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# import all the libraries for requirments
import streamlit as st # for design frontend
#Translating text between a wide range of languages.
#Detecting the language of input text (in some versions).
#Easy integration into Python projects for seamless language translation functionality.
from mtranslate import translate
import pandas as pd # for dataframe
import os
from gtts import gTTS # google text to speech
import base64 # help to convert the binary data to text format data

# Read the language data set
data=pd.read_csv(r"C:\Users\sunil\Desktop\DK\NIT\NIT- Data Science and AI Class\4. November\8th - N

data.dropna(inplace=True) # if any null value found the drop
lang = data['name'].to_list() # take all language name to a list
langlist=tuple(lang) # late this list to tuple if any duplicates the list have it remove which is t
langcode = data['iso'].to_list() # the short form take to a list

# map language with their sort form
lang_array = {lang[i]: langcode[i] for i in range(len(langcode))}

# frontend layout
st.title("Language Translation App") # App heading

# app description
st.write(""" ### Language Interpretation App

This app provides real-time language translation to help users communicate across different language
It detects the input language and translates text into the selected target language, making it ideal for
multilingual communication, cross-cultural interaction, and understanding content in various languages

# input area for language
inputtext = st.text_area("Write Your Text",height=100)

options =list(langlist)
# creat a side bar area where all language contain with radio button to translaate the text that you
selected_option = st.selectbox("Select Language to Translate :", options)
#choice = st.sidebar.radio('CHOSE LANGUAGE',options) # here we pass the tuple of language that we c

# creat a dictionary whichhold all the languages
speech_langs = {
    "af": "Afrikaans",
    "ar": "Arabic",
    "bg": "Bulgarian",
    "bn": "Bengali",
    "bs": "Bosnian",
    "ca": "Catalan",
    "cs": "Czech",
    "cy": "Welsh",
    "da": "Danish",
    "de": "German",
    "el": "Greek",
    "en": "English",
    "eo": "Esperanto",
    "es": "Spanish",

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"et": "Estonian",
"fi": "Finnish",
"fr": "French",
"gu": "Gujarati",
"od": "odia",
"hi": "Hindi",
"hr": "Croatian",
"hu": "Hungarian",
"hy": "Armenian",
"id": "Indonesian",
"is": "Icelandic",
"it": "Italian",
"ja": "Japanese",
"jw": "Javanese",
"km": "Khmer",
"kn": "Kannada",
"ko": "Korean",
"la": "Latin",
"lv": "Latvian",
"mk": "Macedonian",
"ml": "Malayalam",
"mr": "Marathi",
"my": "Myanmar (Burmese)",
"ne": "Nepali",
"nl": "Dutch",
"no": "Norwegian",
"pl": "Polish",
"pt": "Portuguese",
"ro": "Romanian",
"ru": "Russian",
"si": "Sinhala",
"sk": "Slovak",
"sq": "Albanian",
"sr": "Serbian",
"su": "Sundanese",
"sv": "Swedish",
"sw": "Swahili",
"ta": "Tamil",
"te": "Telugu",
"th": "Thai",
"tl": "Filipino",
"tr": "Turkish",
"uk": "Ukrainian",
"ur": "Urdu",
"vi": "Vietnamese",
"zh-CN": "Chinese"
}

if st.button("Convert"):
    # function to decode audio file for download
    def get_binary_file_downloader_html(bin_file, file_label='File'):
        with open(bin_file, 'rb') as f:
            df = f.read()
            bin_str = base64.b64encode(df).decode()
            href = f'<a href="df:application/octet-stream;base64,{bin_str}" download="{os.path.basename(bin_file)}">{file_label}</a>'
            return href

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c1,c2 = st.columns([4,3])

# I/O
if len(inputtext) > 0 :
    try:
        output = translate(inputtext,lang_array[selected_option])
        with c1:
            st.text_area("TRANSLATED TEXT",output,height=200)
            # if speech support is available will render audio file
            if selected_option in speech_langs.values():
                with c2:
                    aud_file = gTTS(text=output, lang=lang_array[selected_option], slow=False)
                    aud_file.save("lang.mp3")
                    audio_file_read = open('lang.mp3', 'rb')
                    audio_bytes = audio_file_read.read()
                    bin_str = base64.b64encode(audio_bytes).decode()
                    st.audio(audio_bytes, format='audio/mp3')
                    st.markdown(get_binary_file_downloader_html("lang.mp3", 'Audio File'), unsafe_allow_html=True)
            except Exception as e:
                st.error(e)

# Add copyright text at the bottom using Markdown
st.markdown("""
---
&copy; 2024 Creted By Darshanikanta. No copy right
""")

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