

Text Translation App Using YODAO API

python

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# -*- coding: utf-8 -*-

# Form implementation generated from reading ui file 'window_2.ui'
# @author ROBIN 35
# Created by: PyQt5 UI code generator 5.14.1
#
# WARNING! All changes made in this file will be lost!

import sys
from PyQt5 import QtCore, QtGui, QtWidgets
from PyQt5.QtWidgets import *
import json
import random
from urllib import parse
import http.client
import uuid
import requests
import hashlib
import time
from imp import reload

class Ui_Mainwindow(object):
    def setupUi(self, MainWindow):
        MainWindow.setObjectName("MainWindow")
        MainWindow.resize(333, 440)
        self.centralwidget = QtWidgets.QWidget(Mainwindow)
        self.centralwidget.setObjectName("centralwidget")
        self.horizontalLayout = QtWidgets.QHBoxLayout(self.centralwidget)
        self.horizontalLayout.setObjectName("horizontalLayout")
        self.tabwidget = QtWidgets.QTabWidget(self.centralwidget)
        font = QtGui.QFont()
        font.setFamily("黑体")
        font.setPixelSize(3.5+12)
        self.tabwidget.setFont(font)
        self.tabwidget.setTabShape(QtWidgets.QTabWidget.Triangular)
        self.tabwidget.setIconSize(QtCore.QSize(20, 16))
        self.tabwidget.setObjectName("tabwidget")
        self.tab = QtWidgets.QWidget()
        self.tab.setObjectName("tab")
        self.horizontalLayout_5 = QtWidgets.QHBoxLayout(self.tab)
        self.horizontalLayout_5.setObjectName("horizontalLayout_5")
        self.verticalLayout_2 = QtWidgets.QVBoxLayout()
        self.verticalLayout_2.setObjectName("verticalLayout_2")
        self.horizontalLayout_4 = QtWidgets.QHBoxLayout()
        self.horizontalLayout_4.setObjectName("horizontalLayout_4")
        self.comboBox_b_1 = QtWidgets.QComboBox(self.tab)
        self.comboBox_b_1.setMaximumSize(QtCore.QSize(100, 16777215))
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self.comboBox_b_1.setObjectName("comboBox_b_1")
self.comboBox_b_1.addItem("")
self.comboBox_b_1.addItem("")
self.comboBox_b_1.addItem("")
self.comboBox_b_1.addItem("")
self.comboBox_b_1.addItem("")
self.comboBox_b_1.addItem("")
self.comboBox_b_1.addItem("")
self.horizontalLayout_4.addWidget(self.comboBox_b_1)
self.pushButton_b = QtWidgets.QPushButton(self.tab)
self.pushButton_b.setMaximumSize(QtCore.QSize(80, 16777215))
self.pushButton_b.setObjectName("pushButton_b")
self.horizontalLayout_4.addWidget(self.pushButton_b)
self.comboBox_b_2 = QtWidgets.QComboBox(self.tab)
self.comboBox_b_2.setMaximumSize(QtCore.QSize(100, 16777215))
self.comboBox_b_2.setObjectName("comboBox_b_2")
self.comboBox_b_2.addItem("")
self.comboBox_b_2.addItem("")
self.comboBox_b_2.addItem("")
self.comboBox_b_2.addItem("")
self.comboBox_b_2.addItem("")
self.comboBox_b_2.addItem("")
self.comboBox_b_2.addItem("")
self.horizontalLayout_4.addWidget(self.comboBox_b_2)
self.verticalLayout_2.addLayout(self.horizontalLayout_4)
self.textEdit_b_1 = QtWidgets.QTextEdit(self.tab)
font = QtGui.QFont()
font.setFamily("Arial")
font.setPixelSize(3.5+10)
self.textEdit_b_1.setFont(font)
self.textEdit_b_1.setObjectName("textEdit_b_1")
self.verticalLayout_2.addWidget(self.textEdit_b_1)
self.textEdit_b_2 = QtWidgets.QTextEdit(self.tab)
font = QtGui.QFont()
font.setFamily("Arial")
font.setPixelSize(3.5+10)
self.textEdit_b_2.setFont(font)
self.textEdit_b_2.setObjectName("textEdit_b_2")
self.verticalLayout_2.addWidget(self.textEdit_b_2)
self.horizontalLayout_5.addLayout(self.verticalLayout_2)
self.tabwidget.addTab(self.tab, "")
self.tab_2 = QtWidgets.QWidget()
self.tab_2.setObjectName("tab_2")
self.horizontalLayout_3 = QtWidgets.QHBoxLayout(self.tab_2)
self.horizontalLayout_3.setObjectName("horizontalLayout_3")
self.verticalLayout = QtWidgets.QVBoxLayout()
self.verticalLayout.setObjectName("verticalLayout")
self.horizontalLayout_2 = QtWidgets.QHBoxLayout()
self.horizontalLayout_2.setObjectName("horizontalLayout_2")
self.comboBox_y_1 = QtWidgets.QComboBox(self.tab_2)
self.comboBox_y_1.setMaximumSize(QtCore.QSize(100, 16777215))
self.comboBox_y_1.setObjectName("comboBox_y_1")
self.comboBox_y_1.addItem("")
self.comboBox_y_1.addItem("")
self.comboBox_y_1.addItem("")

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[illegible]

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self.textEdit_y_2.setFont(font)
self.textEdit_y_2.setObjectName("textEdit_y_2")
self.verticalLayout.addWidget(self.textEdit_y_2)
self.horizontalLayout_3.addLayout(self.verticalLayout)
self.tabwidget.addTab(self.tab_2, "")
self.horizontalLayout.addWidget(self.tabwidget)
Mainwindow.setCentralWidget(self.centralwidget)
self.menubar = QtWidgets.QMenuBar(Mainwindow)
self.menubar.setGeometry(QtCore.QRect(0, 0, 333, 23))
self.menubar.setObjectName("menubar")
Mainwindow.setMenuBar(self.menubar)
self.statusbar = QtWidgets.QStatusBar(Mainwindow)
self.statusbar.setObjectName("statusbar")
Mainwindow.setStatusBar(self.statusbar)

self.retranslateUi(Mainwindow)
self.tabwidget.setCurrentIndex(0)
QtCore.QMetaObject.connectSlotsByName(Mainwindow)

#####core code
#####
str111 = "QTabBar::tab{background-color:rgb(255,255,255,0);} " + \
        "QTabBar::tab:selected{color:red;background-
color:rgb(255,200,255);} "
self.tabwidget.setStyleSheet(str111)
self.pushButton_b.clicked.connect(self.baidu)
self.pushButton_y.clicked.connect(self.youdao)

def baidu(self):
    try:
        text = self.textEdit_b_1.toPlainText()
        url = "/api/trans/vip/translate"
        appid = "20200329000408029" #请填写API
        secretKey = '2TxQYlF19XE_Ffube23w'
        Lang = {"中文": 'zh', '英文': 'en', '日语': 'jp', '韩语': 'kor', '泰语':
'th', '越南语': 'vie', '俄语': 'ru'}
        from_b = self.comboBox_b_1.currentText()
        to_b = self.comboBox_b_2.currentText()
        fromLang = Lang[from_b]
        toLang = str(Lang[to_b])
        salt = random.randint(32768, 65536)
        sign = appid + text + str(salt) + secretKey
        md = hashlib.md5()
        md.update(sign.encode(encoding='utf-8'))
        sign = md.hexdigest()
        myurl = url + \
            '?appid=' + appid + \
            '&q=' + parse.quote(text) + \
            '&from=' + fromLang + \
            '&to=' + toLang + \
            '&salt=' + str(salt) + \
            '&sign=' + sign
        httpClient = http.client.HTTPConnection('api.fanyi.baidu.com')
        httpClient.request('GET', myurl)
        response = httpClient.getresponse()

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        html = response.read().decode('utf-8')
        html = json.loads(html)
        dst = html["trans_result"][0]["dst"]
        self.textEdit_b_2.setText(dst)
    except:
        QMessageBox.warning(self.pushButton, '警告', '错误', QMessageBox.Yes,
                             QMessageBox.Yes)

    def youdao(self):
        def encrypt(signStr):
            hash_algorithm = hashlib.sha256()
            hash_algorithm.update(signStr.encode('utf-8'))
            return hash_algorithm.hexdigest()

        reload(sys)
        q = self.textEdit_y_1.toPlainText()
        if q is None:
            q_2 = None
        size = len(q)
        if size <= 20:
            q_2 = q
        else:
            q_2 = q[0:10] + str(size) + q[size - 10:size]

        YOUDAO_URL = 'https://openapi.youdao.com/api'
        APP_KEY = '7c62856eed0463b8'
        APP_SECRET = '3HYeqG5ers57FfqB7VqP5X5Cpw39Xw9B'  #请填写
        salt = str(uuid.uuid1())
        signStr = APP_KEY + q_2 + salt + str(int(time.time())) + APP_SECRET
        sign = encrypt(signStr)
        Lang = {'自动识别': 'auto', '中文': 'zh-CHS', '俄文': 'ru', '白俄罗斯语':
                'be', '英文': 'en',
                '日文': 'ja', '韩文': 'ko', '法文': 'fr', '西班牙文': 'es', '葡萄牙
                文': 'pt',
                '意大利文': 'it', '粤语': 'yue', '拉丁语': 'la', '世界语': 'eo', '菲
                律宾语': 'tl',
                '泰语': 'th', '索马里语': 'so', '尼泊尔语': '', '德文': 'de'
                }
        from_y = self.comboBox_y_1.currentText()
        to_y = self.comboBox_y_2.currentText()
        data = {}
        data['from'] = Lang[from_y]
        data['to'] = Lang[to_y]
        data['signType'] = 'v3'
        data['curtime'] = str(int(time.time()))
        data['appKey'] = APP_KEY
        data['q'] = q
        data['salt'] = salt
        data['sign'] = sign

        headers = {'Content-Type': 'application/x-www-form-urlencoded'}
        data = requests.post(YOUDAO_URL, data=data, headers=headers)

        response = data
        # print(type(data))

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        # print(data.content)

        data_2 = data.json()
        # print(data_2)
        data_3 = data_2['translation'][0]
        # print(data_3)
        self.textEdit_y_2.setText(data_3)

#####

#####

def retranslateUi(self, MainWindow):
    _translate = QtCore.QCoreApplication.translate
    MainWindow.setWindowTitle(_translate("MainWindow", "翻译精灵"))
    self.comboBox_b_1.setItemText(0, _translate("MainWindow", "中文"))
    self.comboBox_b_1.setItemText(1, _translate("MainWindow", "英文"))
    self.comboBox_b_1.setItemText(2, _translate("MainWindow", "日语"))
    self.comboBox_b_1.setItemText(3, _translate("MainWindow", "韩语"))
    self.comboBox_b_1.setItemText(4, _translate("MainWindow", "泰语"))
    self.comboBox_b_1.setItemText(5, _translate("MainWindow", "越南语"))
    self.comboBox_b_1.setItemText(6, _translate("MainWindow", "俄语"))
    self.pushButton_b.setText(_translate("MainWindow", "翻译→"))
    self.comboBox_b_2.setItemText(0, _translate("MainWindow", "英文"))
    self.comboBox_b_2.setItemText(1, _translate("MainWindow", "中文"))
    self.comboBox_b_2.setItemText(2, _translate("MainWindow", "日语"))
    self.comboBox_b_2.setItemText(3, _translate("MainWindow", "韩语"))
    self.comboBox_b_2.setItemText(4, _translate("MainWindow", "泰语"))
    self.comboBox_b_2.setItemText(5, _translate("MainWindow", "越南语"))
    self.comboBox_b_2.setItemText(6, _translate("MainWindow", "俄语"))
    self.textEdit_b_1.setHtml(_translate("MainWindow", "<!DOCTYPE HTML
PUBLIC "-//W3C//DTD HTML 4.0//EN" "http://www.w3.org/TR/REC-
html40/strict.dtd">\n"
"<html><head><meta name=\"qrichtext\" content=\"1\" /><style
type=\"text/css\">\n"
"p, li { white-space: pre-wrap; }\n"
"</style></head><body style=\" font-family:'Arial'; font-size:10pt; font-
weight:400; font-style:normal;\n">\n"
"<p style=\" margin-top:0px; margin-bottom:0px; margin-left:0px; margin-
right:0px; -qt-block-indent:0; text-indent:0px;\n"><span style=\" font-family:'黑
体'; font-size:12pt; color:#7c7c7c;\n">原文...</span></p></body></html>"))
    self.textEdit_b_2.setHtml(_translate("MainWindow", "<!DOCTYPE HTML
PUBLIC "-//W3C//DTD HTML 4.0//EN" "http://www.w3.org/TR/REC-
html40/strict.dtd">\n"
"<html><head><meta name=\"qrichtext\" content=\"1\" /><style
type=\"text/css\">\n"
"p, li { white-space: pre-wrap; }\n"
"</style></head><body style=\" font-family:'Arial'; font-size:10pt; font-
weight:400; font-style:normal;\n">\n"
"<p style=\" margin-top:0px; margin-bottom:0px; margin-left:0px; margin-
right:0px; -qt-block-indent:0; text-indent:0px;\n"><span style=\" font-family:'黑
体'; font-size:12pt; color:#7e7e7e;\n">译文...</span></p></body></html>"))
    self.tabwidget.setTabText(self.tabwidget.indexOf(self.tab),
    _translate("MainWindow", "百度翻译"))

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self.comboBox_y_1.setItemText(0, _translate("Mainwindow", "自动识别"))
self.comboBox_y_1.setItemText(1, _translate("Mainwindow", "中文"))
self.comboBox_y_1.setItemText(2, _translate("Mainwindow", "俄文"))
self.comboBox_y_1.setItemText(3, _translate("Mainwindow", "白俄罗斯语"))
self.comboBox_y_1.setItemText(4, _translate("Mainwindow", "英文"))
self.comboBox_y_1.setItemText(5, _translate("Mainwindow", "德文"))
self.comboBox_y_1.setItemText(6, _translate("Mainwindow", "日文"))
self.comboBox_y_1.setItemText(7, _translate("Mainwindow", "韩文"))
self.comboBox_y_1.setItemText(8, _translate("Mainwindow", "法文"))
self.comboBox_y_1.setItemText(9, _translate("Mainwindow", "西班牙文"))
self.comboBox_y_1.setItemText(10, _translate("Mainwindow", "葡萄牙文"))
self.comboBox_y_1.setItemText(11, _translate("Mainwindow", "意大利文"))
self.comboBox_y_1.setItemText(12, _translate("Mainwindow", "粤语"))
self.comboBox_y_1.setItemText(13, _translate("Mainwindow", "拉丁语"))
self.comboBox_y_1.setItemText(14, _translate("Mainwindow", "世界语"))
self.comboBox_y_1.setItemText(15, _translate("Mainwindow", "菲律宾语"))
self.comboBox_y_1.setItemText(16, _translate("Mainwindow", "泰语"))
self.comboBox_y_1.setItemText(17, _translate("Mainwindow", "索马里语"))
self.comboBox_y_1.setItemText(18, _translate("Mainwindow", "尼泊尔语"))
self.pushButton_y.setText(_translate("Mainwindow", "翻译→"))
self.comboBox_y_2.setItemText(0, _translate("Mainwindow", "英文"))
self.comboBox_y_2.setItemText(1, _translate("Mainwindow", "中文"))
self.comboBox_y_2.setItemText(2, _translate("Mainwindow", "德文"))
self.comboBox_y_2.setItemText(3, _translate("Mainwindow", "俄文"))
self.comboBox_y_2.setItemText(4, _translate("Mainwindow", "白俄罗斯语"))
self.comboBox_y_2.setItemText(5, _translate("Mainwindow", "日文"))
self.comboBox_y_2.setItemText(6, _translate("Mainwindow", "韩文"))
self.comboBox_y_2.setItemText(7, _translate("Mainwindow", "法文"))
self.comboBox_y_2.setItemText(8, _translate("Mainwindow", "西班牙文"))
self.comboBox_y_2.setItemText(9, _translate("Mainwindow", "葡萄牙文"))
self.comboBox_y_2.setItemText(10, _translate("Mainwindow", "意大利文"))
self.comboBox_y_2.setItemText(11, _translate("Mainwindow", "粤语"))
self.comboBox_y_2.setItemText(12, _translate("Mainwindow", "拉丁语"))
self.comboBox_y_2.setItemText(13, _translate("Mainwindow", "世界语"))
self.comboBox_y_2.setItemText(14, _translate("Mainwindow", "菲律宾语"))
self.comboBox_y_2.setItemText(15, _translate("Mainwindow", "泰语"))
self.comboBox_y_2.setItemText(16, _translate("Mainwindow", "索马里语"))
self.comboBox_y_2.setItemText(17, _translate("Mainwindow", "尼泊尔语"))
self.textEdit_y_1.setHtml(_translate("Mainwindow", "<!DOCTYPE HTML
PUBLIC "-//W3C//DTD HTML 4.0//EN" "http://www.w3.org/TR/REC-
html40/strict.dtd">\n"
"<html><head><meta name=\"qrichtext\" content=\"1\" /><style
type=\"text/css\">\n"
"p, li { white-space: pre-wrap; }\n"
"</style></head><body style=\" font-family:'Arial'; font-size:10pt; font-
weight:400; font-style:normal;\n">\n"
"<p style=\" margin-top:0px; margin-bottom:0px; margin-left:0px; margin-
right:0px; -qt-block-indent:0; text-indent:0px;\n"><span style=\" font-family:'黑
体'; font-size:12pt; color:#7c7c7c;\n">原文...</span></p></body></html>"))
self.textEdit_y_2.setHtml(_translate("Mainwindow", "<!DOCTYPE HTML
PUBLIC "-//W3C//DTD HTML 4.0//EN" "http://www.w3.org/TR/REC-
html40/strict.dtd">\n"
"<html><head><meta name=\"qrichtext\" content=\"1\" /><style
type=\"text/css\">\n"
"p, li { white-space: pre-wrap; }\n"

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"</style></head><body style=\" font-family:\'Arial\'; font-size:10pt; font-  
weight:400; font-style:normal;\">>\n"  
"<p style=\" margin-top:0px; margin-bottom:0px; margin-left:0px; margin-  
right:0px; -qt-block-indent:0; text-indent:0px;\">><span style=\" font-family:\'黑  
体\'; font-size:12pt; color:#7e7e7e;\">>译文...</span></p></body></html>"))  
        self.tabwidget.setTabText(self.tabwidget.indexOf(self.tab_2),  
_translate("MainWindow", "有道翻译"))
```

```
if __name__ == '__main__':  
    app = QApplication(sys.argv)  
    MainWindow = QMainWindow()  
    ui = Ui_MainWindow()  
    ui.setupUi(MainWindow)  
    MainWindow.show()  
    sys.exit(app.exec_())
```