In [15]:
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from tkinter import *
from tkinter import filedialog
import pytesseract
from PIL import Image ,ImageTk
import pyttsx3
import cv2
import speech_recognition as sr
from langdetect import DetectorFactory
from langdetect import detect_langs
from google_trans_new import google_translator
from langdetect import detect
from playsound import playsound



#UpdATED
#FINAL GUI

root = Tk()
root.title("Index MMT")
# root.iconbitmap('Translator.ico')
#getting screen width and height of display
width= root.winfo_screenwidth()
height= root.winfo_screenheight()

#setting tkinter window size
root.geometry("%dx%d" % (width, height))
root.configure(bg='#856ff8')



DetectorFactory.seed = 0


def detect_and_translate(text,target_lang):
    result_lang = detect(text)
    if result_lang == target_lang:
        return text
    else:
        translator = google_translator()
        translate_text = translator.translate(text,lang_src=result_lang,lang_tgt=target_lang)
        return translate_text



#input type-1
def word_sentence():

    def printData(res):
#         print(res)
#         result = res
#         resultLabel.config(padx = 10, justify = CENTER, font =("Courier", 14), text=result)
        text.delete("1.0", "end")
        text.insert(INSERT, res)
        text.pack()


    def get_input():
        sentence = entry1.get()
        code = entry2.get()
        r = detect_and_translate(sentence,target_lang=code)
        printData(r)

    def delete():
        entry1.delete(0,'end')
        entry2.delete(0,'end')
        text.delete("1.0",'end')

#     def speak():




    root1 = Tk()
    root1.title("Multilingual Machine Translation")

    # root.geometry("500x500")

    #getting screen width and height of display
    width= root1.winfo_screenwidth()
    height= root1.winfo_screenheight()

    #setting tkinter window size
    root1.geometry("%dx%d" % (width, height))
    root1.configure(bg='#856ff8')

    text = Text(root1)

    label1 = Label(root1,text = 'Enter Sentence')
    label1.pack()
    label1.config(padx = 10, justify = LEFT, font =("Courier", 14))

    entry1 = Entry(root1, width = 70, bd=2)
    entry1.pack()
```

```
    label2 = Label(root1, text="Enter Lang_code")
    label2.pack()
    label2.config(padx = 10,justify = LEFT,font =("Courier", 14))

    entry2 = Entry(root1, width = 70, bd=2)
    entry2.pack()


    button1 = Button(root1, text ='translate',font =("Courier", 14),activebackground='#00ff00')
    button1.pack()
    button1.config(command = get_input, padx=10, bd=2, width=10, fg='White', bg= 'dark green')


#     resultLabel = Label(root1, text ="\nTranslated text Here!!")
#     resultLabel.pack()

#     buttonspeak = Button(root1, text= "Speak" command= speak, font =("Courier",14),activebackground='#00ff00')
#     buttonspeak.pack(pady=5)
#     buttonspeak.config(padx=10, bd=2, width=10, fg='White', bg='dark red')

    button2 = Button(root1, text = "Delete", command = delete,font =("Courier", 14),activebackground='#00ff00')
    button2.pack(pady = 5)
    button2.config(padx=10, bd=2, width=10, fg='White', bg= 'dark red')

    button3 = Button(root1, text = "Exit", command=root1.destroy,font =("Courier", 14),activebackground='#00ff00')
    button3.pack(pady = 5)
    button3.config( padx=10, bd=2, width=10, fg='White', bg= 'dark red')


    root1.mainloop()

#input type-2
def txtfile():

    root2 = Tk()
    root2.title("Multilingual Machine Translation")

    # root.geometry("500x500")

    #getting screen width and height of display
    width= root2.winfo_screenwidth()
    height= root2.winfo_screenheight()

    #setting tkinter window size
    root2.geometry("%dx%d" % (width, height))
    root2.configure(bg='#856ff8')

    text = Text(root2)

    def printData(res):
#         print(res)
#         result = res
#         res_text.config(padx = 10, justify = CENTER, font =("Courier", 14), text=result)
        text.delete("1.0", "end")
        text.insert(INSERT, res)
        text.pack()

    # Function for opening the file
    def openFile():
        filepath = filedialog.askopenfilename(initialdir=r"C:\Users\Porika Dhanrajnath\Desktop\NLP",
                                              title="Open file",
                                              filetypes= (("text files","*.txt"),
                                              ))
#         file = open(filepath,'r')
        text_data = open(filepath, encoding="utf8")  #Unicode Transformation Format-8
        sentence = text_data.read()
        code = entry1.get()
        r = detect_and_translate(sentence,target_lang=code)
        printData(r)


    label1 = Label(root2, text="Enter Lang_code")
    label1.pack()
    label1.config(padx = 10,justify = LEFT,font =("Courier", 14))

    entry1 = Entry(root2, width = 70, bd=2)
    entry1.pack()


    # Button Label
    button1 = Button(root2, text ='Choose file', command=openFile, font =("Courier", 14),activebackground='#00ff00')
    button1.pack(pady = 5)
    button1.config(padx=10, bd=2, width=15, fg='White', bg= 'dark red')


#     button2 = Button(root2, text ='submit',font =("Courier", 14),activebackground='#00ff00')
#     button2.pack()
#     button2.config(command = get_input, padx=10, bd=2, width=10, fg='White', bg= 'dark green')


#     resultLabel = Label(root2, text ="\nTranslated text Here!!",height=9)
#     resultLabel.pack(pady=20)
#     resultLabel.config(padx = 10,justify = LEFT,font =("Courier", 14))


    button3 = Button(root2, text = "Exit", command=root2.destroy,font =("Courier", 14),activebackground='#00ff00')
    button3.pack(pady = 5)
    button3.config( padx=10, bd=2, width=10, fg='White', bg= 'dark red')


    root2.mainloop()
```

```
#input type-3
def img_file():
    root3 = Tk()
    root3.title("Multilingual Machine Translation")
    # root.geometry("500x500")
    #getting screen width and height of display
    width= root3.winfo_screenwidth()
    height= root3.winfo_screenheight()
    #setting tkinter window size
    root3.geometry("%dx%d" % (width, height))
    root3.configure(bg='#856ff8')

    text = Text(root3)
    def printData(res):
        text.delete("1.0", "end")
        text.insert(INSERT, res)
        text.pack()
    def select_image():
        path = filedialog.askopenfilename()
        code = entry1.get()
        img = Image.open(path)
        printData(img)
        pytesseract.pytesseract.tesseract_cmd ='C:/Program Files (x86)/Tesseract-OCR/tesseract.exe'
        result_text = pytesseract.image_to_string(img)
#         result_text = pytesseract.image_to_string(img, lang='tel')
#         print("Text detected!")
#         print("\n"+result_text)
        text4=detect_and_translate(result_text,target_lang=code)
        printData(text4)

#         afr (Afrikaans), amh (Amharic), ara (Arabic), asm (Assamese), aze (Azerbaijani), aze_cyrl (Azerbaijani - Cyrilic), bel



    label1 = Label(root3, text="Enter Lang_code")
    label1.pack()
    label1.config(padx = 10,justify = LEFT,font =("Courier", 14))

    entry1 = Entry(root3, width = 70, bd=2)
    entry1.pack()


    # Button label
    button1 = Button(root3, text="Choose image", command=select_image, font =("Courier", 14),activebackground='#00ff00')
    button1.pack(pady=5)
    button1.config( padx=10, bd=2, width=10, fg='White', bg= 'dark red')


    button3 = Button(root3, text = "Exit", command=root3.destroy,font =("Courier", 14),activebackground='#00ff00')
    button3.pack(pady = 5)
    button3.config( padx=10, bd=2, width=10, fg='White', bg= 'dark red')


    root3.mainloop()


#input type-4
def voice():

    root4 = Tk()
    root4.title("Multilingual Machine Translation")

    # root.geometry("500x500")

    #getting screen width and height of display
    width= root4.winfo_screenwidth()
    height= root4.winfo_screenheight()

    #setting tkinter window size
    root4.geometry("%dx%d" % (width, height))
    root4.configure(bg='#856ff8')

    text = Text(root4)
#     dtext= Text(root4)

    def printData(res):
#         print(res)
#         result = res
#         res_text.config(padx = 10, justify = CENTER, font =("Courier", 14), text=result)
        text.delete("1.0", "end")
        text.insert(INSERT, res)
        text.pack()

    def detect_text(s):
        label2 = Label(root4,text=s)
        label2.pack()
        label2.config(padx = 10, justify = CENTER, font =("Courier", 14))


    def record():

        recorder=sr.Recognizer()
        with sr.Microphone() as source:
#             print("Speak Now! ")
            printData("Speak Now!")
            audio=recorder.listen(source)

    # txt=recorder.recognize_google(audio)
        try:
        # Auto detect the language
            txt=recorder.recognize_google(audio)
        except sr.UnknownValueError:
            printData("Google Speech Recognition could not understand audio")
        except sr.RequestError as e:
            printData("Could not request results from Google Speech Recognition service")
        detect_text("You said: "+txt)
```

```
        detect_text("You said: "+txt)
        lang=entry1.get()
        text3=detect_and_translate(txt,target_lang=lang)
        printData("\n"+text3)


    label1 = Label(root4, text="Enter Lang_code")
    label1.pack()
    label1.config(padx = 10,justify = LEFT,font =("Courier", 14))

    entry1 = Entry(root4, width = 70, bd=2)
    entry1.pack()


    #Button label

    button1 = Button(root4, text="  record voice", command=record, font =("Courier", 14),activebackground='#00ff00')
    button1.pack(pady=5,side=TOP)
    button1.config( padx=10, bd=2, width=13, fg='White', bg= 'dark red')



    button3 = Button(root4, text = "Exit", command=root4.destroy,font =("Courier", 14),activebackground='#00ff00')
    button3.pack(pady = 5)
    button3.config( padx=10, bd=2, width=10, fg='White', bg= 'dark red')


    root4.mainloop()



#Main root- GUI


# def lang_code_print():
#     f=open("Lang_codes.txt","r")
#     res=f.read()
#     text = Text(root)
#     text.insert(INSERT, res)
#     text.pack()



T = Text(root, height=4, width=50, bd=4, font =("Courier", 14),highlightbackground='#00ff00')
T.pack(side=LEFT, fill=Y)
lang_code_data="""

          *code: -----> Language*


            as---*-----> Assamese
            bn---*-----> Bengali
            en---*-----> English
            fr---*-----> French
            gu---*-----> Gujarati
            hi---*-----> Hindi
            kn---*-----> Kannada
            ks---*-----> Kashmiri
            ml---*-----> Malayalam
            mr---*-----> Marathi
            mn---*-----> Mongolian
            ne---*-----> Nepali
            pa---*-----> Panjabi; Punjabi
            sa---*-----> Sanskrit
            ta---*-----> Tamil
            te---*-----> Telugu
            ur---*-----> Urdu

"""

T.insert(END, lang_code_data)

label1 = Label(root,text = 'Welcome to Multilingual Machine Translation')
label1.pack()
label1.config(padx = 10, justify = CENTER, font =("Courier", 14))

# lang_button = Button(root, text = "Languages with codes",font =("Courier", 14),activebackground='#00ff00')
# lang_button.pack()
# lang_button.config(command = lang_code_print, padx=10, bd=2, width=20, fg='White', bg='dark green')


button1 = Button(root, text ='word or sentence',font =("Courier", 14),activebackground='#00ff00')
button1.pack(pady = 5)
button1.config(command = word_sentence, padx=10, bd=2, width=20, fg='White', bg='dark green')

button2 = Button(root, text ='text file',font =("Courier", 14),activebackground='#00ff00')
button2.pack(pady = 5)
button2.config(command = txtfile, padx=10, bd=2, width=20, fg='White', bg='dark green')

button3 = Button(root, text ='Image',font =("Courier", 14),activebackground='#00ff00')
button3.pack(pady = 5)
button3.config(command = img_file, padx=10, bd=2, width=20, fg='White', bg='dark green')

button4 = Button(root, text ='Voice',font =("Courier", 14),activebackground='#00ff00')
button4.pack(pady = 5)
button4.config(command = voice, padx=10, bd=2, width=20, fg='White', bg='dark green')

button5 = Button(root, text = "Exit", command=root.destroy,font =("Courier", 14),activebackground='#00ff00')
button5.pack(pady = 5)
button5.config(padx=10, bd=2, width=10, fg='White', bg= 'dark red')


root.mainloop()
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In [ ]:

In [ ]: