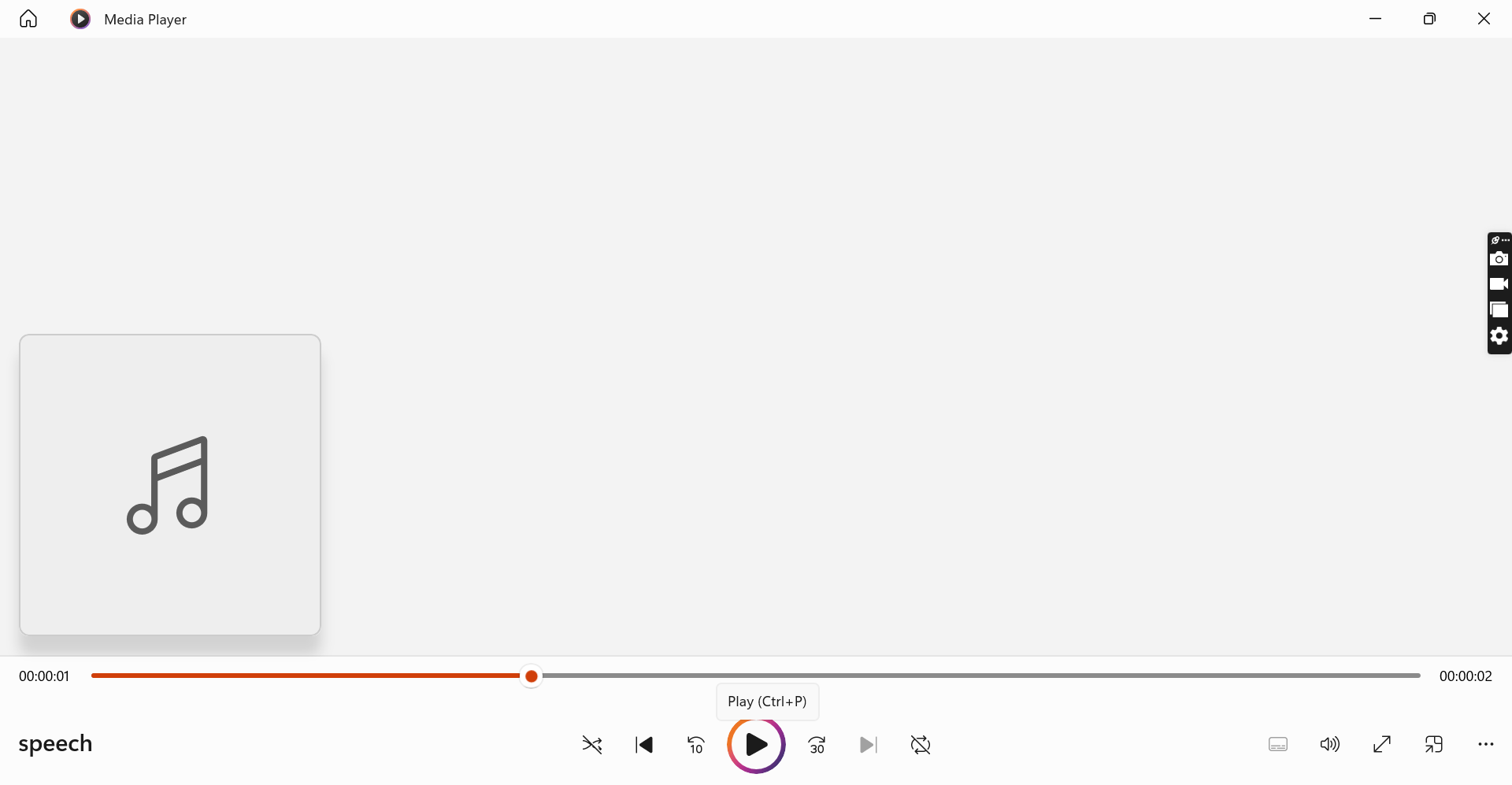
btnRead=tk.Button(root,height=1,width=10,text="Read",command=getText)

btnRead.pack()

root.mainloop() #will keep my window open until I cross it

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